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Sec. 1800	Coils (Inductors, Toroids), Assemblies, Forms
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antennas and standby AC electric power,
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make everything . . . FROM A TO Z

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Antenna Specialists offers the most complete line of two-way radio antennas and accessories for every band. Our engineering design experience, skilled craftsmanship, use of the finest materials obtainable, quality control and extensive manufacturing facilities provide the highest quality antennas at the lowest possible cost. There's an antenna for every type of system and every antenna is fully warranted.



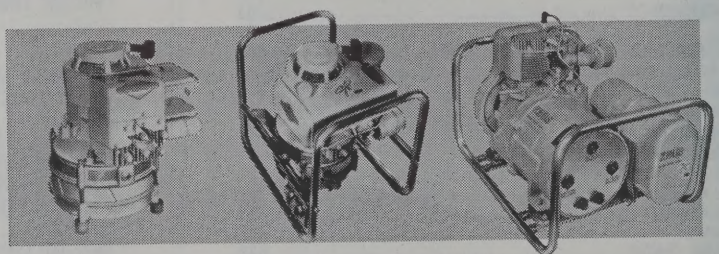
Citizens band (27 Mc.)
Professional band (30 through 470 Mc.)
Amateur (2-6-10 meter)
Marine band—(27 Mc.) and (2000 through 2830 kc.)
Broadcast band (car radio)

Major suppliers of special telescopic antennas. Our facilities are also equipped for special design system antennas. Write for full information.

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generators, portable AC electric

Reliable, instant power with only one moving part—the exclusive Permanent Magnet Alternator.

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Available in ten models from 1000 to 3000 watt, AC continuous duty rating.

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"Stripes of Quality"

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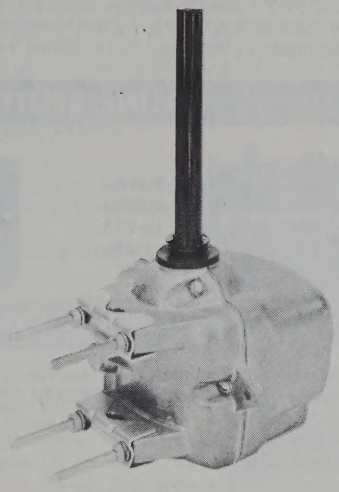
Antenna Rotor Systems

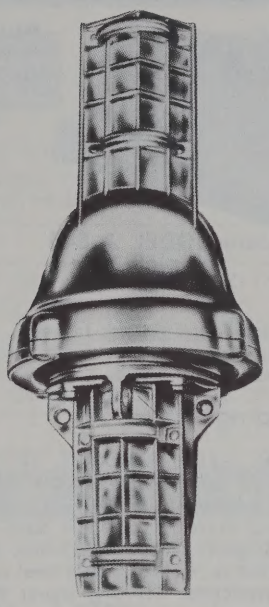
CDE CORNELL-DUBILIER

CLASS
252.00

TELEVISION & FM ROTORS

THE ONLY ROTOR FOR SUBURBAN AND METROPOLITAN AREAS





THE ONLY HEAVY DUTY TV-FM ROTOR SYSTEM BEST FOR ALL AREAS

Cornell-Dubilier is the only manufacturer of antenna-rotor systems offering the user a choice of antenna rotor systems for different reception requirements. The reception requirements of metropolitan and suburban areas close to TV and FM transmitting facilities are entirely different than those of the medium to deep fringe areas. Different antennas are required for each area and different antenna rotor systems should also be used in each reception area. Only CDE offers a choice of systems to meet individual requirements.

MODEL TR-10

The TR-10 antenna rotor system is the only rotor designed specifically for the limited antenna requirements of metropolitan and suburban areas. The TR-10 rotor is designed and priced to the requirements of this market. The built-in mounting mast of the TR-10 provides for convenient mounting of the antenna as well as preventing the installation of antennas above the capability of the rotor. The TR-10 features a manual control box similar to the TR-2C described below.

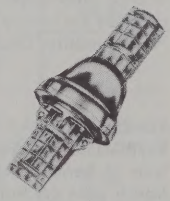




MODEL TR-2C

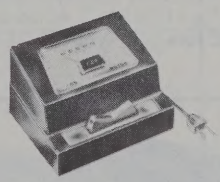
The TR-2C heavy duty antenna rotor system combines the smart styling of a Raymond Loewy/William Snaith Inc. manual control box design with the rugged CDE bell motor unit. The control box is extremely small and blends with any decor. CDE's exclusive compass pattern indicating light system and end of rotation light provide for rapid rough tuning with fine tuning visually or by FM tuning indicator. The touch-bar control system provides precise and accurate antenna orientation. TR-2C uses 8 wire cable.

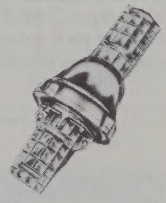




MODEL TR-4A

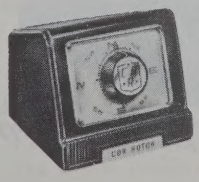
The model TR-4A couples a meter control system with the heavy duty CDE bell casting motor unit. The compass calibrated meter provides for rapid rough tuning with fine tuning visually or by FM tuning indicator. The touch bar control system permits rapid and precise antenna orientation. The TR-4A model uses 4 wire control cable.

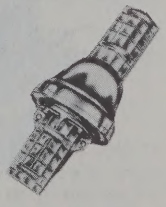




MODEL AR-22

The famous model AR-22 rotor system combines automatic control and the heavy duty bell motor unit. When the AR-22 control knob is turned to the desired antenna direction, the motor unit follows precisely. When the desired direction is reached, the unit shuts itself off automatically. The automatic model represents the ultimate in convenient and precise antenna direction control, and is the most popular and widely accepted of all antenna rotor systems. The system uses 4 wire cable.

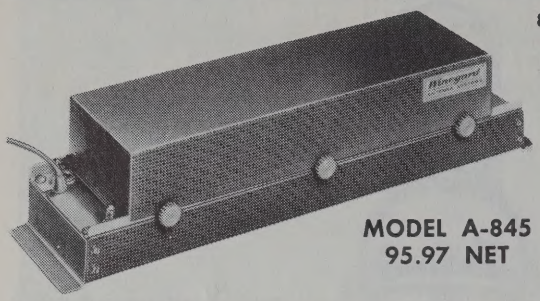




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Winegard DISTRIBUTION SYSTEM EQUIPMENT

AMPLIFIERS



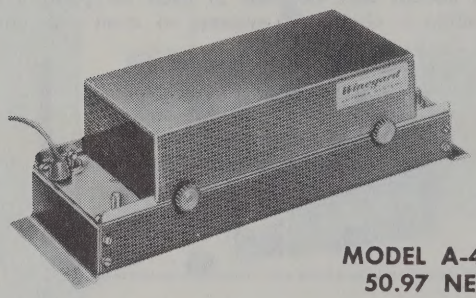
8-TUBE 45db GAIN

MODEL A-845
95.97 NET

A high gain amplifier for large distribution systems in hotels, motels, hospitals, schools, etc. Has all the features needed for a top quality installation. Underwriters' Laboratories, Inc. Listed.

SPECIFICATIONS

TUBES: six 6HA5; two 6DJ8. **GAIN:** +45db. **BANDPASS:** 54-108MC, 174-216MC. **RESPONSE:** ±.25db per 6MC channel. **NOISE FIGURE:** 3.7db lo-band; 5db hi-band. **MAX. SIGNAL INPUT:** gain control at max., .008V per band; gain control at min., .025V per band. **MAX. SIGNAL OUTPUT:** 3.2V. **CONTROLS:** gain, 0-10db; tilt, 3-6db. **INPUT:** 75 ohm. **OUTPUT:** 75 ohm. Blue baked enamel perforated steel cabinet, 2 7/8" x 14 1/2" x 3 3/8". AC cord. **SWITCHES:** OFF-ON; power to preamplifier. AC fuse. 117V 60CPS 48 watts.



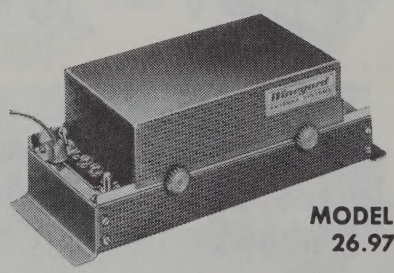
4-TUBE 30db GAIN

MODEL A-430
50.97 NET

A high gain amplifier designed to drive up to 40+ TV outlets. Recommended for smaller motels, apartments, etc., and deluxe home systems. Finest quality. Underwriters' Laboratories, Inc. Listed.

SPECIFICATIONS

TUBES: four 6HA5. **GAIN:** +30db. **BANDPASS:** 54-108MC, 174-216MC. **RESPONSE:** ±.25db per 6MC channel. **NOISE FIGURE:** 3.7db lo-band, 5db hi-band. **MAX. SIGNAL INPUT:** gain control at max., .02V per band; gain control at min., 1V per band. **MAXIMUM SIGNAL OUTPUT:** 2V. **CONTROLS:** gain, 0-10db. **INPUT:** 75 or 300 ohm. **OUTPUT:** 75 ohm. Two C-59 75 ohm connectors supplied. Blue baked enamel perforated steel cabinet, 2 7/8" x 11" x 3 3/8". AC cord. **SWITCHES:** OFF-ON; power to preamplifier. AC fuse. 117V 60CPS 25 watts.



2-TUBE 15db GAIN

MODEL A-215
26.97 NET

The ideal home system amplifier for up to 10 outlets. Will also function as power supply for Winegard's transistor antenna preamplifier, Models AP-220T and AP-275T. Underwriters' Laboratories, Inc. Listed.

SPECIFICATIONS

TUBES: two 6HA5. **GAIN:** +15db. **BANDPASS:** 54-108MC, 174-216MC. **RESPONSE:** flat, ±.25db per 6MC channel. **NOISE FIGURE:** 3.7db lo-band, 5db hi-band. **MAX. SIGNAL INPUT:** 350,000 microvolts. **MAX. SIGNAL OUTPUT:** 2V. **INPUT:** 75 or 300 ohm. **OUTPUT:** 75 or 300 ohm. Two C-59 75 ohm connectors supplied. Blue baked enamel perforated steel cabinet, 2 7/8" x 9 1/4" x 3 3/8". AC cord. **SWITCHES:** ON-OFF; power to preamplifier. AC fuse. 117V 60CPS 14 watts.

LINE SPLITTERS



2-WAY MODEL LS-275 5.40 NET



4-WAY MODEL LS-475 8.25 NET

Model LS-275 is a matched, reactive type splitter to split trunk line into two legs.
Model LS-475 is a matched, reactive type splitter to split trunk line into three or four legs. Unused outputs must be terminated with 75 ohm resistor.

IMPEDANCE: 75 ohms (all terminals)
ATTENUATION: (2-way) 3db at all outputs
(4-way) 6db at all outputs
MOUNTING: Surface mount, 2 wood screws provided.
FITTINGS: (2-way) 3 C-59 cable connectors provided
(4-way) 5 C-59 cable connectors provided

ATTENUATION PADS

Mod. VP-3 — 300 ohm



2.70 NET Reduces incoming signal from −6 to 20db. Used ahead of distribution amplifier it smooths incoming signal.

Mod. VP-7 — 75 ohm



7.77 NET Identical to above, but 75 ohm in and out. C-59 connectors included.

300 ohm — FIXED



MOD.	db	NET
FP3-6	6	1.80
FP3-12	12	1.80
FP3-20	20	1.80

75 ohm — FIXED

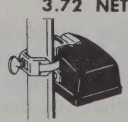


Includes C-59 connectors

MOD.	db	NET
FP7-3	3	5.37
FP7-6	6	5.37
FP7-12	12	5.37
FP7-20	20	5.37

MATCHING TRANSFORMERS

MOD. T-5911M 3.72 NET



Mast Mount

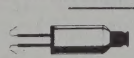
MOD. T-5911S 3.72 NET



Surface Mount

Weatherized housing. Will pass AC-DC current. To block AC-DC current remove 2 coils in circuit. Antenna mount.

Identical to above, but mounts inside on wall. (T-5911S)



"Pigtail Transformer" for back of TV set

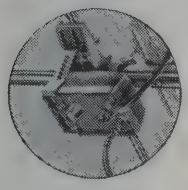
Mod. T-73 **1.80 NET**

Attractive, durable back-of-set matching transformer. Use to run RG-59/U direct to TV sets.

© U.C.P., Inc.

Winegard DISTRIBUTION SYSTEM EQUIPMENT

CHANNEL CONTROL COUPLERS



MOD. CCC-2 (thru 13) . . . . 7.98 NET*

Does all three — 1. Couple any number of yagis to single down-lead. 2. Equalize signal to predetermined level on every channel. 3. Match 300 ohm yagi antenna to 75 ohm coaxial cable. Versatile, convenient, inexpensive.

SPECIFICATIONS

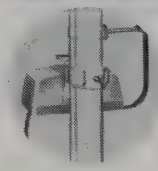
INSERTION LOSS: max. −1.7db lo-band, −2.5db hi-band. **BANDPASS:** single 6MC channel. **RESPONSE:** ± ¼ db per 6MC channel. **ISOLATION FIGURE:** min. 18db lo-band, 14db hi-band. **VSWR:** 1.2:1. **INPUT:** 300 ohm. **OUTPUT:** 75 ohm.

*** PLUG-IN ATTENUATION PADS — 7 MODELS FROM −3db TO −20db . . . . . .98 NET**

VHF YAGI COUPLERS

MOD. CA-* 3.30 NET

Allow you to couple up to 8 different cut-channel yagis on mast, using a single down-lead. Or couple cut-channel yagis with any TV VHF broad-band or all-channel antenna.



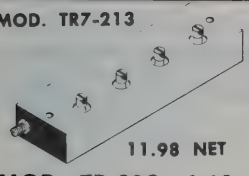
SPECIFICATIONS

INSERTION LOSS: lo-band, max. .75db; hi-band, max. 2db. **BANDPASS:** 6MC. **RESPONSE:** flat, ±.25db per 6MC channel. **VSWR:** max. 1.3:1. **ISOLATION FIGURE:** lo-band, min. 20db; hi-band, min. 16db. **INPUT:** 300 ohm. **OUTPUT:** 300 ohm.

* Specify Channel

TV-FM CHANNEL TRAPS

MOD. TR7-213

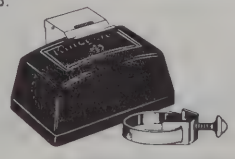


11.98 NET

General-purpose wavetrap. 4 independent traps together cover the entire VHF TV-FM spectrum. 1st and 2nd or 3rd and 4th traps tuned together attenuate by an average of 50db. Undesirable frequencies outside of these bands are effectively eliminated by a VHF TV-FM bandpass filter by an average of 37db.

MOD. TR-213, 4.60 NET

General-purpose wavetrap. 3 independent traps together cover the entire VHF TV-FM spectrum. Any trap can be used individually or in conjunction with the others. Each trap attenuates −12 to 30db.



MOUNTS INSIDE OR OUT

MOD. TR-713, 6.00 NET

For very severe interference in the high VHF TV band. It has 3 independent traps which can be used individually or in combination to attenuate 1, 2 or 3 separate frequencies. 3 traps tuned togther attenuate −40db.

MOD. TR-2FM, 6.00 NET

For very severe interference in the low VHF TV-FM bands. It has 3 independent traps which can be used individually or in combination to attenuate 1, 2 or 3 separate frequencies. 3 traps tuned together attenuate −49db.

MOD. TR-FM, 3.00 NET

Preset by the factory to attenuate the entire FM band without affecting TV frequencies by 25db.

COAXIAL CABLE CONNECTORS



For RG-59/U

For attaching RG-59/U coax to any standard miniature jack, including all Winegard products having 75 ohm jacks.
MOD. C-59 . . . . . .59 NET



For RG-11/U

For attaching RG-11/U coax to any standard miniature jack, including all Wingeard products having 75 ohm jacks.
MOD. C-11 . . . . . 1.47 NET

CABLE-TO-CABLE CONNECTOR (For 59/U or 11/U) Mod. C-81, .70 NET

CONNECTOR FERRULE CRIMPING TOOL . . . . . Mod. CR-1, 5.39 NET

LINE DROP TAPS

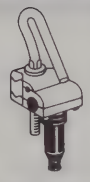


SINGLE SINGLE DOUBLE DOUBLE QUAD

Drops branch lines from either RG-59/U or RG-11/U trunk lines. Branch lines must be RG-59/U.

	MODEL	ISOLATION	NET
SINGLE DROP TAP	LTD-175	9db	**3.57**
SAME, TERMINATED	LTD-175T	9db	**3.57**
DOUBLE DROP TAP	LTD-275	16db	**5.73**
SAME, TERMINATED	LTD-275T	16db	**5.73**
QUAD	LTD-475T	15db	**11.70**

RG-11/U PRESSURE TAP

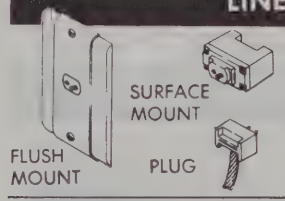


Drops RG-59/U branch line from RG-11/U trunk line. Includes attenuator. Ideal for outdoor use.

MODEL	ISOLATION	NET
C-11PTY	15db avg.	**4.14**
C-11PTR	20db avg.	**4.14**
C-11PTG	10db avg.	**4.14**

RG-11/U COAX CONNECTOR (Terminated) . . . MOD. C-11T, 1.80 NET
PRESSURE TAP GOUGING TOOL . . . . . MOD. GT-1, 6.00 NET

LINE TAP-OFFS



Complete and preassembled. Includes wall plate, receptacles, divider plate and nylon plug. Standard Ivory matches convenience outlets. Specify isolation: 6, 10, 15 or 20db.

DESCRIPTION	MODEL	NET
TV TAP — FLUSH MOUNT — 75 OHM INPUT, 300 OHM OUTPUT	LTF-73	**2.10**
SAME AS ABOVE, BUT SURFACE MOUNT	LTS-73	**1.77**
TV TAP — FLUSH MOUNT — 300 OHM INPUT, 300 OHM OUTPUT	LTF-33	**2.10**
SAME AS ABOVE, BUT SURFACE MOUNT	LTS-33	**1.77**
TV TAP — FLUSH MOUNT — 75 OHM INPUT, 75 OHM OUTPUT	LTF-77	**2.10**
SAME AS ABOVE, BUT SURFACE MOUNT	LTS-77	**2.10**

HI-LO ANTENNA COUPLER



MOD. F-100
2.40 NET

Couples high and low band TV VHF antennas or splits signals in order to amplify high and/or low band. Mounts indoors or out.

75-OHM MODEL F-175
5.97 NET

FM COUPLER-SPLITTER



MOD. CA-FMB
2.70 NET

Couples FM antenna and VHF TV antenna on same mast with single down-lead. Or splits signals for use as a TV and FM set coupler.

75-OHM MODEL CA7-FMB
6.60 NET

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Winegard ANTENNA AMPLIFIERS COUPLERS • ACCESSORIES

VHF-COLORTRON TWIN NUVISTOR PREAMPL.

MOD. AP-220N, 23.97 NET

America's most popular all-channel antenna amplifier. Can be used almost anywhere, even near local stations without overloading. Fits directly on Colortron antenna driven element, yet mounts easily on any VHF antenna. Weatherproof design.



MOUNTS ON ANY ANTENNA

INCLUDES POW. SUP.

SPECIFICATIONS

NUVISTORS: two 13CW4. **GAIN:** +15db lo-band, +10db hi-band. **BANDPASS:** 54-88MC, 174-216MC. **RESPONSE:** ±¼db per 6MC channel. **VSWR:** 1.5:1, or better, input and output. **NOISE FIGURE:** max. 4db lo-band, max. 5.1db hi-band. **MAX. SIGNAL INPUT:** 200,000 microvolts per band. **MAX. SIGNAL OUTPUT:** 1,100,000 microvolts lo-band; 635,000 microvolts hi-band. **INPUT:** 300 ohm. **OUTPUT:** (2) 300 ohm. **SWITCH:** OFF-ON-AUTO. AC fuse. 117V 60CPS 4.8 watts.

ALSO 75-OHM MODEL AP-275, 26.97 NET

VHF-COLORTRON TWIN TRANSIS. PREAMPL.

MOD. AP-220T, 26.97 NET

New high gain VHF-TV and FM antenna preamplifier boasts a flat 18db gain across low and high bands plus FM 88 to 108 mc. Can be used closer to stations than other transistor amplifiers without overloading.

SPECIFICATIONS

TRANSISTORS: one 2N2495, one 2N2966. **GAIN:** +18db per band. **RESPONSE:** flat, ±¼db per 6MC band. **BANDPASS:** 54-108MC, 174-216MC. **VSWR:** Input 1.5:1 max. Output 1.75:1 max. **NOISE FIGURE:** max. 4.5db lo-band, max. 3.7db hi-band. **MAX. SIGNAL INPUT:** 45,000 microvolts lo-band, 30,000 hi-band. **MAX. SIGNAL OUTPUT:** 360,000 microvolts lo-band, 240,000 hi-band. **INPUT:** 300 ohm. **OUTPUT:** 300 ohm. 117V 60CPS 1.8 watts.

ALSO 75-OHM MODEL AP-275T, 29.97 NET

SUPER COLORTRON TRANSIS. PREAMPL.

MOD. AP-75T, 47.97 NET

High-powered, VHF-TV and FM transistor antenna preamplifier for deluxe installations. (New 75 ohm model replaces the AP-215N 300 ohm model.)



SPECIFICATIONS

TRANSISTORS: one 2N2495, one 2N2966. **TUBES:** two 6HA5. **GAIN:** +30db. **RESPONSE:** flat, ±¼db per 6MC channel. **BANDPASS:** Mod. AP-75T is designed to increase signals on VHF TV-FM bands (54-108MC, 174-216MC). **NOISE FIGURE:** max. 4.5db lo-band, 4.7db hi-band. **MAX. SIGNAL INPUT:** 30,000 microvolts. **MAX. SIGNAL OUTPUT:** 2V. **INPUT:** 300 ohm. **OUTPUT:** 300 or 75 ohm. **SWITCHES:** (on amplified power supply) OFF-ON, OFF-ON REMOTE AMPL. AC fuse. 117V 60CPS 14 watts.

STEREOTRON FM NUVISTOR PREAMPL.

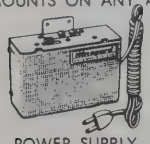
MOD. AP-320, 23.97 NET

Same as Model AP-220N except circuit designed especially for FM frequencies 88-108 megacycles. Mounts on Stereotron antenna driven element or on any other FM antenna. 300 ohm terminals. Extends FM reception distance up to 200 miles and more. Also 75 ohm model.

RED-HEAD VHF TRANSIS. PREAMPL.



MOUNTS ON ANY ANT.



POWER SUPPLY

MOD. RD-300, 17.97 NET

Biggest selling single transistor preamplifier for fringe area use. Mounts on any TV or FM antenna. Powers up to 6 TV/FM sets.

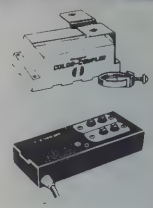
SPECIFICATIONS

TRANSISTOR: 2N2360. **GAIN:** +18db lo-band, +14db hi-band. **BANDPASS:** 54-108MC, 174-216MC. **RESPONSE:** ±¼db per 6MC channel. **VSWR:** 1.5:1 or better, input and output. **NOISE FIGURE:** 3.8db on Ch. 2 to 4.9db on Ch. 13, ±.5db. **MAX. SIGNAL INPUT:** 20,000 microvolts. **MAX. SIGNAL OUTPUT:** 160,000 microvolts. **INPUT:** 300 ohm. **OUTPUT:** (2) 300 ohm. **SWITCH:** OFF-ON. 117V 60CPS 1.4 watts.

UHF ANTENNA TRANSIS. PREAMPL.

MOD. UHF-212, 29.97 NET

New twin transistor preamplifier with high gain circuit for use in almost any UHF reception area. Exceptionally uniform frequency response on all UHF channels 14-83. Measured gain of +12db. VSWR 1.65:1. 300 ohm input and output. Mounts on any UHF antenna. Includes power supply.



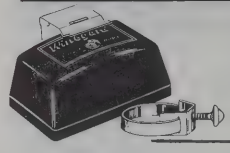
POWER SUPPLY

MOD. UHF-110X, 20.97 NET

Single transistor preamplifier for use in fringe areas. Has less gain than Mod. UHF-212 and lower maximum signal input limit. 300 ohm input and output. Mounts on any UHF antenna. Includes power supply.



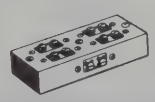
MULTI-SET TV-FM COUPLERS



TWO-SET MOD. CC-23, 2.37 NET

America's most popular two-set coupler. Maintains best possible impedance match. High signal isolation prevents interaction. VSWR with both outputs loaded: 1.25:1 or better. Can be installed inside or out. 300-ohm input and outputs. High impact polystyrene case.

4-SET MOD. LT-43 3.45 NET



300 ohm input and four 300 ohm outputs. VSWR with all outputs loaded: 1.26:1. Mounts inside. No-strip terminals.

75-OHM MOD. LT-47 3.45 NET

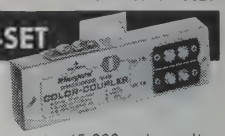
6-SET MOD. LT-63 4.77 NET



300 ohm input and six 300 ohm outputs. VSWR with all outputs loaded: 1.15:1. Mounts inside. No-strip terminals.

75-OHM MOD. LT-67 4.77 NET

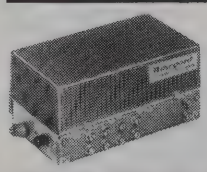
ELECTRONIC TWO-SET



MOD. EC-230, 10.80 NET

Transistorized coupler "boosts" signal min. +10db to provide sharp, clear reception to two sets, even in deep fringe areas. Cross modulation level: 45,000 microvolts. Ideal for color or black and white.

4-SET BOOSTER-COUPLER



MOD. BC-208, 17.98 NET

Runs 1-4 sets (or outlets). Provides +8db gain to each output. Boosts signal, cuts snow. Uses two 6HA5 ampliframe shielded triodes to produce higher gain and less noise than similar products. Complete isolation between sets. Can be used for FM, too.

TRANSIS. FM BOOSTER-AMPLIFIER



MOD. FM-318, 10.80 NET

Transistorized to boost FM signal from antenna by minimum +17db. Greatly improves FM reception. Flat frequency response, maximum signal input 45,000 microvolts.

TV-FM OUTLETS

Disconnect type outlets are complete and preassembled. Includes wall plate, receptacle(s), divider plate(s) and nylon plug(s). Choice of ivory or brown — match standard AC electric outlets. 0db loss.



FLUSH MOUNT

SURFACE MOUNT



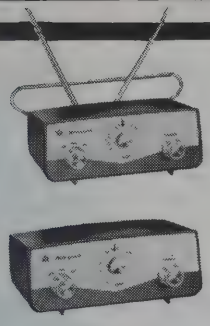


PLUG

DESCRIPTION	MODEL	NET
300SL, 1 TV-FM, FLUSH MOUNT	T-3	1.29
SAME, SURFACE MOUNT	T-35	1.08
75SL, 1 TV-FM, FLUSH MOUNT	T-7	1.71
SAME, SURFACE MOUNT	T-75	1.21
300SL, TV-ROTOR, FLUSH	TR-3	2.39
SAME, 75SL	TR-7	2.52
300SL, VHF, UHF, ROTOR, FLUSH	TR-320	2.39
300SL, VHF, UHF, ROTOR, FLUSH	TR-32U	2.39

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Winegard ANTENNAS • VHF • UHF • FM



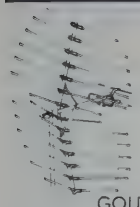
UHF CONVERTERS

Sized right, styled right. Superior circuitry gives superb performance. Models for every UHF reception area. Autumn brown cabinet blends with any TV set.

- 2-TUBE MOD. WITH BUILT-IN UHF AND VHF ANTENNAS. UC-200-A, **33.47 NET.**
- SAME, WITHOUT BUILT-IN ANTENNAS. UC-200, **29.95 NET.**
- 1-TUBE MOD. WITH BUILT-IN UHF AND VHF ANTENNAS. UC-100A, **23.28 NET.**
- SAME, WITHOUT BUILT-IN ANTENNAS. UC-100, **19.95 NET.**

EXTRA FEATURES . . . .
EXTRA PERFORMANCE!

UHF ANTENNAS



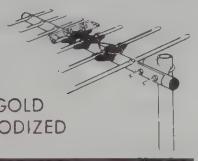
GOLD ANOD.

"TRACKER" MOD. U-540, 17.98 NET

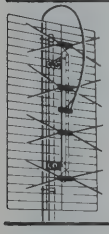
Our most powerful! Uses incident wave principle with tangent paraboloid reflector system. Extremely uniform frequency response on all UHF channels 14-83. Measured gain of +13db. 4-ft. size, completely factory preassembled. Recommended for all UHF reception areas.

"TRACER" MOD. U-807, 3.57 NET

Modified high gain yagi design. Very flat frequency response on all UHF channels 14-83. Small, compact, completely factory preassembled.



GOLD ANODIZED



4-BAY BOW-TIE MOD. KU-420 4.70 NET

Popular fringe area model. Sturdy construction. Factory preassembled.



2-BAY MOD. KU-220 3.90 NET

Smaller version of 4-bay model for primary signal areas.



WITH CORNER REFLECTOR

UHF YAGIS 16-ELEMENT



WITHOUT CORNER REFLECTOR

High gain cut-to-channel yagis for regular or translator UHF. Ask for complete list and prices.

FM ANTENNAS



GOLD ANOD.

"STEREOTRON" Mod. SF-8, 14.18 Net

High gain FM yagi brings in those distant stations, improves the locals and helps stereo reception as well. Finest quality. Completely factory preassembled. Accepts Nuvistor preamplifier Mod. AP-320 or AP-375.



MOD. FM-3T "TURNSTILE" 7.53 NET

GOLD ANODIZED

Popular FM antenna for primary signal areas. Has exclusive offset mount allowing it to be mounted on mast with TV antenna. Can be stacked.



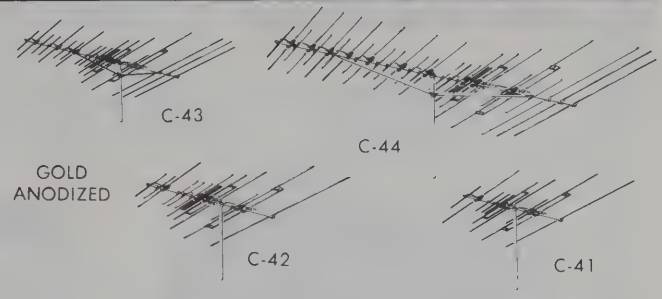
"RANGER" MOD. FR-1 4.17 NET

GOLD ANODIZED

Low cost FM antenna for primary areas. "S" design.

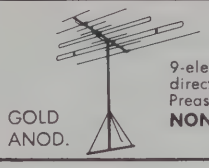
COMPLETE INSTALLATION MOD. FR-1K, 5.38 NET

ALL-CHANNEL VHF



No finer antennas anywhere.. Extremely high gain models for every reception area. Incorporates Winegard's patented Electro-Lens* director system. Super sensitive, super efficient. Uniform frequency response, high front-to-back ratio, pinpoint directivity. VSWR 1.5:1 or better. Corrosion-proof, completely factory preassembled. Nationally advertized in LIFE, etc.

MOD. C-44 . . 38.97 NET **MOD. C-42 . . 20.97 NET**
MOD. C-43 . . 31.14 NET **MOD. C-41 . . 14.97 NET**
MOD. C-40 (Not Shown) . . . 8.98 NET



GOLD ANOD.

"SUPER POWERBEAM"
MOD. G-41S, 11.97 NET

9-element fringe area antenna with Winegard's Electro-Lens* director system. Finest antenna for the money anywhere. Preassembled.

NON-ANODIZED MOD. K-415, 9.61 NET

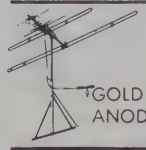
"POWERBEAM" KIT MOD. G-41K, 13.05 NET

Ideal for primary reception areas. Outperforms conicals, in-lines, rabbit ears, etc. Complete installation includes mount, mast, wire, etc. Preassembled.



GOLD ANOD.

NON-ANODIZED MOD. K-41K, 8.07 NET



GOLD ANOD.

"TWILIGHT" MOD. TL-283, 15.72 NET

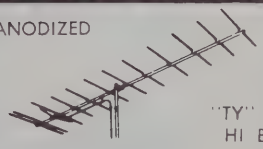
VHF, UHF and FM reception all from one antenna. Patented design. Complete installation includes mast, mount, wire and all hardware. Preassembled.

VHF CUT-CHANNEL & BROAD-BAND YAGIS

GOLD ANODIZED



"TY" SERIES LOW BAND



"TY" SERIES HI BAND

Extra rugged, extra high gain yagis for use whenever the very finest is desired. Models for each channel and each band. Precision tuned for maximum performance.

EXAMPLES — NET

MOD. TY-3 (Ch. 3) 24.69 **MOD. TY-7 (Ch. 7) 12.90**
MOD. TY-6 (Ch. 6) 21.99 **MOD. TY-12 (Ch. 12) 12.90**



"K-5" SERIES 5-ELEMENTS



"K-10" SERIES 10-ELEMENTS

Compare with folded dipole yagis at twice the cost! Full size, wide spaced elements. Complete series in both 5 and 10-element models.

EXAMPLES — NET

5-ELEMENT	10-ELEMENT
MOD. K5-02 (Ch. 2) 6.56	**MOD. K10-02 (Ch. 2) 12.42**
MOD. K5-07 (Ch. 7) 2.65	**MOD. K10-07 (Ch. 7) 4.48**

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BOGEN SOUND SYSTEMS

FLEX-PAK® DELUXE PA AMPLIFIERS

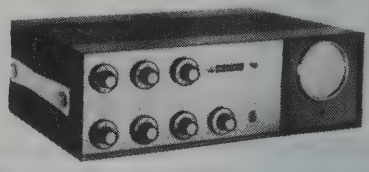
Combining operational flexibility, sound quality and dependability, Bogen professional amplifiers offer functions and features unmatched at any price, by any maker. Adaptable to a wide variety of applications once served only by custom designed, custom fabricated equipment, these amplifiers will accommodate virtually any audio signal source, providing a degree of intelligibility and control not previously obtainable in a single chassis amplifier. They include facilities for a host of accessories, engineered to satisfy specific requirements: two and four channel remote controllers, peak limiters, standby controllers for microphone or music channels; optional monitor and speaker units to allow checking of sound levels by both ear and eye; 600-ohm balanced line transformers; high-fidelity phono tops; plug-in microphone transformers, control locking plates, wall mounting kits and many more.



MX60A/MX30A/
MTX30A Shown with MMS-1 †



M330A/M60A Shown with MSK-1 †



M120

	*MTX30A All Transistor	MX60A	MX30A	M330A	M60A	M120
POWER OUTPUT	30 w. @ 2% (Full power: 30- 20,000 cps)	60 w. @ 2% (Full pwr: 21 - 30,000 cps ±1 db)	30 w. @ 2% (Full pwr: 21 - 40,000 cps ±1½ db)	30 w. @ 2%	60 w. @ 3%	120 w. @ 3%
PEAK POWER	50 watts	85 watts	50 watts	50 watts	100 watts	200 watts
POWER CONSUM.	60 watts	180 watts	125 watts	120 watts	160 watts	320 watts
FREQ. RESPONSE	±1 db, 15-25,000 cps	±1½ db, 10-38 ,000 cps	± 2 db, 10- 40,000 cps	±2 db, 20-20,000 cps	±2 db, 20-20,000 cps	± 1 db, 20-20,000 cps
SENSITIVITY	Mic.: 2 MV (high imp); Mag.: 3 MV; Aux.: 0.3-v	Mic.: 3.5 MV (high imp); Mag.: 2 MV; Aux.: 0.15-v	Mic.: 3.5 MV (high imp); Mag.: 2 MV; Aux.: 0.15-v	Mic.: 6 MV; Mag.: 50 MV; Aux.: 0.3-v	Mic.: 9 MV; Mag.: 24 MV; Aux.: 0.4-v	Mic.: 9MV; Mag.: 24MV; Aux.: 0.4-v
GAIN	Mic.: 125 db; Mag.: 120 db; Aux.: 95 db	Mic.: 125 db; Mag.: 120 db; Aux.: 85 db	Mic.: 125 db; Mag.: 120 db; Aux.: 85 db	Mic.: 120 db; Mag.: 105 db; Aux.: 95 db	Mic.: 122 db; Mag.: 115 db; Aux.: 96 db	Mic.: 125 db; Mag.: 118 db; Aux.: 99 db
HUM and NOISE (below rated output)	Mic. —70 db; Mag. —65 db; Aux. —85 db.	Mic. —70 db	Mic. —70 db	Mic. —65 db; Aux. —80 db	Mic. —65 db; Aux. —80 db	Mic. —65 db; Mag. —65 db; Aux. — 80 db
INPUTS	4 mic. (convert to low impedance, with T200, T500 or T50 transformer); 2 mic. (high imp.); 2 mag. phono or tape playback heads; 2 aux. (high imp., high level); 1 600-ohm balanced telephone line with WMT1 transformer; 2 bridging. Note: 4 mics. and any two of the other nine inputs may be simultaneously mixed and faded.	4 mic. (convert to low impedance with T200, T500 or T50 transformer); 1 mic. (high imp. or mag. tape); 2 aux. (high imp. high level/fader); 1 600 ohm balanced telephone line with WMT1 transformer; 1 bridging input/output. Note: 6 inputs can be simultaneously mixed and faded.	4 mic. (convert to low impedance with T200, T500 or T50 transformer); 1 mic. (high imp. or mag. tape); 2 aux. (high imp. high level/fader); 1 600-ohm balanced telephone line with WMT1 transformer; 1 bridging input/output. Note: 6 inputs can be simultaneously mixed and faded.	3 mic. (convert to low impedance with T200, T500 or T50 transformer or 2 convert to mag.); 1 aux. channel (2 inputs/fader control); 1 600-ohm balanced telephone line with WMT1 transformer. Note: 4 inputs can be simultaneously mixed and faded.	3 mic. (convert to low impedance with T200, T500 or T50 transformer or 2 convert to mag.); 1 aux. channel (2 inputs/fader control); 1 600-ohm balanced telephone line with WMT1 transformer. Note: 4 inputs can be simultaneously mixed and faded.	3 mic. (convert to low impedance with T200, T500 or T50 transformer or 2 convert to mag.); 1 aux. channel (2 inputs/fader control); 1 600-ohm balanced telephone line with WMT1 transformer. Note: 4 inputs can be simultaneously mixed and faded.
OUTPUT IMPEDANCE	4, 8, 16 ohms, tape and booster jacks, 25-v, balanced (21 ohms), 70-v. balanced (163 ohms)	4, 8, 16 and 83 ohms, balanced 25-v. line, balanced 70-v. line	4, 8, 16 and 163 ohms, balanced 25-v. line, balanced 70-v. line	4, 8, 16 ohms, balanced 25-v (16 ohms), 70-v (163 ohms)	4, 8, 16 ohms, balanced 25-v (16 ohms), balanced 70-v (82 ohms)	8 and 16 ohms, balanced 25-v (5 ohms), balanced 70-v (41 ohms), balanced 25-v center tap (1.25 ohms)
CONTROLS	4 individual mic. (each with speech filter or wide-range switch) • 1 high imp. mic./mag. phono/tape head/aux.-fader control with speech filter switch • 1 high imp. mic./mag. phono/tape head/aux.-600 ohm line fader control with speech filter switch • master vol. • bass • treble • power switch • calibrated low freq. filter (variable) determines low freq. cut-off of any of 6 inputs • provision for remote control or precedence of all six inputs and master vol.	4 individual mic. (each with speech filter switch) • 1 mic./mag./tape with speech filter switch • aux. 1/aux. 2 • master vol. • bass • treble • power switch • calibrated low freq. filter (variable) determines low freq. cut-off of all inputs • provision for remote control or precedence of all six inputs and master vol.	4 individual mic. (each with speech filter switch) • 1 mic./mag./tape with speech filter switch • aux. 1/aux. 2 • master vol. • bass • treble • power switch • calibrated low freq. filter (variable) determines low freq. cut-off of all inputs • provision for remote control or precedence of all six inputs and master vol.	3 mic. • aux. 1/2 • master vol. • bass • treble • power switch • provision for remote control or precedence for mic.	3 mic. • aux. 1/2 • master vol. • bass • treble • power switch • provision for remote control or precedence for mic.	3 mic. • aux. 1/2 • master vol. • bass • treble • power switch • provision for remote control or precedence for mic.
TONE CONTROL ACTION	Treble (10 kc) +12 db to —14 db; Bass (50 c) +15 db to —9 db	Treble (10 kc) +13 db to —15 db; Bass (50 c) +15 db to —10 db	Treble (10 kc) +13 db to —15 db; Bass (60 c) +15db to —10 db	Treble (10 kc) +10.5 db to —14.5 db; Bass (50 c) +13.5 db to —9 db	Treble (10 kc) +12 db to —15.5 db; Bass (50 c) +15 db to —9.5 db	Treble (10 kc) + 12 db to —14.5 db; Bass (50 c) + 15 db to —9.5 db
TRANSISTORS or TUBES	32-transistors, 3-silicon diodes, 2-zener diodes	8 tubes: 3—12AX7A, 3—7247, 2—8417 plus 5-silicon rectifiers	8 tubes: 3—12AX7A, 3—7247, 2—7868 plus 5-silicon rectifiers	5 tubes: 2—7868, 1—7247, 2—6EU7 plus 2-silicon rectifiers and 1-bias silicon diode	5 tubes: 2—8417, 1—7247, 2—6EU7 plus 2-silicon rectifiers and 1-bias silicon diode	7 tubes: 4-8417, 1-7247, 2-6EU7 plus 3-silicon rectifiers
DIMENSIONS	16½" W, 12" D, 4¾" H	16½" W, 12" D, 4¾" H	16½" W, 12" D, 4¾" H	14⅞" W, 9⅞" D, 5¾" H	14⅞"W, 9⅞"D, 5¾" H	16½" W, 12" D, 4¾" H
SHIP. WEIGHT	24 lbs.	40 lbs.	34 lbs.	20 lbs.	28 lbs.	42 lbs.
LIST PRICE	$398.75 (Zone 2: $403.00)	$324.40 (Zone 2: $329.35)	$262.40 (Zone 2: $266.75)	$188.75 (Zone 2: $191.75)	$231.25 (Zone 2: $235.45)	$324.85 (Zone 2: $328.75)

*Operates on 105-125 VAC or 12-15 VDC — from —20°C to +70°C (158°F) † MMS-1: monitor meter and speaker. MSK-1: monitor speaker

LEAR SIEGLER, INC. / LSI® BOGEN COMMUNICATIONS DIVISION

© U.C.P., Inc.

BOGEN "MU" PA AMPLIFIERS

BOGEN SOUND SYSTEMS

The handsomely styled new "MU" series amplifiers offer: 1 or 2 microphone inputs, a variety of auxiliary inputs, individual and master volume controls, Memory Markers for re-setting controls to previously determined levels, tape output/booster jack (MU130, MU15A and MU10A), constant voltage output taps and many more features as outlined below:

	MU1250 ALL TRANSISTOR*	MU130	MU15A	MU10A
POWER OUTPUT	50 w. at 10% (continuous)	30 w. at less than 2% distortion	15 w. at less than 2% distortion	10 w. at less than 3% distortion
PEAK POWER	70 watts	50 watts	25 watts	15 watts
POWER CONSUMPTION	Full power: 116 w (117-VAC), 6.7 amps. (12VDC) Quiescent: 16 w (117VAC); .3 amps (12VDC)	120 w	90 w	70 w
FREQUENCY RESPONSE	±2 db 30 to 15,000 cps	±2 db 20 to 20,000 cps	±2 db 20 to 20,000 cps	±2 db 20 to 20,000 cps
GAIN	**Mic.** 125 db **Aux.** 95 db	**Mic.** 122 db **Aux.** 95 db	**Mic.** 125 db **Aux.** 100 db	**Mic.** 125 db **Aux.** 100 db
HUM AND NOISE (below rated output)	**Mic.** —65 db **Aux.** —70 db	**Mic.** —65 db **Aux.** —80 db	**Mic.** —60 db **Aux.** —80 db	**Mic.** —60 db **Aux.** —80 db
OUTPUT IMPEDANCE	4, 8 and 16 ohms; 25-v balanced line; 70-v (122 ohms) balanced	4, 8 and 16 ohms (16 ohms balanced); 25-v balanced (use 16 ohm tap), 70-v 163 ohms)	4, 8 and 16 ohms (16 ohm balanced); 25-v balanced (42 ohms); 70-v (326 ohms)	4, 8 and 16 ohms; 25-v balanced (62 ohms); 70-v (500 ohms)
INPUTS	**2-mic.** (hi-or-low impedance, no transformer required) **2 aux. 1 mag. phono or tape**	**1 mic.** (hi-impedance converts to low-impedance with T200, T500 or T50 transformers) **1 aux.** (hi-impedance, hi-level)	**2 mic.** (hi-impedance, converts to low-impedance with T200, T500 or T50 transformers) **2 aux.** (hi-impedance, hi-level)	**1 mic.** (hi-impedance converts to low-impedance with T-155/6/7 transformers) **2 aux.** (hi-impedance, hi-level)
TUBES and/or TRANSISTORS	**Total of 11 transistors** and 3 silicon rectifiers: 2—2N3053 7—2N2712 2—2N1557 3—MR322	**Total of 4 tubes** and silicon rectifiers: 1—6EU7 1—7247 2—7868	**Total of 4 tubes** and 3 silicon rectifiers: 1—6EU7 1—6AV6 2—6GW8/ECL86	**Total of 3 tubes** and silicon rectifier 1—6EU7 2—6GW8/ECL86
TONE CONTROLS	**Treble** (10 kc) —17 db **Bass** (50 cps) +10 db to —17 db	**Treble** (10 kc) +12 db to —14 db **Bass** (50 cps) +15 db to —9 db	**Treble** (10 kc) +12 db to —14 db **Bass** (50 c) +15 db to —9 db	**Treble** (10 kc) —17 db **Bass** (50 c) —17 db
DIMENSIONS	15¾" W, 10" D, 6¾" H	15¾" W, 10" D, 6¾" H	15¾" W, 10" D, 6¾" H	15¾" W, 10" D, 6¾" H
SHIPPING WEIGHT	23 lbs.	20 lbs.	19 lbs.	15 lbs.
LIST PRICE	$249.90 (Zone 2: $252.00)	$149.90 (Zone 2: $152.90)	$139.90 (Zone 2: $143.05)	$97.40 (Zone 2: $99.65)

*Operates on 12-VDC or 117-VAC. Will operate within a temperature range of —20°C to +65°C (—4°F to +149°F)

Accessories: matching phono-top, control-guard locking plate, rack panel mounting kits, carrying cases, remote volume controls . . . and more.



MU1250 Shown with phono-top



MU130



MU15A



MU10A

MOBILE AMPLIFIERS

BT35; 35-WATT COMPACT TRANSISTOR MOBILE PA AMPLIFIER

55-watts when used as electronic siren

Excellent for police, fire, CD and boats; radio receiver connects easily to aux. input. Splashproof-gasket seals chassis in cabinet. Temperature range —20°C to +65°C (149°F). Polarity protection. Accessory siren tone-fog horn generator. Adjustable fixed-lock bracket. Built-in RF/line filters.

Power Output: 35 watts @ less than 10% (continuous); 55 watts with siren generator **Peak Power:** 55 watts **Power Consumption:** Full power: 3.6 amps; Quiescent: .42 amps 12-15 VDC **Frequency Response:** 150-15,000 cps ±3 db. **Inputs:** 1 mic. (low impedance) • 1 aux. #1 (high level) tuner/tape/phono, 1 aux. #2 (high level) accessory (tone signal) **Gain:** microphone, 110 db.; auxiliary, 90 db. **Hum and Noise:** microphone, —90 db. (below rated output); aux., —95 db. (below rated output) **Sensitivity:** mic.: 1 MV; aux.: 0.4 volts **Output Impedance:** 4, 8, 16 ohms (output socket for accessory siren/fog horn generator) **Controls:** 1 mic. • 1 aux. volume • 1 selector switch/power (4 positions); power off, mic., radio, Aux. **Transistors:** 5 transistors — 1 silicon diode: 2 — 2N2431, 1 — 2N555, 2 — 2N1557, 1 —silicon diode **Dimensions:** 8" W, 6¼" D, 3" H **Shipping Weight:** 8 lbs. List Price: **$132.40** (Zone 2: **$133.35**)

SF-1 SIREN/FOG HORN GENERATOR. All-silicon transistor, easily attaches to dashboard or bottom of BT35. Furnished with 6 ft. cable and plug for attaching to BT35. Provision for remote/accessory foot switch for generator activation. Siren may be operated automatically or manually. List Price: **$91.20** (Zone 2: **$91.60**)



BT35

BT20; 20-WATT TRANSISTOR MOBILE PA AMPLIFIER

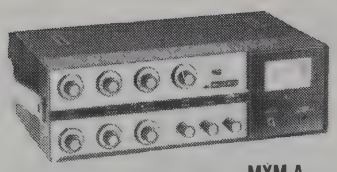
Power Output: 20 watts @ less than 10% (continuous) **Power Consumption:** Full power: 2.95 amps; Quiescent: .56 amps; 12-15 VDC **Frequency Response:** 250 — 12,000 cps ±3 db. **Inputs:** 1 mic. (low impedance) • 1 aux. (tuner, tape, phono) **Gain:** mic., 110 db.; aux., 90 db. **Hum and Noise:** mic. —90 db. (below rated output); aux. —95 db. (below rated output) **Sensitivity:** mic., 1 MV; aux., 0.4 volts **Output Impedance:** 4, 8, 16 ohms **Controls:** 1 mic.; 1 aux./power **Transistors:** (5): 2 — 2N2431, 1 — 2N555, 2 — 2N669 **Dimensions:** 4½" W, 4" D, 6½" H **Shipping Weight:** 5 lbs. List Price: **$99.90** (Zone 2: **$100.85**)



BT20

All prices and specifications subject to change without notice. Zone 2 includes the states of Ariz., Ark., Cal., Col., Ida., La., Miss., Mont., Nev., N.M., Okla., Oreg., Tex., Utah, Wash. and Wyo. Alaska and Hawaii run slightly higher.

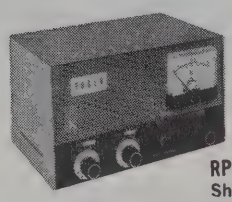
BOGEN SOUND SYSTEMS



MXM-A



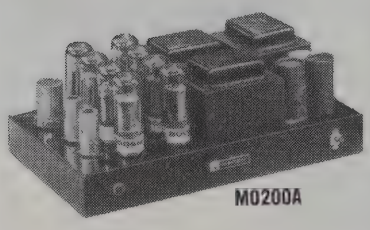
RTP-1



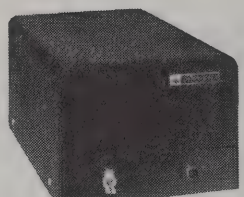
RP-2
Shown with
CAGVU2



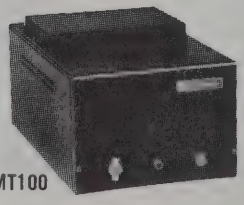
MX6A



M0200A



M0100A
M060A
M030A



MT100

MIXER-PREAMPLIFIERS

MXM-A MIXER-PREAMPLIFIER

Professional, broadcast quality, self-powered unit which accommodates 7 mixed input signals simultaneously (5 may be from high or low impedance mics). One mic. input converts to an equalized mag. phono cartridge or tape playback head. Two aux. (high imped., high level) are connected to a fader control. Bridging input accepts signals from a remote preamplifier or a zero level line. Up to 3 MXM-A's may be paralleled to provide 21 inputs (up to 15 mics.). Output level may be monitored aurally and visually by headset and built-in VU meter. Panel-controlled speech filters for all mic. inputs; separate bass and treble tone controls. Provision for converting high imped. to balanced low imped. microphone inputs by using plug-in transformers. Sockets accept remote control and precedence plug-in units. Panel-controlled calibrated low frequency (notch) filter effectively "tunes out" hum, turntable rumble etc. **Power Output:** 20 V. into high imped. load at 1%; 4 V. into 600 ohms at 1%; (from bridging output) 0.1 V. into 1 Meg. **Freq. Response:** 18-38,000 cps ± 1 db. **Output Imped.:** high imped. (less than 3,000 ohms); 500/600 ohms with TL 600 (broadcast quality) plug-in transformer **Sensitivity:** high imped. 2 MV.; low imped. 0.1 V.; Mag., 1 MV.; bridging 0.5 V.; Aux., 0.1 V. **Hum:** (below rated output) Mic. 60 db. **Tone Controls:** treble: (10 KC) + 12 db to −12 db; bass: (50 cps) + 14 db to −8 db **Tubes:** 4-12AX7A, 1-7247, 1-12AU7A plus 3 silicon rectifiers **Power Consumption:** 25 watts, 117 VAC; 50/60 cps **Dimen.:** 16½" W, 12" D, 4¾" H **Ship. Wt.:** 20 lbs. **List Price:** $274.90 (Zone 2: $278.65)

RTP-1 ALL-SILICON TRANSISTOR PREAMPLIFIER

Designed for true broadcast quality, the RTP-1 will drive any number of booster amplifiers or packaged amplifiers over a 500/600 ohm line—even several miles away. Inputs include 2 Mic. (high or low impedance), 2 Aux. on fader control, 1 bridging. Two RTP-1's can be paralleled to provide 6 mixed inputs. Extremely low battery drain. Features include: Head-phone monitor jack on front panel; built-in output meter calibrated in VU and db; 117 VAC or 12 VDC operation with internal batteries or external DC power supply; built-in battery tester. **Power Output:** at 0 db: 1.8 V. into 500 ohms (.1%); at + 12 db: 7 V. into 500 ohms (2.5%); output transformer is built-in; no high impedance output. **Freq. Response:** 20-20,000 cps ± 1 db. **Output Imped.:** (split output) 125/150 ohms & 125/150 ohms or 500/600 ohms balanced. **Input Imped.:** Mic.: high or low imped. (with T50, T200, T500 transformers); Aux.: 0.1 Meg. **Sensitivity:** low imped. (500 ohms) Mic. 0.5 MV; high imped. Mic. 5 MV.; Aux. .25 V. **Gain:** Mic. 72 db; Aux. 55 db; Bridging 60 db. **Bass Cut:** −12 db at 50 cps **Hum:** Mic.: −65 db; Aux. −70 db **Power Consum.:** 5 watts at 117 VAC 50/60 cps; 0.3 amps at 12 VDC. **Transistors:** 9 silicon plus 3 silicon diodes **Dimen:** 9" W, 9¼" D, 3½" H. **Ship. Wt.:** 6½ lbs. **List Price:** $191.60 (Zone 2: $192.65).

RP-2 . . . LOW-NOISE PROGRAM PREAMPLIFIER

For use at remote pickup points. Features: separate input channels for 1 mic. and 1 phono; separate vol. controls for each channel permit input mixing; output feeds either booster amplifier or a low impedance line separately or simultaneously; bass cut-off switch for speech clarity. Enclosure with VU meter is available. **Power Consumption:** 20 W.; 117 V. AC; 60 cps. **Gain:** mic., 76 db; phono, 35 db. **Sensitivity:** mic.; 3.5 MV.; phono, 0.4 V. **Bass Cut:** 20 db. **Output Imped.:** hi-imped., cathode follower driven (min. recommended load resistance 10,000 ohms); lo-imped.: 600 ohms (50 and 200 ohms). **Input Imped.:** hi-impedance, ½ megohm convertible to lo-imped. by use of plug-in transformers for 50, 150-250 or 600 ohms. **Tubes:** total of 4 (2-6SF5, 1-6J5, 1-6X5GT). **Dimen.:** 11" W., 7⅜" D., 5¼" H. With cage, height is 6¼". **Ship Wt.:** 8 lbs. RP-2 (Cage CAGVU2 optional extra) **List Price:** $95.00 (Zone 2: $96.35). CAGVU2 **List Price:** $38.75 (Zone 2: $39.50).

MX6A MIXER-PREAMPLIFIER

A self-powered unit with provisions for mixing any combination of 4 of its 6 inputs, including 4 high imped. mic. inputs and 2 radio-phono inputs. Can mix radio and/or phono signals with mic. signals for multi-mic. recordings of large groups and special recording effects. Individual gain controls for each channel; wide frequency response, low distortion and low hum; can be placed up to 400 ft. away from the amplifier. **Power Consumption:** 10 w., 117 V., 60 cps. **Freq. Response:** ± 2 db, 50 to 15,000 cps. **Gain:** mic., 59 db; phono, 30 db. **Hum:** (below rated output) − 70 db. **Output Imped.:** less than 1,000 ohms (cathode follower). **Input Imped.:** mic., .5 megohm; phono, .5 megohm. **Tubes:** total of 3 (2-12AX7, 1-12AT7). **Dimen:** 8" x 5⅜" x 4¾". **Ship. Wt.:** 5 lbs. **List Price:** $47.50 (Zone 2: $68.00).

"MO" SERIES BOOSTER AMPLIFIERS

	MO200A	MO100A	MO60A	MO30A	MT100* ALL-SILICON TRANSISTOR BOOSTER
POWER OUTPUT	200 w. at less than 2% distortion Full power: 21-50,000 cps ± 1 db at 5%	100 w. at less than 2% distortion Full Power: 21-50,000 cps ± 1 db at 5%	60 w. at less than 2% distortion Full Power: 21-30,000 cps ± 1 db at 5%	30 w. at less than 2% distortion Full Power: 21-40,000 cps ± 1½ db at 5%	100 w. at 1% Full Power: 29-20,000 cps ±1 db at 5%
FREQUENCY RESPONSE	8-50,000 cps ± 1 db	8-50,000 cps ± 1 db	10-38,000 cps ±1½ db	10-40,000 cps ± 2 db	15-35,000 cps ±1 db
OUTPUT IMPEDANCE	balanced 8 ohms, balanced 25-v (3Ω) C.T., balanced 70-v (25Ω) C.T. and 115-v (66Ω) (for industrial uses)	balanced 16 ohms, balanced 25-v (6.25Ω) C.T., balanced 70-v (49Ω) C.T. and 115-v (132Ω) (for industrial uses)	balanced 4, 8, 16 ohms, balanced 25-v (10Ω), balanced 70-v (83Ω)	balanced 4, 8, 16 ohms, balanced 25-v (21Ω), balanced 70-v (163Ω)	balanced 16Ω, balanced 25-v (6Ω) C.T., balanced 70-v (49Ω) C.T. and 115-v (132Ω) (for industrial uses)
INPUTS	High impedance: 0.5 megohms. Low impedance: 500/600 ohms with T161 or T165B line transformer	High impedance: 0.5 megohms. Low impedance: 500/600 ohms with T161 or T165B line transformer	High impedance: 0.5 megohms. Low impedance: 600Ω with T161 or T165B transformer	High impedance: 0.5 megohms. Low impedance: 600Ω with T161 or T165B transformer	High impedance: 0.1 megohms. Low impedance: 500/600Ω with TL600 transformer 10,000Ω with TL10K transformer
SENSITIVITY	High impedance: better than 2-v. Low impedance: with T161 transformer, better than 0.5-v	High impedance: better than 2-v. Low impedance: with T161 transformer, better than 0.5-v	High impedance: better than 2-v. Low impedance: with T161 transformer, better than 0.5-v	High impedance: better than 2-v. Low impedance: with T161 transformer, better than 0.5-v	High impedance: 0.75-v. Low impedance: with TL600 transformer, 0.2-v
HUM (below rated output)	80 db	80 db	80 db	80 db	80 db
TUBES or TRANSISTORS	(10) tubes and (3) silicon rectifiers: 2-7247, 8-8417	(5) tubes and (3) silicon rectifiers: 1-7247, 4-8417	(3) tubes and (2) silicon rectifiers, (1) bias sil.-diode: 1-7247, 2-8417	(3) tubes and (2) silicon rectifiers, (1) bias sil.-diode: 1-7247, 2-7868	All-silicon transistors plus 3 zener diodes
POWER CONSUMPTION	500 watts	250 watts	160 watts	105 watts	Full Power: 215 w. (117 VAC); Quiescent: 50 w. (117 VAC) Full Power: 11.5 amps (14 VDC)
DIMENSIONS	16" W, 11½" D, 6" H	8" W, 13" D, 6¾" H	8" W, 13" D, 6¾" H	8" W, 13" D, 6¾" H	8" W, 13" D, 6" H
SHIPPING WEIGHT	48 lbs.	29 lbs.	28 lbs.	23 lbs.	30 lbs.
LIST PRICE	$412.50 (Zone 2: $419.25)	$227.40 (Zone 2: $232.65)	$176.25 (Zone 2: $180.45)	$144.90 (Zone 2: $148.40)	$349.90 (Zone 2: $354.55)

* Maximum ambient temperature for continuous operation: (100 w. sine wave output) — 50°C (122°F.)

LEAR SIEGLER, INC. / ® BOGEN COMMUNICATIONS DIVISION

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"CHB" SERIES PA AMPLIFIERS

BOGEN SOUND SYSTEMS

Models CHB100, CHB50 and CHB35A share these outstanding features: systems-tested circuitry for continuous, heavy-duty operation; protected against circuit damage caused by accidental shorting or disconnecting of loudspeaker lines; no "double duty" control devices; built-in remote control circuit permits volume adjustment from up to 2,000 feet away; Memory Level Markers; tape output/booster jack.

	CHB100	CHB50	CHB35A	CHB1225**	CHB20A	CHB14A	CHB10A
POWER OUTPUT	100 w. at 5% distortion	50 w. at 5% distortion	35 w. at 5% distortion	20 w at 10% continuous	20 w at 5% distortion	14 w. at 5% distortion	10 w.
FREQUENCY RESPONSE	±2 db, 20 to 20,000 cps	±2 db, 20 to 20,000 cps	±2 db, 20 to 20,000 cps	±2 db, 60 to 20,000 cps	±2 db, 20 to 20,000 cps	±2 db, 20 to 20,000 cps	±2 db, 40 to 12,000 cps
INPUTS	2 Mic. (hi-impedance) 1 Mag. Phono 2 Aux. (hi-impedance hi-level) Provision for WMT 1	2 Mic. (hi-impedance) 1 Mag. Phono 2 Aux. (hi-impedance hi-level) Provision for WMT 1	2 Mic. (hi-impedance) 1 Mag. Phono 2 Aux. (hi-impedance hi-level) Provision for WMT 1	2 Mic. (hi or low impedance) 2 Aux. (hi-impedance, hi-level)	1 Mic. (hi-impedance) 2 Aux. (hi-impedance hi-level) Provision for WMT 1	1 Mic. (hi-impedance) 2 Aux. (hi-impedance hi-level) Provision for WMT 1	1 Mic. (hi-impedance) 1 Phono (hi-impedance hi-level) Provision for WMT 1
HUM & NOISE (below rated output)	Mic. —70 db Aux. —80 db	Mic. —70 db Aux. —80 db	Mic. —65 db Aux. —80 db	Mic. —65 db Aux. —70 db	Mic. —65 db Aux. —80 db	Mic. —55 db Aux. —80 db	Mic. —60 db Phono —75 db
SENSITIVITY	Mic. 5 mv Aux. .3-v Mag. Phono 15 mv	Mic. 5 mv Aux. .3-v Mag. Phono 15 mv	Mic. 4 mv Aux. .2-v Mag. Phono 12 mv	Mic. 3 mv (hi-impedance) Mic. 2 mv (low impedance) Aux. 0.5-v	Mic. 3 mv Aux. .5-v	Mic. 4 mv Aux. .4-v	Mic. 6 mv Phono .2-v
GAIN	Mic. 125 db Aux. 100 db Mag. Phono 115 db	Mic. 120 db Aux. 95 db Mag. Phono 110 db	Mic. 125 db Aux. 100 db Mag. Phono 115 db	Mic. 120 db Aux. 90 db	Mic. 125 db Aux. 100 db	Mic. 120 db Aux. 95 db	Mic. 110 db Phono 90 db
OUTPUT IMPEDANCE	4, 8 and 16 ohms, 25-v line balanced, (6 ohms) 70-v line (50 ohms) 2 speaker sockets and screw terminals	4, 8 and 16 ohms, 25-v line (12 ohms) 70-v line (100 ohms) 2 speaker sockets and screw terminals	4, 8 and 16 ohms, 25-v line (18 ohms) 70-v line (143 ohms) 2 speaker sockets and screw terminals	4, 8 and 16 ohms, 25-v (25 ohms) balanced, 70-v (196 ohms) balanced	4, 8 and 16 ohms, 25-v line balanced (31 ohms), 70-v line (250 ohms) 2 speaker sockets and screw terminals	4, 8 and 16 ohms, 25-v line (45 ohm) 70-v (355 ohm) 2 speaker sockets and screw terminals	4, 8 and 16 ohms, 25-v line (62 ohms), 70-v (500 ohms) 1-speaker socket and screw terminals
TONE CONTROL ACTION	Treble (10 kc) ±12 db to —15 db Bass (50 cps) +14 db to —9 db	Treble (10 kc) +10 db to —15 db Bass (50 cps) +11 db to —10 db	Treble (10 kc) +10 db to —16 db Bass (50 cps) +14 db to —10 db	Treble (10 kc) —11 db Bass (50 cps) +9 db to —9 db	Treble (10 kc) +10 db to —16 db Bass (50 cps) +14 db to —10 db	Treble (10 kc) —15 db Bass (50 cps) —17 db	Treble (10 kc) —24 db
TUBES or TRANSISTORS	Total of 7 tubes and silicon rectifier: 1—6EU7 1—12AX7 4—7868 1—6C4	Total of 5 tubes and silicon rectifier: 1—6EU7 1—12AX7 2—6L6GC 1—6C4	Total of 5 tubes, 2 silicon rectifiers and 1-silicon diode: 1—6EU7 2—7868 1—12AX7 1—6C4	Total of 11 transistors and 3 silicon rectifiers: 9—2N2712 2—RCA 40050 (matched) 1—50D100D 2—50D100A	Total of 3 tubes, 2 silicon rectifiers and 1-silicon diode: 1—6EU7 2—6GW8	Total of 3 tubes, 2 silicon rectifiers: 1—6AU6 2—ECL86	Total of 2 tubes and silicon rectifier: 1—12AX7/ ECC 83 1—7868
POWER CONSUMPTION	300 w 105-125 VAC 50-60 cycles	150 w. 105-125 VAC 50-60 cycles	125 w 105-125 vac 50-60 cycles	No Signal 12 w (117 vac) 0.3A (14 VDC) Max. Signal 50 w (117 VAC) 2.5A (14 VDC)	90 w 105-125 (VAC) 50-60 cycles	70 w 105-125 (VAC) 50-60 cycles	50 w 105-125 (VAC) 50-60 cycles
DIMENSIONS	6¾" H, 15¾" W, 10" D	6¾" H, 15¾" W, 10" D	6¾" H, 15¾" W, 10" D	4-7/16" H, 13⅛" W, 10" D	6¾" H, 15¾" W, 10" D	6¾" H, 15¾" W, 10" D	5¾" H, 11¼" W, 8¼" D
SHIPPING WEIGHT	25 lbs.	21 lbs.	21 lbs.	17 lbs.	17 lbs.	16 lbs.	Model CHB10A 12 lbs. Model CHB10A-LC (less cage) 10 lbs.
LIST PRICE	$194.85 (Zone 2: $198.60)	$142.35 (Zone 2: $145.50)	$122.35 (Zone 2: $125.35)	$182.25 (Zone 2: $184.50)	$99.90 (Zone 2: $102.45)	$79.85 (Zone 2: $82.40)	Model CHB10A $64.75 (Zone 2: $66.50) Model CHB10A-LC (less cage) $60.00 (Zone 2: $61.50)



CHB100 Shown with phono-top



CHB50/CHB35A



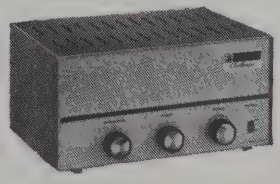
CHB1225



CHB20A



CHB14A



CHB10A

**Operates on 12-15 VDC and 117 VAC

Accessories: matching phono-top, control-guard locking plate, rack panel mounting kits, carrying cases, remote volume controls . . . and more. WMT1 transformer provides 500/600 ohm telephone line input for wired background music.

All prices and specifications subject to change without notice. Zone 2 includes the states of Ariz., Ark., Cal., Col., Ida., La., Miss., Mont., Nev., N.M., Okla., Oreg., Tex., Utah, Wash. and Wyo. Alaska and Hawaii run slightly higher.

BOGEN SOUND SYSTEMS

"VP" SERIES PORTABLE TRANSCRIPTION PLAYERS

VP25 & VP50 ALL-TRANSISTOR SYSTEMS



VP50-DS

Phono Mechanism: high-fidelity B51 turntable; automatic tone arm cueing; continuously variable speed from 29 to 86 rpm — plus 4 click-stop speed positions (16, 33-1/3, 45, and 78 rpm); rubber turntable mat; up to 16" records; separate motor power switch; complete with G.E. variable reluctance cartridge with dual sapphire-tipped styli.

Amplifier: — **Power Output:** VP25 — 20 w. (continuous sine wave), 30 w. (peak); VP50 — 40 w. (continuous sine wave), 60 w. (peak). **Transistors and Diodes:** VP25 (total 15); 11 — 2N2712 silicon, 2 — 2N2147 germanium, 2 — silicon diodes; VP50 (total 17); 9 — 2N2712 silicon, 2 — 2N3053 silicon, 4 — 2N2147 germanium, 2 — silicon diodes. **Frequency Response:** ±1 db, 45-18,000 cps. **Power Consumption:** VP25 — 50 w. (117 VAC); Ampl: 2 amp. 12-15 VDC; VP50 — 120 w. (117 VAC); Ampl: 6 amp. 12-15 VDC (Note: inverter is required for both VP25 and VP50 to operate phono mechanism on 12-15 VDC). **Inputs:** (4) Mic. 1; Radio/Tape; Phono (internal); Mic. 2. **Outputs:** VP25 — 2-8 ohm speaker sockets 10 w. each; Monitor; Tape. VP50 — 2-speaker sockets on panel; 2-speaker sockets on bottom — all in parallel — connected to impedance selector lug. Terminal strip: 4, 8, 16 ohm and 25 v. balanced 70 v.; Monitor; Tape. **Controls:** Channel 1: Treble; Bass; Vol; Selector Switch; Channel 2: Vol; Four position Tone Switch, Power Switch.

Systems: **VP25** — in single portable case; heavy 12" loudspeaker in lid; 25' cable and plug. **Dimen.:** 15¾" W, 16½" D, 10¾" H (less handle and projections). **Net Wt:** 40 lbs. **List Price:** $236.30 (Zone 2: $240.25)
VP50-DS: in two portable cases; split speaker case offers two 12" loudspeakers each with 25' cable and plug. **Dimen.:** transcription player case: 15¾" W, 16½" D, 7" H (less handle and projections). Speaker case: 15¾" W, 16½" D, 11½" H (less handle and projections). **Net Wt:** 54 lbs. **List Price:** $332.35 (Zone 2: $338.15)
VP-25-SC: same as VP25 with the addition of one SC-35 sound column with one type C2 cable (25') **List Price:** $339.60 (Zone 2: $346.65).
VP50-SC: same as VP50-DS but with two SC-35 sound columns instead of the two 12" speakers. **List Price:** $461.85 (Zone 2: $471.75).
VP50-LS: same as VP50-DS but without speakers. **List Price:** $255.25 (Zone 2: $259.15).



VP25

Accessories: **DS-12** speaker case — split case mounts 2-12" loudspeakers with cables and plugs. **Net Wt.:** 21 lbs. **List Price:** $77.10 (Zone 2: $79.05).
DS-12AD — similar to DS-12 but with cables and plugs which permit using 4 or more speakers. **Net Wt.:** 21 lbs. **List Price:** $77.10 (Zone 2: $79.05).
SC-35 Sound Column — 35 w. sound column complete with cable and plug. 42" H, 6" D, 9½" W. **Net Wt.:** 24 lbs. **List Price:** $103.35 (Zone 2: $106.35)
MON-2 Monitor Amplifier System includes 10 w. high gain amplifier and 8" Alnico PM speaker in carrying case. **List Price:** $87.65 (Zone 2: $90.90).
C3 Battery Connector Cable: used to operate VP25 and VP50 amplifiers from 12-15 v. battery. **List Price:** $14.90 (Zone 2: $15.25).
Several types of microphones are available.



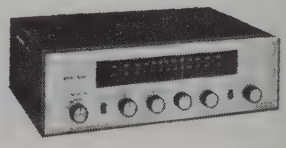
VP18

VP18 10-watt all-transistor portable transcription player offering the same quality performance as its "bigger brothers" the VP25 and VP50.

Phono Mechanism: — same as the VP25 and VP50.

Amplifier: **Power Output:** 10 w. (continuous sine wave), 15 w. (peak); **Transistors and Diodes:** (total of 7); 5-2N2926 silicon, 2-40022 germanium; 4-silicon diodes; **Power Consumption:** 35 watts (117 VAC); **Mic. Input:** 1 (high imped.); **Output:** 8-ohm speaker socket; **Controls:** Mic. Vol., Phono Vol., Bass, Treble, Music-speech Switch (Mic. only), Power Switch; **Freq. Response:** 45-18,000 cps ± 11½ db; **Phono Cartridge:** wide-range ceramic; **Loudspeaker:** 1-12", 10 oz. ceramic magnet; **Dimen.:** 15¾" W, 16½" D, 10¾" H; **Net Wt:** 31 lbs. **List Price:** $187.90 (Zone 2: $192.95).

RP150-BM — AM/FM BACKGROUND MUSIC SYSTEM



A 15-watt, high-fidelity, AM-FM radio/amplifier. Can power from 1 to 60 loudspeakers . . . and more by addition of a Bogen auxiliary booster amplifier. For paging and announcements, a touch of a button silences music and amplifies voice. Provision for playing records, tapes, and automatic tape. **Radio Frequency Range:** FM: 88-108 MC; AM: 530-1640 KC. **Power Output:** 15 watts at less than 2% distortion; 30 watts peak. **Inputs:** Mic. Phono (Mag.), Phono (Xtal-ceramic), Aux. **Audio Frequency Response:** FM: 20-20,000 cps ± 1 db; AM: 20-4,500 cps ± 1 db; Phono, Aux: 20-20,000 cps ± 1 db; Mic: 50-12,000 cps ± 3 db. **Sensitivity:** FM: 1.25 uv for 20 db quieting; I.H.F.: 3 uv; AM: Loop Sensitivity -- 120 uv/m for 20 db s/n; **Terminal Sensitivity** 5 uv for 20 db s/n. **Selectivity:** FM: 180 KC, 3 db down; AM: 8 KC, 3 db down. **Audio Sensitivity:** Phono: mag.-.005 v, crystal-.25 v; Aux: .5 v; Mic: .04 v. **Hum and Noise:** —55 db. **Controls:** Power, Program Vol, Mic. Vol, Mic. Selector, Program Selector, Bass, Treble, Tuning. **Outputs: Speaker** — 8 ohms, 16 ohms, 25 v line for matching line transformers; tape output, multiplex output. **Tubes:** 13 plus 3 crystal diodes. **Power Requirements:** .85 amps, @ 117 v, 60 cycles AC. **Dimensions:** 15" x 4¾" x 11⅝". **Weight:** 21 lbs. **Prices: Model RP150-BM** (less enclosure), **Net:** $186.60 (Zone 2: $188.70). Model EN12 vinyl-clad Metal Enclosure, **Net:** $14.95 (Zone 2: $15.55). Microphone Assembly, Transcription Player, and Rack Panel Kit are available.

All prices and specifications subject to change without notice. Zone 2 includes the states of Ariz., Ark., Cal., Col., Ida., La., Miss., Mont., Nev., N.M., Okla., Oreg., Tex., Utah, Wash. and Wyo. Alaska and Hawaii run slightly higher.

© U.C.P., Inc.

POWERFUL ALL TRANSISTORIZED PORTABLE ADDRESS SYSTEM AND POWER MEGAPHONE

with built-in Fog Horn & Signal Alarm



NEW GELOSO 2583

AMPLIVOICE

Wherever and whenever voice amplification is required, you can count on the all new, ultra-versatile Amplivoice to do the job with the finest fidelity. Only 3½ pounds light, the 2583 is equipped with an easy-to-carry shoulder strap for use as a power megaphone . . . and a dynamic cardioid microphone with nine foot extension cable for instant conversion to a portable address system.

Completely weather-proof, this multi purpose instrument has an extended range of 1000 yards or more, and functions under all weather conditions, and varied temperature environments. Ideal for public speakers, teachers, construction supervisors, athletic and camp instructors, and law enforcement officers the Amplivoice is constructed of high-impact materials to be virtually indestructable.

Model 2583
with dynamic Cardioid microphone, nine foot extension cable, shoulder strap, batteries and volume control. **$89.95**



Indoor and Outdoor Portable Public Address



Recommended by Military and Law Enforcement Officers.



Invaluable to Coaches and Instructors



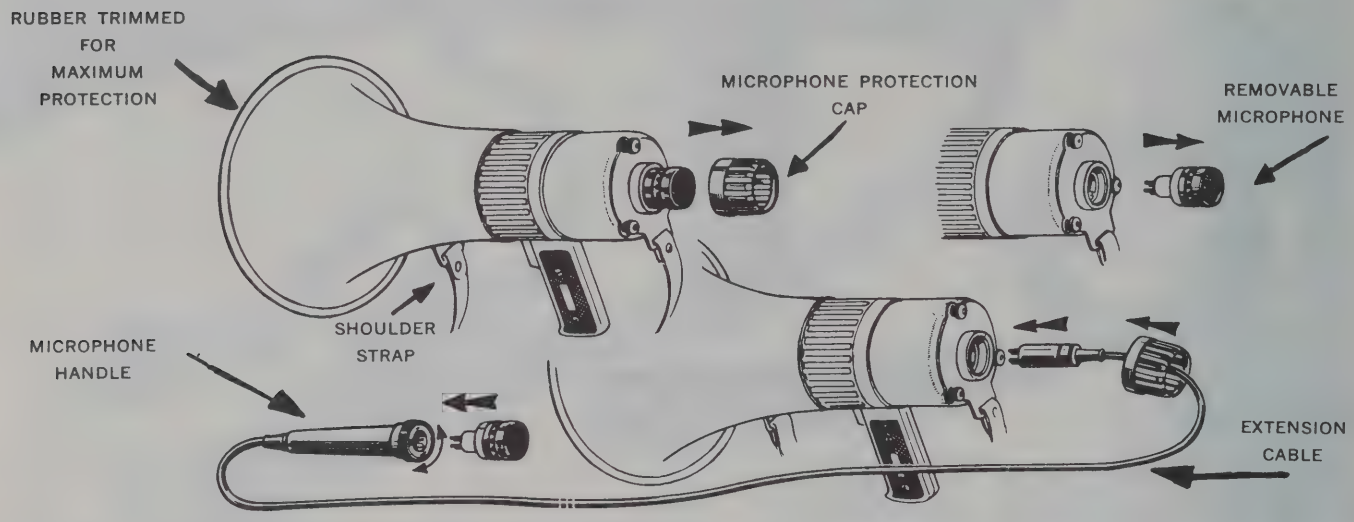
All-Weather Mobile PA System

AME 1

481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351

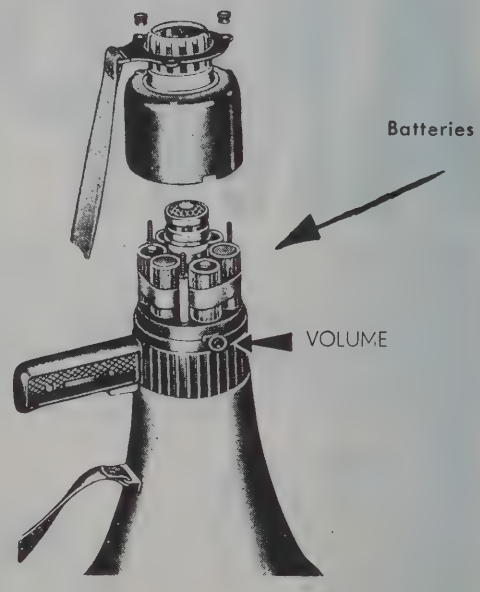
GELOSO AMPLIVOICE 2583

The revolutionary Amplivoice, years ahead in design and performance, offers unlimited voice amplification whenever and wherever required. Only the Geloso 2583 offers all these outstanding quality features: Dual purpose portable PA System, and Power Megaphone • Variable Volume control • All transistor power Range of 1000 yards or more • On/Off trigger in handle for Megaphone use Dynamic Cardioid Mike with remote On/Off switch and 9 foot extension cable Completely Weatherproof • Only 3½ pounds light • Adapts for Fog Horn or Signal Alarm • Shock-resistant, rugged construction • Full One Year Guarantee.



SPECIFICATIONS

AMPLIFIER	5 Transistors. Air tight for all weather operation. Very low battery drain.
BATTERY COMPLIMENT	6 type "C" batteries.
VOLUME	Variable Control Knob.
RANGE	Increased range efficiency. 1000 yards or more depending on terrain.
MICROPHONE	Dynamic, Cardioid type. Advanced Shock-proof design.
HORN AND MICROPHONE	Absolutely shock-proof. Ruggedly constructed of molded nylon ultramid plastic.
WEIGHT	Only 3½ pounds.
SIZE	Bell diameter 9¾", length 16½", height 11" overall.
CARRYING STRAP	1" wide reinforced nylon.



AMERICAN GELOSO ELECTRONICS, INC.

What do You Need in Public Address? *BELL* has it.

BE-10 Compact, rugged 10-watt PA amplifier. Excellent for modest power requirement installations. See Sheet 1.

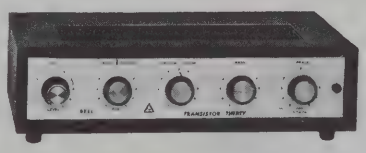




Mark 80 DeLuxe 80-watt PA amplifier. Special inputs, true high fidelity sound. Ideal unit for high-power, constant-use requirements. See Sheet 6.

BE-20 A 20-watt PA amplifier ideal for installations calling for medium power requirements.
See Sheet 2.





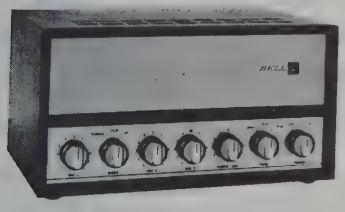
T-30 Fully transistorized 30-watt PA amplifier. Light weight, low-heat, long-life unit. Plenty of power for most PA requirements.
See Sheet 7.

BE-35 35-watt PA amplifier, sufficient power for most PA needs. See Sheet 3.

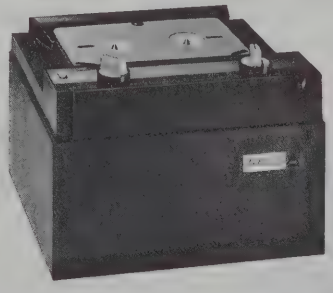


TM-30 Fully transistorized 30-watt mobile PA amplifier. Operates from 12 volt DC source. May be used with exclusive Bell S/TM-30 electronic siren and siren speaker. See Sheet 8.





BE-75 Rugged 75-watt amplifier, moderate price, high performance.
See Sheet 4.



BE-660 Tape cartridge background music unit. 2 hours of automatically played, carefully-selected music on each cartridge. See Sheet 9.

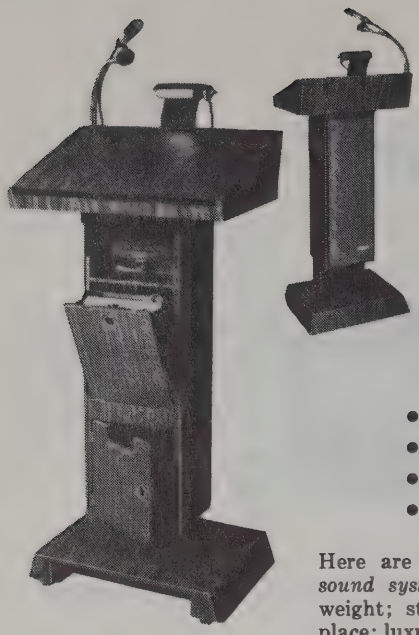


Mark 40 DeLuxe 40-watt PA amplifier. Attractive appearance, rugged construction, extra features.
See Sheet 5.

For decades the name Bell has been known and respected in the public address field. Bell is proud to present the most complete line of public address equipment in its thirty year history. There is a Bell Public Address Amplifier for every requirement — from a modest 10-watt unit to super-voiced 80-watt units. Bell gives you true high fidelity sound, rugged construction, long-lasting, low-maintenance electronics. In short: Bell is your best buy in Public Address.

BEL1

1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625



AMPLI-VOX
Sound Column LECTERN
Model S-500

- *For audiences up to 3000*
- *Completely self-contained*
- *Battery operated—use indoors or out*
- *Deluxe walnut Formica furniture finish*

Here are both your *reading table* and complete *sound system* in one package: sturdy, but lightweight; stable, but readily rolled from place to place; luxurious, but modestly priced.

SPECIFICATIONS

Amplifier—25 watt EIA rating (40 watt peak), push-pull, all transistor design, 50-15,000 cps.
Microphone: Professional dynamic cardioid, supplied with goose-neck and lavalier cord.
Speakers: 6 full fidelity 5" speakers in integrated sound column.
Inputs: For microphone, and for auxiliary equipment.
Outputs: For auxiliary speaker and for other equipment.
Power Source: Works on 10 flashlight batteries, that give 200 hours of operation (more than a year with normal use.) Long-life alkaline batteries recommended. AC Adapter available.
Lectern Dimensions: 15 inches deep, 21 inches wide at base.
Reading Table Dimensions: 13 inches deep, 20 inches wide.
Construction: All wood, walnut Formica furniture finish, hidden wheels for easy movement.
Height: Adjustable 36 inches to 46 inches.
Weight: 40 lbs. with batteries.
Price: Model S-500 complete—**$349.50** less batteries.

Designed for convenience, the Sound Column Lectern is easily adjustable for height. The amplifier controls are easy to reach, easy to use. The microphone can be positioned wherever you want it. The integrated sound column, housing six speakers, provides superb audience coverage and penetration anywhere in the hall or auditorium.



AMPLI-VOX
Roving ROSTRUM
Model S-120

- *Completely portable—weighs 22 lbs.*
- *For audiences up to 1000*
- *It becomes its own lectern*
- *High volume sound from flashlight-battery power*

Streamlined, self-contained complete sound system gives you 25 watts of audio power. Easy to use: open the case, position the microphone, turn on and talk.

SPECIFICATIONS

Amplifier: 25 watt EIA rating (40 watt peak), push-pull, all-transistor design.
Microphone: Professional dynamic cardioid with 10-ft. cable, frequency response 50-15,000 cps, supplied with adjustable goose-neck stand, lavalier cord to wear around neck.
Speakers: Two high efficiency full fidelity 6" x 9" units with 10-oz. ceramic magnets. Each can handle full amplifier power. One built into reading table, one in cover with 40-ft. cable. Special anti-feedback speaker housing allows high volume without howls.
Inputs: For microphone and auxiliary equipment.
Outputs: For auxiliary speaker, tape recorder.
Dimensions: 8⅞" high, 16¾" wide, 17¼" deep.
Construction: Molded scuff-proof black Royalite; retractable legs for height adjustment.
Weight: 22 lbs. with batteries.
Price: Model S-120 with professional microphone—**$189.95** less batteries.
Model S-110 same except microphone is low impedance omnidirectional dynamic—**$149.95** less batteries.

The Roving Rostrum reproduces voice and music with excellent fidelity and clarity. It works on 10 flashlight batteries, that last for more than a year with normal use. Retractable legs are provided for easy reading height adjustment. The luggage-style case is made of scuff-proof Royalite.



AMPLI-VOX
DIPLOMAT
Model S-200

- *Complete P.A. system in an attache case*
- *Take it anywhere—weighs 16½ lbs.*
- *Flashlight battery operated*
- *Clear distinct powerful sound*
- *For audiences up to 500*

Take your own P.A. system anywhere . . . be heard wherever you go! Easy to carry and easy to use, the Diplomat is completely self-contained, requires no electrical outlets. For extra power or coverage, extension speakers matched to the carrying case can be added. Amplifier can be readily removed from the case where remote amplification is desired.

SPECIFICATIONS

Amplifier: 25 watt EIA rating (40 watt peak), push-pull, all-transistor design. (Available separately as Model S-700.)

Microphone: Low impedance omnidirectional dynamic with 10-ft. cable, lavalier cord to wear around neck, desk stand. May be located hundreds of feet from speaker unit.

Speaker: 6" x 9" high efficiency full fidelity speaker in anti-feedback housing built into case. 40 feet of cable supplied for operation away from amplifier. Additional cable and/or extension speaker may be added.

Inputs: For microphone and auxiliary equipment.

Outputs: For auxiliary speaker, tape recorder.

Power Source: Works on 10 flashlight batteries, that give 200 hours of operation (more than a year with normal use). Long-life alkaline batteries recommended. AC Adapter available.

Dimensions: 12" high, 19" wide, 4¼" deep.

Weight: 16½ lbs. with batteries.

Price: Model S-200 complete—**$119.95** less batteries. Model S-700 Portable Amplifier only, net each—**$69.95**.



AMPLI-VOX SOUND CRUISER *Model S-310*

- *Clear, powerful mobile soundcasting*
- *Ideal for cars, trucks, busses, boats*
- *45-second installation*
- *Plugs into cigarette lighter socket*
- *Ruggedly built to take plenty of punishment*

The Sound Cruiser is a complete mobile sound system. You get a 32-watt all-transistor amplifier, a noise-cancelling microphone for excellent intelligibility, and two weatherproof horn speakers, supplied mounted on car-top carrier, especially designed for voice penetration. (You can easily add a tape deck or turntable for fine music reproduction.)

In your "instant sound truck," they'll hear you coming and going. Your message comes through loud and clear.

SPECIFICATIONS

Amplifier: 32 watt EIA rating (50 watt peak), all-transistor, push-pull design.

Response: 50-15,000 cps, for maximum voice penetration and intelligibility, with less than 5% distortion at full output.

Controls: Master volume, auxiliary volume, auxiliary stand-by switch, and tone.

Microphone Input: Any dynamic or ceramic microphone, 105 db gain.

Auxiliary Input: High impedance, for radios, tuners, recorders, etc. 500 K ohms, full power at 0.3 V.

Outputs: Two, 8 to 16 ohm speakers or recorders.

Signal-to-Noise Ratio: 80 db.

Power Source: 12 VDC—idle power 40 ma. Plugs into auto cigarette lighter socket; automatically polarizes to system. Terminals provided for permanent installation. (AC and flashlight battery power packs available.)

Size: 8⅜" wide x 3¼" high x 8⅜" deep.

Mounting: Handle supplied for easy carrying, ready mounting under dash.

Speakers: Two weatherproof Implex horn speakers that swivel and lock in any direction, can handle full amplifier output, mounted on car-top carrier ready to clamp to car.

Microphone: Noise-cancelling hand-held microphone, supplied with 5' coil cord, push-to-talk switch, mounting clip.

Weight: Complete system, 20 lbs., amplifier only, 8 lbs.

Price: Model S-310, Sound Cruiser Complete system, net each (including F.E.T.)—**$169.95.**

Model S-300 Mobile Amplifier only, net each (including F.E.T.)—**$79.95.**



AMPLI-VOX *Background Music and* PAGING SYSTEM *Model S-410*

- *Individually adjust music volume and paging volume*
- *Supplied complete with paging mike and 2 speakers*
- *35 watts of power, plenty for large areas*
- *Perfect for restaurants, motels, stores, plants, offices, clubrooms*

This compact amplifier fits in a desk drawer, can be readily mounted under a table or counter, and looks good in full view. It's easy to install, easy to use; your receptionist or switchboard operator can work it instantly. Everyone can hear it.

Since it lets you adjust background music volume level and paging volume level *separately*, your message comes through clearly while you retain music continuity.

SPECIFICATIONS

Amplifier: 35 watt EIA rating (50 watt peak), all-transistor, push-pull design.

Frequency Response: 50-15,000 cps.

Controls: Microphone volume, music volume, music tone.

Microphone Input: Low impedance, up to 50 K ohms, 105 db gain.

Accessory Input: High impedance, 1 megohm (0.3 V. for full output), 3-position selector switch for magnetic phono, ceramic phono (both RIAA equalized), tuner or tape recorder.

Outputs: 8 and 16 ohms; 25 V.C.T. and 70.7 V. line; 600 ohms telephone line (all outputs bridging).

Power Source: 55 watts, 105-125 V. AC, 50/60 cps.

Size: 8⅜" wide x 3¼" high x 8¾" deep.

Microphone: Desk stand paging mike with push-to-talk switch, 6 ft. cable.

Speakers: 2 background music 6" x 9" speakers with ceramic magnets in walnut vinyl bass reflex enclosures. System accommodates up to 8 speakers without detracting from sound level at any location.

Weight: Complete system 20 lbs., amplifier only 8¾ lbs.

Price: Model S-410 Background Music & Paging System, complete, net each—**$189.95.**

Model S-400, Background Music & Paging Amplifier only, net each—**$79.95.**

AMPLI-VOX *Accessories*

AC ADAPTER

Where alternating current is available, and plug-in operation is preferred, you can immediately convert Ampli-Vox equipment. AC Adapter Model S-1410 is quickly interchangeable with Battery Pack in Models S-200, S-300, S-310, S-500, and S-700. AC Adapter Model S-1400 for permanent installation in Roving Rostrum Models S-120 and S-110 permits AC operation with battery stand-by, instant change-over. Both models for 105-125 V., 60 cps AC operation.

Model No. S-1400 AC Adapter for S-120, S-110, Shipping Weight 2 lbs. **$29.95 net**

Model No. S-1410 AC Adapter for S-200, S-300, S-310, S-500, S-700, Shipping Weight 2 lbs. **$29.95 net**

PORTABLE POWER PACK

For Mobile Models S-300 and S-310. For use with 10 flashlight batteries (not supplied), to convert Model S-300 Mobile Amplifier or S-310 Sound Cruiser system for portable operation.

Model No. S-1420 Portable Power Pack, Shipping Weight 12 oz. **$7.50 net**

READING LIGHT

Deluxe shaded lamp slides into position on Roving Rostrum or Sound Column Lectern. Supplied with 25 watt show case bulb (25-T10). AC operation only.

Model No. S-1100 Reading Light, Shipping Weight 1 lb. **$4.95 net**

MICROPHONE FLOOR STAND

Collapsible design for easy carrying and storage, gooseneck top for easy microphone adjustment, height adjusts 36" to 70".

Model No. S-1070 Microphone Floor Stand, Shipping Weight 10 lbs. **$29.95 net**

SOUND COLUMN AUXILIARY SPEAKER

Six high efficiency full fidelity 5" loudspeakers positioned in sound column for highly directional penetrating coverage. Vinyl-covered case with carrying handle.

Model No. S-1200 Sound Column Auxiliary Speaker, Ship. Wt. 11 lbs. **$59.95 net**

MICROPHONE EXTENSION KIT

Use two mikes simultaneously, even in separate rooms. Kit includes: Additional microphone with 10-ft. cord, mixer, and 25-ft. extension cord. Ready to plug in.

Model No. S-1020, with professional dynamic cardioid microphone, Sh. Wt. 2 lbs. **$79.95 net**

Model No. S-1030, with omnidirectional dynamic microphone, Shipping Weight 2 lbs. **$39.95 net**

MICROPHONE MIXER

Accommodates 4 separate microphones, independent volume controls.

Model No. S-1040, Microphone Mixer, Shipping Weight 1½ lbs. **$24.95 net**

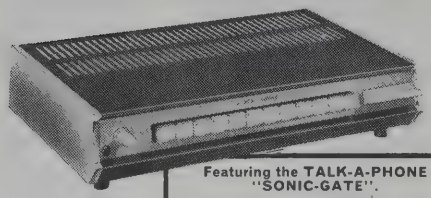
NEW TALK-A-PHONE WIRELESS AND HOME INTERCOM SYSTEMS

TWO NEW WIRELESS SYSTEMS

Two NEW, high-quality wireless intercoms, featuring the exclusive TALK-A-PHONE "SONIC GATE" circuit. Provides dependable communication where permanent, wired systems are not practical. Ideal for use in offices, factories, stores, homes, apartments, nurseries, farms, etc. Distinctively styled cabinets combine the look and feel of fine grained leather with the strength and rigidity of steel. Beautifully finished in charcoal gray with brushed chrome side panels. Each station has a translucent indicator which illuminates when "On." All stations must be connected to outlets on the **same electric company service transformer.** Built-in Ground Adapter provides greater sensitivity where electrical wiring is routed over long paths. U.L. Approved.

NEW TALK-A-PHONE 12-STATION SELECTIVE WIRELESS* SYSTEM

• 6 Separate 2-Way Conversations Simultaneously
• Selective Paging with Reply • Push-Button Channel Selector
• Start a System with any number of Masters and Staffs



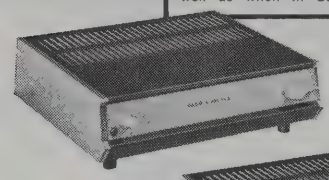
Featuring the TALK-A-PHONE "SONIC-GATE".

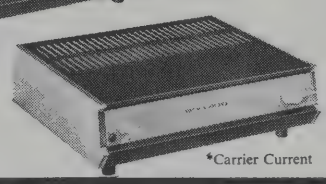


Your Voice Goes Through . . . Noise and Hum are Screened Out . . .

The Sonic Gate circuit effectively suppresses line noises and hum by 30 db while system is in actual operation, as well as when in Stand-By position.

- No Installation
- No Wiring
- No Cables
- Just Plug-in and Talk





*Carrier Current

Provides selective communication. Each Master is equipped with a 6 or 12-channel selector; can converse with any other station selectively; can receive calls on any channel Master elects to use. As many as 6 separate conversations may be held simultaneously, with 12 Masters. Masters can talk with any station in system; can also set up conferences.

Wireless Staff Stations are for use where calls need not be originated, but where reply must be made. They are available for operation on any single channel desired—to match that of Master. They also can be used to receive Paging Calls from any Selective Wireless Master in the system . . . use as many Wireless Staffs as needed (all Staffs must operate on same channel for this purpose). Two or more Wireless Staffs on the same channel will function as a 2-Station System (without Master); they can originate calls and reply to each other.

Start a system with any number of Masters and Staffs. Where up to 12 stations are used, each on a separate channel, Master can converse selectively with any channel. If more than 12 stations are used, channels must be *shared*; stations on same channel will receive all calls to that channel. To change location, merely pick up unit and move . . . no rewiring or new installation is necessary. All stations are equipped with the original TALK-A-PHONE UNI-TRANS feature, which permits continuous one-way transmission for periods when you wish to dictate or "listen-in."

T-LCM-8912. 12-Station Selective Wireless Master. Complete, with tubes and instructions, ready to use. Operates on 110-120 volts, AC or DC. Size 14"wx8¾"dx3⅛"h. Shipping weight, 12½ lbs.
List Price Per Station $154.00 ..... Net **89.80**

T-LCM-8906. 6-Station Selective Wireless Master.
As above except for 6-Station Capacity. Shpg. Wt. 10 lbs.
List Price Per Station $136.00 ..... Net **79.50**

Wireless Staff Stations. Receive and reply on a single channel only.

T-LCS-901 Channel 1	T-LCS-903 Channel 3	T-LCS-905 Channel 5
T-LCS-902 Channel 2	T-LCS-904 Channel 4	T-LCS-906 Channel 6

Complete with tubes and instructions, ready to use. Operates on 110-120 volts, AC or DC. Size, 10½"wx8¾"dx3⅛"h. Shipping weight, 7 lbs.
List Price Per Station $77.00 ..... Net **45.00**

NEW TALK-A-PHONE 2-STATION WIRELESS* SYSTEM

A complete system of 2 stations, ready to use. Simply place each unit where desired, plug each into nearest electrical outlet, and talk! Add more stations anytime. All stations will receive any messages transmitted from any point. Move units anywhere, plug into electrical outlet and use—no re-wiring or new installation necessary. The original TALK-A-PHONE UNI-TRANS is built in—provides continuous one-way transmission; ideal for dictation, or listening-in on baby. 110-120 V. AC-DC. Size, 10½"wx8¾"dx3⅛"h.

T-LC-33. Complete with tubes and instructions. Weight 16 lbs. List Price Per System $138.00 . . . Net **79.90**

T-LC-17. Additional Single Station. Weight 8 lbs. List Price Each $69.00 ..... Net **39.95**

CRADLEPHONE—Optional for all units above. Add H to model No. when ordering.
List Price per Station add $59.95 ..... Net add **$35.00**

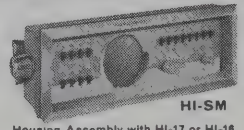
NEW TALK-A-PHONE All-Transistor HOME INTERCOM-RADIO SYSTEMS



HI-9 or HI-8



HI-9R or HI-29R



HI-SM

Housing Assembly with HI-17 or HI-16



HI-4



HI-1



T-LR-2R

This new TALK-A-PHONE Intercom System saves the housewife and homeowner miles of tiresome steps, hours of time . . . Makes home life easier, more comfortable and more enjoyable . . .

LISTEN-IN ON BABY, CHILDREN OR SICK ROOM . . . from any room in the house, day or night • ANSWER OUTSIDE DOORS FROM ANY ROOM . . . in any part of the house—without opening doors to strangers • TALK FROM ROOM TO ROOM . . . back and forth, upstairs or downstairs, any time, day or night • YOUR FAVORITE RADIO PROGRAMS . . . follow you throughout the house with the flick of a switch.

TALK-A-PHONE All-Transistor Home Intercom units are beautifully finished in gold, polished and satin silver tones. All Masters and Staff Stations are designed for flush mounting; or with optional Housing Assembly, these stations can be mounted on walls, cabinets, or set on tables, shelves, etc. Plaster Ring included for 8 and 16-Station units require 14$\frac{1}{16}$"w, 4⅜"h, 3½"d wall opening. Front panel size: 15¼"w, 5¼"h. HI-4 requires 4⅛"w, 6½"h, 2"d wall opening. Front Panel size: 4$\frac{13}{16}$"w x 7$\frac{3}{16}$"h. Sub-Stations are designed for flush mounting only, do not need Plaster Ring. Requires 2" square wall opening, 2" deep. Front Panel size: 3⅜"w, 5⅜"h. Stations do not plug into electrical outlet. Operates from Battery or HI-PS Power Supply Unit. Total capacity: up to 16 stations including Central Master. With full instructions.

CENTRAL MASTER STATIONS. Only one used per system. Contains the All-Transistor Amplifier (and radio when built-in). Place in any room. Master can call and converse with any other station (or stations) in system; can listen-in to any Station that user makes "non-private". If system has Model HI-9R Central Master (built-in radio), the Master and any Staff can listen to standard AM radio broadcasts. "Additional" Masters can be used in rooms where it is desired to listen to AM radio programs different from those tuned in at Central Master.

HI-9 Central Master Station. Without radio, less battery.
List Price, Each, $99.50 ..... Net Each **58.00**

HI-9R Central Master Station. With built-in radio. Less battery.
List Price, Each, $154.00 ..... Net Each **89.50**

HI-17 Central Master Station. Same as HI-9 except has total 16 station capacity. Without built-in radio.
List Price Each $146.00 ..... Net Each **85.50**

HI-29R Additional Master Station. With built-in radio. Less battery.
List Price, Each, $154.00 ..... Net Each **89.50**

STAFF STATIONS. 4, 8 and 16-Station Capacity Staff Stations can be combined within the same system and used with choice of one 8-station capacity or one 16-station capacity Central Master Station. (When HI-9R is used, any HI-4, HI-8 and HI-16 staff, can listen to radio of HI-9R).

HI-4 Staff Station. Provides same facilities as HI-8 but has 4-Station capacity. For flush mounting in wall. With accessory T-SM-L, can be surface mounted.
List Price Each $29.95 ..... Net Each **17.50**

HI-8 Staff Station. Use as needed to call and converse with one or more Staff, Master or Sub-Stations. Can be switched to "private" or "non-private" operation as desired. When "non-private", as in baby or sick room use, another Staff or Master can listen in. Staff can listen to standard AM radio programs of HI-9R Central Master.
List Price Each $54.00 ..... Net Each **31.50**

HI-16 Staff Station. Same as HI-8 except has total 16 station capacity.
List Price Each $99.95 ..... Net Each **58.50**

HI-SM HOUSING ASSEMBLY. For enclosing any 8 or 16-Station Capacity Master or Staff, to permit mounting on walls or cabinets, or placing on tables, shelves, etc.
List Price Each $19.00 ..... Net Each **11.00**

HI-1 OUTDOOR SUB-STATION. For front and rear entrance applications. Complete with push-button for connection to regular house chime, bell or buzzer. Has illuminated nameplate. When caller rings bells, any Master or Staff may reply and converse with caller. Caller operates no controls.
List Price Each $27.50 ..... Net Each **15.95**

T-LR-2R ALTERNATE OUTDOOR SUB-STATION. For flush mounting. Requires wall opening 4⅛" square, 2" deep. Stainless steel front panel measures 4$\frac{13}{16}$" square. Complete with plaster ring. Without push button or illuminated nameplate.
List Price Each $21.00 ..... Net Each **11.95**

Model T-SM Optional accessory for surface mounting T-LR-2R on wall.
List Price Each $6.80 ..... Net each **4.00**

Model TSM-L Optional accessory for Surface mounting HI-4 Staff on wall.
List Price Each $7.80 ..... Net Each **4.60**

HI-JB8 JUNCTION BOX for connecting Masters and Staffs up to a total of 8 stations. See #2 of "How to Determine Cable Needs."
List Price Each $7.00 ..... Net Each **4.00**

HI-JB16 JUNCTION BOX Same as above except for up to 16 stations.
List Price Each $9.95 ..... Net Each **5.95**

BATTERY. Use any 9-volt dry battery, such as ignition or telephone battery; or six standard #6 dry cells in series—available from local sources. *Note: When battery is used, power supply is not required.*

HI-PS POWER SUPPLY UNIT. One required per system (only when battery is not used). Plugs into any 110-120 volt, 60 cycle AC electrical outlet in basement, attic, etc.
List Price Each $27.50 ..... Net Each **15.95**

HOW TO DETERMINE CABLE NEEDS

Masters and Staff Stations. Use #6226 cable in one of 2 ways: (1) Measure from 1st unit to 2nd unit only; from 2nd unit to 3rd unit only, etc., until last unit is reached—then total. Cable between last and 1st unit not needed. (2) Place a Common Junction Box (Model HI-JB) in attic, basement, closet, etc. Measure from each Master and Staff to Junction Box and total. Double length #6226 required for 16-Station units. Connect HI-4 to nearest 8 or 16-Station unit or to HI-JB with #6214 cable.

Outdoor Sub-Stations: Connect to nearest Master or Staff only with #6202 cable.

Battery or Power Supply Unit: Connect with #6202 cable to Master Stations only.

CABLE. For indoor or outdoor use.

Type No.	No. Pairs	Approx. O.D.	LIST, Per Ft.	NET, Per Ft.
6226	13	⅝"	.47c	28c
6214	7	$\frac{7}{16}$"	.24c	14c
6202	1	$\frac{3}{16}$"	.06¢	3½¢

All Prices Slightly Higher West of Rockies All Prices and Specifications Subject to Change Without Notice.
Manufactured under exclusive TALK-A-PHONE Patents

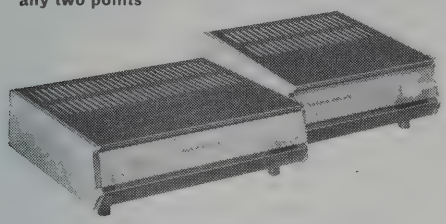
TALK-A-PHONE CO.

© U.C.P., Inc.

NEW TALK-A-PHONE Deluxe Intercom Systems

Quality intercommunication systems designed for the Office, Business, Plant, House, Farm, Professional Man, or any other private or commercial application. A flick-of-a-finger gives you instant and direct two-way conversation between any two points—anywhere. Masters have translucent indicator which illuminates when system is "on." In cabinets that combine the look and feel of fine grained leather with the strength and rigidity of steel. Beautifully finished in charcoal gray and brushed chrome. Resists industrial liquids and atmospheres. Size: Masters, 10½"w x 8¼"d x 3¼"h.; Subs, 7½"w x 8¼"d x 2¼"h. U.L. Approved.

2-way voice communication between any two points

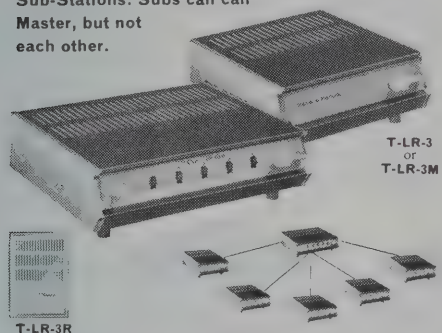


TALK-A-PHONE 2-STATION SYSTEM

T-LC-2 A complete, high-quality intercommunication system. Includes a Master Station, a Sub-Station and 50 feet of interconnecting cable. Additional cable available for distances up to 2000 feet. Easy to install and operate. Master and Sub-Station can originate calls to each other and carry on a 2-way conversation. Sub-Stations can be used "privately" or "non-privately". When "private", Master cannot listen-in on Sub-Station; yet Sub can answer and originate calls. When "non-private", persons at Sub-Station can answer calls at a distance without operating controls, as well as originate calls. Master is equipped with a translucent indicator, illuminated by permanent-type bulb, to show when system is "on". Rugged, high-gain amplifier is built to withstand continuous use and to require a minimum of maintenance. Adjustable Volume. Only Master plugs into electrical outlet, 110-120 volts, AC or DC. Master in deluxe cabinet finish, Sub-Station cabinet is of same style and color, but is in grained, baked enamel finish. U.L. Approved.

Model T-LC-2 2-Station System complete with tubes, easy-to-follow instructions, and 50 feet of cable. Wt. 13 lbs.
List Price complete $62.00.....Net complete **36.00**
No. 6303 (3 conductor) cable. 175° F. individually covered conductors with overall plastic jacket and milar shield. Provides noise-free cable lines in Industry, Office and Home. For indoor and outdoor use where additional lengths are required between the Master and Sub-Station.
List Price per foot 6¾c.....Net per foot **.04**
No. 5303 (3 conductor) cable for indoor use.
List Price per foot 5c.....Net per foot **.03**
Optional Wall Mounting Brackets for Model T-LC-2 Sub-Station are available. See description below.

A system of one Master Station which can communicate with from one to ten Sub-Stations. Subs can call Master, but not each other.



TALK-A-PHONE MASTER SELECTIVE SYSTEMS

T-LM A new system consisting of one Master Station and from one to ten Sub-Stations. Master Station can talk and listen to any one Sub-Station, several Sub-Stations or with all Subs simultaneously. Sub-Stations do not communicate with each other. Only the Master Station plugs into an electrical outlet. You may start with only one Master and one or two Sub-Stations and then add later when necessary. Installation of system has optional feature whereby Sub-Stations can be connected "privately," or "non-privately" and still originate calls to the Master under either application. Once a conversation has been initiated with a "non-private" system, persons at Sub-Stations need operate no controls and can reply from a distance. When the system is connected "privately," Master unit cannot "listen in" on Sub-Stations. However, they can reply when called, and also originate calls to the Master. Operates universally on 110-120 volts, AC-DC. U.L. Approved.

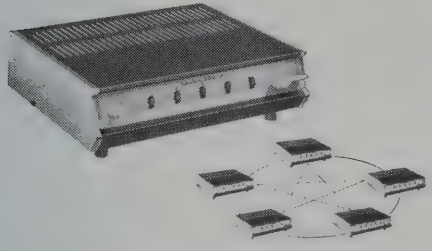
T-AC The T-AC-5406 and T-AC-5411 Master Stations operate as above with the added feature of 10 times volume output. A desirable feature for large or noisy areas and for paging. Operates on 110-120 volts, AC only.

Use only one Master in each System.

Optional Wall Mounting Brackets for Models T-LR-3 and T-LR-3M are available. See description below.

Model T-LM-5 Master selective Station for 5 Sub-Stations, complete with tubes and easy-to-follow instructions. Wt. 8 lbs. List Price each $59.95.....Net each **34.95**
Model T-LM-10 Master Selective Station for 10 Sub-Stations, complete with tubes and easy-to-follow instructions. Wt. 8 lbs. List Price each $75.00.....Net each **44.00**
Model T-AC-5406 Master Station. 5 sub-station capacity. High Volume Output. Wt. 8 lbs.
List Price each $75.00.....Net each **44.00**
Model T-AC-5411 Master Station. 10 sub-station capacity. High Volume Output. Wt. 8 lbs.
List Price each $89.95.....Net each **52.50**
Model T-LR-3 Sub-Station (in same deluxe finish as Masters) for use with any of above Masters. Wt. 6 lbs.
List Price each $27.50.....Net each **15.95**
Model T-LR-3M Sub-Station (in cabinet of same style, color and size as above, but in grained, baked enamel finish) for use with any of above Masters. Wt. 6 lbs.
List Price each $21.00.....Net each **11.95**
Model T-LR-3R Flush mounted Sub-Station for use with any of above Masters. Requires wall opening 4⅛" W. x 6½" H. Stainless steel front panel measures 4 15/16" W. x 7 5/16" H. Complete with plaster ring.
List Price each $21.00.....Net each **11.95**
Model T-SM-L Optional accessory for surface mounting T-LR-3R on wall. List Price each $7.80...Net each **4.60**
Model T-HP-3 Hi-Power Staff Station for wall mounting. Charcoal Gray metal case. Wt. 8 lbs.
List Price each $28.00.....Net each **16.50**
Model T-HP-3V Same as above, but with built-in volume control, adjustable to full output.
List Price each $36.50.....Net each **21.50**
Model T-C-20 Nine-inch weatherproof re-entrant horn. Charcoal Gray color. Wt. 5 lbs.
List Price each $44.95.....Net each **26.50**
Model T-C-20V Same as above, but with built-in weather resistant volume control, adjustable to full output.
List Price each $59.95.....Net each **34.95**
T-S-100 Wall Switch for origination of call through T-C-20 or T-HP-3. List Price each $6.00.....Net each **3.50**
Model T-S-111 Wall Mounted Cradle Phone. (Optional accessory). For noisy areas and listening privacy. Use with T-HP-3, T-C-20 and T-S-100. Speaker disconnects when in use.
List Price each $75.00.....Net each **44.00**
No. 6303 (3 conductor) cable. 175° F. individually covered conductors with overall plastic jacket and milar shield. Provides noise-free cable lines in Industry, Office and Home. For indoor and outdoor use to connect Sub-Station to Master.
List Price per foot 6¾c.....Net per foot **.04**
No. 5303 (3 conductor) cable for indoor use.
List Price per foot 5c.....Net per foot **.03**

A system of up to ten Master Stations. Each station can call and communicate with any other.



TALK-A-PHONE SUPER SELECTIVE SYSTEMS

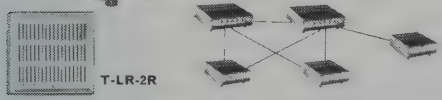
T-LS A new system of all Master Stations. Any Station can call any other Station in system. Several completely private 2-way conversations are possible at same time. A versatile, low cost intercom system offering extreme flexibility, meeting many requirements in industry, offices, homes, etc. Any Station can call and carry on a conversation with any other Station or Stations in the system with absolute "privacy." Have a visitor in your office and your mind is at ease that no one can eavesdrop on your conversation. Stations can be located even 1000 feet apart. Variable volume, adjustable at each unit, controls incoming voice. You can start with two or three masters, and then add later as required. Operates universally on 110-120 volts, AC-DC. U.L. Approved.

T-AC The T-AC-505 and T-AC-510 Master Stations operate as above but provides a system with the added feature of 10 times volume output. A desirable feature for large or noisy areas and for calling many stations at once. T-AC-505 and T-AC-510 Masters cannot be intermixed with any other master. For 110-120 volts, AC only.

Model T-LS-5 Super Selective Station for five Masters, complete with tubes and easy-to-follow instructions. Wt. 8 lbs. List Price each $59.95.....Net each **34.95**
Model T-LS-10 Super Selective Station for ten Masters, complete with tubes and easy-to-follow instructions. Wt. 8 lbs. List Price each $75.00.....Net each **44.00**
Model T-AC-505 Super-Selective Station for 5 Masters. Hi-Volume Output. Wt. 8 lbs. Complete with instructions.
List Price $75.00.....Net each **44.00**
Model T-AC-510 Same as T-AC-505 except for 10 Masters. List Price each $89.95.....Net each **52.50**
No. 5506 (6-conductor) Cable for connecting T-LS-5 or T-AC-505 Masters. List Price per foot 13cNet per foot **.07½**
No. 9911 (11-conductor) Cable for connecting T-LS-10 or T-AC-510 Masters. List Price per foot 24cNet per foot **.14**

A system combining one or more Master Stations with one or More Sub-Stations up to a combined total of ten. Masters call any station. Subs reply but cannot originate calls.





TALK-A-PHONE COMBINATION SYSTEMS

T-CL For the more flexible type of communication system requiring the operation of more than one Master Station, along with Sub-Stations which need not originate calls. Personnel can answer incoming calls even though they are 25 to 40 feet from their unit. Master Stations may talk to each other and to all Sub-Stations in the system selectively; or you can have one or more Sub-Stations which are exclusive to only one Master Station (as illustrated in the diagram at left). Master Stations have the option of making themselves "private" or "non-private" at will. You can begin with two stations (at least one must be a Master) and add other units as required. Model T-CL-5 Master Station has a total inter-connecting capacity of five stations, including Masters and Sub-Stations; while Model T-CL-10 Master Station has a total capacity of ten stations. Sub-Stations are not plugged into electric current. U.L. Approved. 110-120 volts. AC-DC.
Optional Wall Mounting Brackets for Models T-LR-2 and T-LR-2M are available. See description below.

T-AC The T-AC-605 and T-AC-610 Master Stations operate as above but provides a system with the added feature of 10 times volume output. A desirable feature for large or noisy areas and for calling many stations at once. T-AC-605 and T-AC-610 Masters cannot be intermixed with any other master. For 110-120 volts, AC only.

Model T-CL-5 Combination Master for five station use, complete with tubes and easy-to-follow instructions, Wt. 8 lbs. List Price each $72.00.....Net each **42.00**
Model T-CL-10 Combination Master for ten station use, complete with tubes and easy-to-follow instructions. Wt. 8 lbs. List Price each $87.00.....Net each **51.00**
T-AC-605 Combination Master for 5-Station use. Hi-Volume Output. Wt. 8 lbs. Complete with instructions.
List Price each $87.00.....Net each **51.00**
T-AC-610 Same as T-AC-605 except for 10-Station use.
List Price each $102.00.....Net each **59.95**
Model T-LR-2 Sub-Station (in same deluxe finish as Masters) for use with any of above Masters. Wt. 6 lbs.
List Price each $27.50.....Net each **15.95**
Model T-LR-2M Sub-Station (in cabinet of same style, color and size as above, but in grained, baked enamel finish) for use with any of above Masters. Wt. 6 lbs.
List Price each $21.00.....Net each **11.95**
Model T-LR-2R Flush mounted Sub-Station for use with any of above Masters. Requires wall opening 4⅛" square. Stainless steel front panel measures 4 15/16" square. Complete with plaster ring.
List Price each $21.00.....Net each **11.95**
Model T-SM Optional accessory for surface mounting T-LR-2R on wall. List price each $6.80....Net each **4.00**
Model T-HP-3 Hi-Power Sub-Station for wall mounting in charcoal gray metal case. Wt. 8 lbs.
List Price each $28.00.....Net each **16.50**
Model T-HP-3V Same as above, but with built-in volume control, adjustable to full output.
List Price each $36.50.....Net each **21.50**
Model T-C-20 Nine-inch weather proof re-entrant horn. Charcoal gray color. List Price each $44.95....Net each **26.50**
Model T-C-20V Same as above, but with built-in weather resistant volume control, adjustable to full output.
List Price each $59.95.....Net each **34.95**
Model T-S-111 Wall Mounted Cradle Phone. (Optional accessory). For noisy areas and listening privacy. Use with T-HP-3 and T-C-20. Speaker disconnects when in use. List Price each $75.00.....Net each **44.00**
No. 6210 (5 pair) Cable for interconnecting T-CL-5 or T-AC-605 Masters.
List Price per foot 24c.....Net per foot **.14**
No. 6226 (13 pair) Cable for interconnecting T-CL-10 or T-AC-610 Masters.
List Price per foot 47c.....Net per foot **.28**
No. 6902 (2-conductor) Cable for connecting Sub-Station to T-CL-5, T-CL-10, T-AC-605 or T-AC-610.
List Price per foot 3½c.....Net per foot **.02**





A. CRADLEPHONE—Optional for any unit above (except T-CL-5, T-CL-10, T-AC-605, T-AC-610, T-C-20, T-HP-3, T-LR-3R and T-LR-2R.) Add "H" to Model No. when ordering.
List Price Per Station, add $59.95.....Net, add **35.00**

B. WALL MOUNTING BRACKETS—Optional accessory for use with TALK-A-PHONE Models T-LR-3, T-LR-3M, T-LR-2, T-LR-2M, T-C-41, T-C-41M, T-C-42, T-C-42M, and T-LC-2 Sub Station to enable mounting on wall, side of desk, etc. One pair required per station. Permits mounting with front panel upward, downward or sideward.

Model T-W1 Mounting Brackets, per pair. List Price $1.25. Net **.75**

All Prices Slightly Higher West of Rockies — All Prices and Specifications Subject to Change Without Notice. Manufactured under exclusive TALK-A-PHONE Patents.

HOW TO DETERMINE CABLE REQUIREMENTS

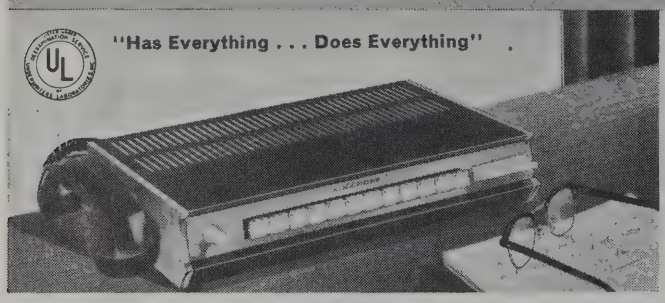
For **Master Selective Systems** measure from each Sub-Station to the Master and order total. For **Super Selective Systems**—measure from first Master to second Master only, from second Master to third Master only, etc., and total. Cable between first and last Master not necessary. For **Combination Systems**—Master cable; measure from first Master to second Master only, from second Master to third Master only, etc., and total; Sub-Station cable; measure from each Sub-Station to nearest Master only. Connect T-S-111 at any convenient point between remote speaker and Master Station.

TALK-A-PHONE CO.

1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625

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THE ALL-NEW, ALL-TRANSISTOR TALK-A-PHONE "CHIEF" AND "CHIEF REDI-POWER" INTERCOMMUNICATION SYSTEMS



"Has Everything . . . Does Everything"

One Model Meets Every Requirement

Setting a new standard in quality, design and performance, the new TALK-A-PHONE "CHIEF" and "CHIEF REDI-POWER" meets every intercom need of office, factory, institution, or any other commercial or private application. "CHIEF" Master Stations of 6, 12, 20, 30, 40 or 50 station capacity can be intermixed with "CHIEF REDI-POWER" Masters of different capacities, together with Staff Stations and Horns within the same system in any desired combination. Masters can talk with any other Master or Staff . . . page . . . and can utilize other optional equipment shown as well. Staffs can answer any Master and can originate calls to one Master, or to two Masters selectively.

ONLY THE TALK-A-PHONE "CHIEF" AND "CHIEF REDI-POWER" GIVE YOU ALL THESE FEATURES

• **DISTINCTIVELY STYLED**—Less than 3-inches high. In cabinets that combine the look and feel of fine-grained leather with the strength and rigidity of steel: Attractively finished in charcoal gray and brushed chrome.
• **"PRIVATE" OR "NON-PRIVATE" MASTERS AND STAFFS**—Exclusive Dynasonic Design enables stations to perform "privately" (so no one can listen-in), or "non-privately" (for reply without use of controls). The same station can be "private" to one or more Masters and "non-private" to others, and retain full communication facilities.
• **INCOMING CALL CHIME**—A standard feature of Masters. Indicates that your station is being called. Caller talks, you reply.
• **MONITORING SIGNAL**—A standard feature of Masters and Staffs. Visually indicates to a "non-private" station that it is being monitored.
• **BUSY SIGNAL**—A standard feature of Masters and Staffs. Visually indicates when station you call is "busy." All units have facility to override "busy signal" for important calls.
• **DYNASONIC SELECTOR**—An exclusive TALK-A-PHONE feature that permits intermixing of stations and variation of performance. Add to system at anytime without discarding original equipment.
• **MULTI-MAGIC STATION SELECTOR**—A patented, exclusive TALK-A-PHONE feature that enables selection of up to 30 stations with only 12 push buttons . . . 40 and 50 stations with 14 push buttons . . . in the same attractive cabinet style and size.
• **UNI-TRANS DICTATION CONTROL**—No need to operate or hold down controls when one-way transmission is desired or when Cradle Phone is used.
• **EXTERNAL RELAY CONTROL**—A standard built-in feature of Masters. Enables Master to activate external relays for operating siren, gong, light, etc. For use in extremely high noise level areas to signal personnel, who can then communicate with caller from Master in quieter location or in sound booth.
• **RECIPROCAL POWER SUPPLY**—Each Master operates on 110-120 volts, AC only, and should be plugged-in. Where no electrical outlet is available, up to 30% of the Masters in the system can operate without being plugged-in.
• **NOISE-FREE VOICE RANGE POWER**—The rugged, all-transistor high-gain amplifier provides unsurpassed clarity and naturalness of tone. The exclusive, patented TALK-A-PHONE circuit enables performance without noise, hum or distortion when used with TALK-A-PHONE cable.
• **HI-POWER STAFF STATIONS AND HORNS**—For use with any TALK-A-PHONE Master where exceptionally high volume at Staff locations is needed. Ideal for paging speakers. T-HP-3 provides more than twice the volume of universal Staff; T-C-20 provides about 4 times greater volume . . . more with REDI-POWER Masters.
• **WALL SWITCH**—Combine with TALK-A-PHONE Horn or Hi-Power Staff to add origination-of-call feature.
• **"LD" LONG DISTANCE**—(optional accessory on "CHIEF" Masters). For use over cable lines of 2,000 ft., 5,000 ft., 10,000 ft. or more without loss of volume. Functions only between Masters with LD . . . not between an LD Master and Staff. Built-in at factory at additional cost.
• **CRADLE PHONE**—(optional accessory on Masters or Staffs). Has live microphone. Provides listening privacy and greater speaking convenience. Diminishes background noises in noisy areas. Eliminates use of controls in conversation between Masters. Cuts off incoming voice from loudspeaker when in use.
• **WALL MOUNTED CRADLE PHONE**—(optional accessory). For noisy areas and listening privacy. Use with T-HP-3, T-C-20 and T-S-101 or T-S-102. Speaker disconnects when in use.
• **RIGHT-OF-WAY RELAY**—(optional accessory). Use with "CHIEF REDI-POWER" Masters to page any group of stations with a single button. Paged stations can also be used for intercommunication. RW-10 capacity, 10 stations. For greater capacity use more RW-10's. Connects to one Master, other Masters also utilize facilities.
• **POWER PAGING BOOSTER**—(Optional accessory). Use with "CHIEF" Masters to page a group of speakers with a single button. 30 watts output. Requires its own paging speakers (as T-C-20, T-HP-3). Provides paging facility only . . . paged stations cannot reply or originate calls through paging speakers. Connects to one Master, other Masters can also utilize facilities.

All "CHIEF" and "CHIEF REDI-POWER" Master Stations come complete with junction box and built-in power supply attached by 6' flexible cable. Master size: 14"w, 3⅛"h, 8¾"d. For 110-120 volts, AC only. U.L. Approved.

T-C-4906 Master 6 station capacity. Wt. 13 lbs.
List Price Per Station $136.00.....Net **79.50**

T-C-4912 Master 12 station capacity. Wt 14 lbs.
List Price Per Station $154.00.....Net **89.80**

T-C-4920 Master 20 station capacity. Wt. 17 lbs.
List Price Per Station $184.00.....Net **107.40**

T-C-4930 Master 30 station capacity. Wt. 20 lbs.
List Price Per Station $214.00.....Net **125.00**

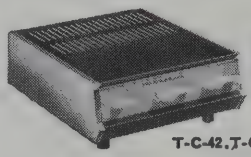
T-C-4940 Master 40 station capacity. Wt. 23 lbs.
List Price Per Station $244.00.....Net **142.60**

T-C-4950 Master 50 station capacity. Wt. 26 lbs.
List Price Per Station $274.00.....Net **160.20**

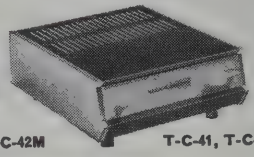
How to Determine Cable Requirements. To inter-connect Master Stations, measure from first Master to second Master only, from second to third Master only, etc., until the last unit in the system is reached, and total. For T-C-4920 and T-C-RP-5920, use two lengths of 6226 Cable; and for T-C-4930 use three lengths of 6226 Cable, etc. To connect T-C-41, T-C-20, T-C-42 or T-HP-3 Staff Stations, measure from Staff Station to the one Master to which Staff Station originates calls. To connect the T-C-42 Staff Station measure a separate length of cable from Staff Station to each Master Station to which Staff originates calls (for each T-C-41 or T-C-42, follow same procedure). Connect T-S-111 at any convenient point between remote speaker and Master Station.

TALK-A-PHONE ALL-TRANSISTOR "CHIEF REDI-POWER" MASTERS These units have all the operational features of the "CHIEF," plus the additional feature of built-in extra power (up to 20 watts) for use when and as needed. Provides additional volume for calling many stations at once, or noisy locations singly. Needs no separate power booster, which would eliminate return speech. Return speech is received at normal room volume. REDI-POWER Masters have a self-compensating amount of volume, whether you call 2, 10 or 20 stations simultaneously. Each station receives its pre-determined volume with no division of output as you call more stations at once. Use REDI-POWER Masters with "CHIEF" Masters and Staffs in same system. Add RW-10 and REDI-POWER Masters can page any group of stations with a single selector button. Paged stations can also be used for intercommunication. Operates on 110-120 volts, AC only. U.L. Approved.

T-C-RP-5912 Redi-Power Master 12 station capacity. Wt. 18 lbs.
List Price Per Station $235.00.....Net **138.00**
T-C-RP-5920 Redi-Power Master 20 station capacity. Wt. 21 lbs.
List Price Per Station $265.00.....Net **155.00**



T-C-42, T-C-42M



T-C-41, T-C-41M



T-C-41R

TALK-A-PHONE "CHIEF" UNIVERSAL STAFF STATIONS For use with any "CHIEF" or "CHIEF REDI-POWER" Master. Like Masters, Staff Stations can be connected "privately" or "non-privately", and can originate calls. When "non-private", calls can be answered at a distance from Staff without using controls. Persons at "non-private" Staffs may reply to all Masters in the system (whether directly connected to them or not) and can originate calls to one Master or two Masters, depending upon Staff's capacity. Connected "privately" no one can listen-in to Staff, but any Master can call. "Private" Staffs can originate calls and reply to one or two Masters. Each Staff has "busy signal" and "monitoring signal" features. Staffs do not connect to an electrical outlet . . . are distinctively styled in modern cabinets that combine the look and feel of fine grained leather with the strength and rigidity of steel. Attractively finished in charcoal gray and brushed chrome. Size: 7½"w x 8¾"d x 2⅞"h.

T-C-41. Staff Station for origination-of-call to one Master. Wt. 8 lbs.
List Price, Each $36.50.....Net **21.50**
T-C-41M. Same operation as T-C-41 and in cabinet of same style, color and size, but in grained baked enamel finish. Wt. 8 lbs. List Price, Each $29.95.....Net **17.50**
T-C-42. Staff Station for origination-of-call to two Masters. Wt. 8 lbs.
List Price, Each $45.00.....Net **26.50**
T-C-42M. Same operation as T-C-42 and in cabinet of same style, color and size, but in grained baked enamel finish. Wt. 8 lbs. List Price, Each $38.50.....Net **22.50**
T-C-42R. Same as T-C-42, but for flush wall mounting. Stainless Steel Front Panel, 4⅜ x 7⅜". Wall Opening: 4⅛"w x 6½"h x 2"d. Wt., 5 lbs.
List Price, Each $38.50.....Net **22.50**
T-C-41R Flush mounted Staff Station for use with any of above Masters. Requires wall opening 4⅛" W. x 6½" H. Stainless steel front panel measures 4⅜"W. x 7⅜" H. Complete with plaster ring. List Price Each $29.95.....Net each **17.50**
T-SM-L Optional accessory for surface mounting T-C-41R on wall.
List price each $7.80.....Net each **4.60**
T-HP-3. Hi-Power Sub-Station for wall mounting in charcoal gray metal case. Wt. 8 lbs.
List Price, Each $28.00.....Net **16.50**
T-HP-3V. Same as above, but with built-in volume control, adjustable to full output. List Price, Each $36.50.....Net **21.50**
T-C-20. Nine-inch weatherproof re-entrant horn. List Price, Each $44.95..Net **26.50**
T-C-20V. Same as above, but with built-in weather resistant volume control, adjustable to full output. List Price, Each $59.95.....Net **34.95**

Optional Wall Mounting Brackets for Models T-C-41, T-C-41M, T-C-42 and T-C-42M are available. See description on preceding page.

Optional Equipment

Cradle Phone Available on all Models. Add "H" to Model No. when ordering. List Price, Each—add $59.95.....Net add **35.00**
Model T-S-111 Wall Mounted Cradle Phone. List Price, Each $75.00....Net **44.00**
LD—Long Distance Feature Available on "Chief," Master Stations. Add "LD" to Model No. when ordering. List Price, Each—add $20.00.....Net add **11.75**
T-S-101 Wall Switch For origination of call to one Master through T-C-20, or T-HP-3 in Chief systems. List Price, Each $11.95.....Net **6.95**
T-S-102 Wall Switch For origination of call to two Masters through T-C-20, or T-HP-3 in Chief systems. List Price, Each $19.95.....Net **11.70**
T-RW-10 Right-of-Way Relay. List Price, Each $63.00.....Net **37.00**
T-HP-30 Power Booster. List Price, Each $138.00.....Net **81.00**

Cable (For Indoor and Outdoor Use)

6206 Cable for connecting T-C-41, T-C-42, T-HP-3, T-C-20 with origination of call. List Price per Ft. 14c.....Net per Ft. **8¼c**
6214 Cable for inter-connecting T-C-4906 Masters. List Price per Ft. 24c. Net per Ft. **14c**
6226 Cable for inter-connecting T-C-4912, T-C-4920, T-C-4930, T-C-4940, T-C-4950, T-C-RP-5912 and T-C-RP-5920 Masters. List Price per Ft. 47c.....Net per Ft. **28c**
6902 Cable for connecting T-HP-3, T-C-20 without origination of call.
List Price per Ft. 3½c.....Net per Ft. **2c**

All Prices Slightly Higher West of Rockies-All Prices and Specifications Subject to Change Without Notice. Manufactured under exclusive TALK-A-PHONE Patents

New **"Built-in Business Intercom"** for offices, stores, medical centers, etc. can be supplied on request. Write today for details.

TALK-A-PHONE CO.

© U.C.P., Inc.

For Quality Acoustics The Name Is...

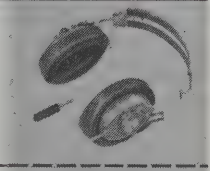
TELEX

QUALITY ACOUSTIC PERFORMANCE . . . and unexcelled reliability have been the primary design criteria for Telex products for twenty-six years. This and superb Telex craftsmanship have built a reputation for product excellence that is our proudest possession.

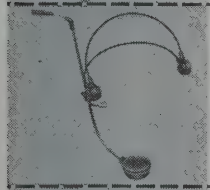
WIDE PRODUCT RANGE Shown below are selected products representative of the complete Telex line. Special products are designed and built to meet specific application requirements. A line of miniature switches is also available. Write for detailed information.



DYNA-TWIN®—Dynamic driver with moisture-proof mylar diaphragm delivers exceptionally flat response from 30 to 20,000 cps. The ultimate in sound quality for language laboratories, commercial applications and high fidelity use. With or without boom microphone.



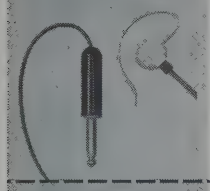
STEREO-TWIN—Elliptical speakers deliver response of 16 to 15,000 cps for right and left stereo channels. Listening with the stereo-twin is a breathtaking new experience for even the experienced audiophile. Removable foam rubber cushions can be washed and sanitized.



BOOM—MIKE HEADSET—Two-way communications unit is suitable for a broad field of applications, including switchboard, amateur radio, general communications. Standard equipment on intercontinental jets. Easy to slip on, simple to adjust, practically unnoticeable to wear. Mike boom is adjustable.



TELESET®—For inexpensive general purpose listening the teleset cannot be surpassed. The same high quality magnetic driver used in the magna-twin delivers full range response with excellent tonal quality. Rugged construction assures reliability. Completely field serviceable as are other Telex headsets.



TELETHIN EARSET®—Nearly unnoticeable when worn at the ear for private listening to portable radios, record players or dictation equipment. Ideal for hospital and other group listening requirements. Ear loop supports miniature magnetic speaker comfortably. Speaker available as a separate component for use with a variety of cords and ear loops.



PILLOW SPEAKERS—With a Telex magnetic or dynamic pillow speaker, radio, tv, tape or phonograph programs can be enjoyed privately through the pillow without disturbing others. Very popular for bedroom late-tv viewing and in hospitals, nursing homes and motels. Diaphragm sealed against corrosion, dirt and moisture for reliable service.



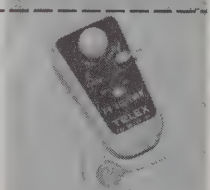
MAGNA-TWIN®—Rugged practicality and superior sensitivity of magnetic driver elements have won acceptance of the Magna-Twin with or without boom microphone as standard for language laboratories and communications. Frequency response: 50 to 10,000 cps.



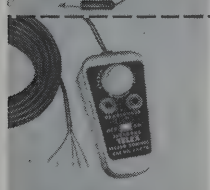
DYNASET®—An all purpose headset with pleasant tone, the light weight dynaset has hundreds of general listening applications. Receiver is located in "Y" with sound carried through acoustical tubing to both ears. 50 to 6,500 cps. Weight is only 1.25 ounces.



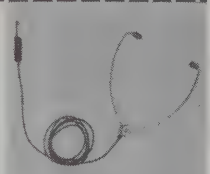
TWINSET®—A favorite of private and airline pilots, the twinset makes any Nav/Com system perform at its best. FAA approved, it weighs only 1.6 ounces, rests lightly at the temple with sound piped directly into the ear. Ambient background sound remains intelligible for cockpit conversation, yet full communication effectiveness is maintained.



TV LISTENER—Listen to television through your private earset without disturbing others. Ideal for late night viewing. Widely used in hospitals, rest homes, motels and dormitories—wherever quiet must be combined with television entertainment. Two earsets may be used simultaneously. On-off switch and volume control at chair side.



STEREO CONTROL KIT—The stereo control kit allows adjustment of stereo speakers by remote control from your chair. Two headsets may be plugged into the miniature control model which carries an on-off switch and volume control. Kit complete with simple instructions and 15 foot cord.



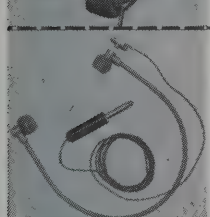
MONOSET®—The original under-the-chin lightweight headset for use with dictating machines, the monoset is a favorite of secretaries. Clear, clean sound reproduction makes dictation easier to understand. Light weight of 1.2 oz. allows efficient transcription for extended periods without fatigue.



INTEGRAL-CONTROL STEREO-TWIN—The only headset to provide ideal stereo balance under all listening conditions. Smoothly styled control knobs on each earpiece provide separate sound level control for each channel. The same superb sensitivity and response that has won wide audiophile acceptance for the standard Stereo-Twin headset. Now add integral channel control for ultimate headset enjoyment.



AMPLIFIED DYNAMIC HEADSET—Self-contained transistor amplifiers with volume control eliminate need for external amplifier equipment, making this headset a two-wire intercommunication system. All-dynamic moisture proof mylar drivers. Noise-cancelling microphone. Ideal as self-contained student position for Language Labs, or in noisy industrial environments. Removable noise protector foam ear cushions.



TELE-FI®—The tele-fi gives 30% better understanding of speech because the single speaker delays sound to one ear imperceptably for greater "depth of sound." With replaceable foam eartips, unit includes plastic earframes for use as a single earset. Excellent for monitoring, phone order boards, office machines.

TELEX /*Acoustic Products*

TELEX

ATLAS SOUND

ATLAS PAGING AND TALK BACK SPEAKERS

The HU and CJ models listed below are all equipped with the well-known "Versalock" mounting bracket. This rigid, rugged and dependable bracket is completely adjustable on both a horizontal and vertical plane, affording "pin-point" directivity and simple secure mounting. The HU and TP horns are constructed of aluminum, while the CJ horns are molded of indestructible Fiberglas. Rugged diecastings and tough steel parts add strength wherever necessary. All models are 100% weatherproof under all climatic conditions.

HU-12N Small in size and low in cost. Excellent for low power paging and talk-back systems where limited coverage is required.

HU-15N The famous ATLAS SOUND "work horse," HU-15N is the most popular all-purpose, trouble-free speaker of its type and size.

HU-24N Similar to HU-15N. The larger horn improves low frequency response and increases over-all efficiency. For paging and talk-back systems that are also required to reproduce music.

CJ-14N A wide angle speaker with a rectangular horn opening which gives broad sound dispersion in the horizontal plane while maintaining good vertical coverage.

EC-10 The lowest priced American-made speaker designed specially for low power systems requiring limited coverage. Made possible by a breakthrough in design, materials and performance, EC-10 gives improved results and high efficiency for intercom and other applications formerly using cone speakers.

Horn sections are molded of a new, tough, all-weather, acrylic plastic and the handsome beige-brown color combination blends with any decor. The tough steel bracket is adjustable and makes mounting simple and secure. Model EC-10 is unmatched where size, weight, appearance and high efficiency combined with low cost are factors.

CJ-30N Similar to CJ-14N, except the power handling capacity is increased and the larger, wide angle horn improves low frequency response.

TP-15N One high efficiency driver unit does the work of two for low cost bi-directional coverage in long corridors and outdoors. The universal bracket mounts the dual horns at a 10° angle down or out from wall surface or pole.

MODEL	POWER	IMPEDANCE (specify)	FREQUENCY cps	SOUND LEVEL#	DISPERSION	DIMENSIONS	SHIPPING WEIGHT	NET PRICE
EC-10	6 Watts	8 or 45 ohms	400-13,000	112 db	125°	6¼" Bell dia. 6⅜" deep	2½ lbs.	8Ω $14.25 45Ω $15.15
*HU-12N	7.5 Watts	8 or 45 ohms	350-13,000	115 db	120°	7½" Bell dia. 7¼" deep	3½ lbs.	8Ω $16.80 45Ω $17.70
*HU-15N	25 Watts	8 or 45 ohms	250-13,000	123 db	100°	9¾" Bell dia. 8¾" deep	6 lbs.	8Ω $20.70 45Ω $21.60
HU-24N	25 Watts	8 or 45 ohms	200-13,000	124 db	95°	11¼" Bell dia. 12" deep	6 lbs.	8Ω $23.10 45Ω $24.00
CJ-14N	7.5 Watts	8 or 45 ohms	350-13,000	115 db	120° x 60°	5½" high 9½" wide 8" deep	3½ lbs.	8Ω $18.60 45Ω $19.50
CJ-30N	25 Watts	8 or 45 ohms	250-13,000	121 db	120° x 60°	6" high 14" wide 11¼" deep	7 lbs.	8Ω $26.10 45Ω $27.00
TP-15N	25 Watts	8 or 45 ohms	250-13,000	120 db Each horn	100° Each horn	9¾" Bell dia. 16½" long	7½ lbs.	8Ω $32.10 45Ω $33.00
TP-24N	25 Watts	8 or 45 ohms	200-13,000	121 db Each horn	95° Each horn	11¼" Bell dia. 23" long	8 lbs.	8Ω $35.70 45Ω $36.60
DU-12N	7.5 Watts	8 or 45 ohms	350-13,000	115 db	110°	7" Bell dia. 14" long	4 lbs.	8Ω $2[illegible].0 45Ω $22.50
DC-5	6 Watts	8 ohms	120-7,000	105 db	\—	7" Bell dia. 14" long	3 lbs.	8Ω $14.25

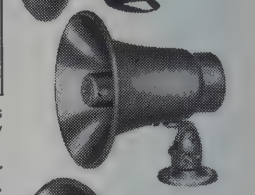
* Available with factory preassembled and prewired T-11 weatherproof line transformer. Model HU-12NT: Net Price $23.25. Model HU-15NT: Net Price $27.15.

Measured at 4 ft. on axis rated power.

LINE TRANSFORMERS IN COMPLETE ATLAS SOUND CATALOG

NEW


EC-10

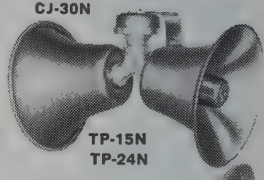

HU-12N


HU-15N
HU-24N


CJ-14N
CJ-30N

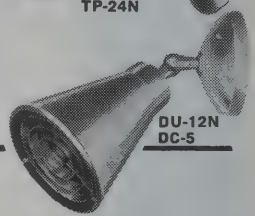
TP-24N Same as TP-15N but equipped with oversized horns for improved low frequency response. Excellent for bi-directional paging locations required to reproduce music.

The DéCor speakers described below are designed to simulate a lamp, handsomely styled for contemporary interiors. All horn parts, fully adjustable bracket and base-canopy, are finished in brushed satin aluminum. Base-canopy conceals wiring and matching transformer, if required. All mounting hardware included. May be used outdoors in sheltered locations.


TP-15N
TP-24N

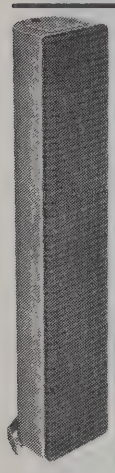
DU-12N Equipped with a driver type reproducer unit for high efficiency, directivity and intelligibility.

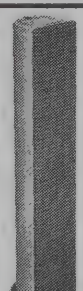
DC-5 Equipped with a high efficiency weather-resistant 5" diameter cone speaker for pleasing reproduction of low level voice and music. Ideal for locations where appearance is a critical factor, such as churches, conference halls, restaurants and similar quiet surroundings.

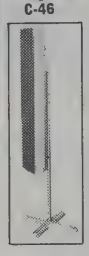

DU-12N
DC-5

ATLAS Columair SOUND COLUMNS

(with exclusive EASY-MOUNT Universal Bracket)


C-66


C-46



The "Columair" consists of an in-line array of six frequency adjusted cone speakers. The in-line configuration produces a sound pattern having a broad horizontal and narrow vertical distribution. Provides uniform sound intensity even at varying distances from the sound column. EASY-MOUNT swivel bracket permits optimum adjustment of critical beam pattern. Transformer cover plate located at top of enclosure. Constructed of heavy gauge steel finished in light beige two tone spatter. Plastic grill cloth in contrasting shade covers front plywood panel. Interior lined with "Tufflex" acoustic padding. Fine appearance blends with most décors.

SPECIFICATIONS	C-46	C-66
Speaker Array	Six, Four-Inch	Six, Six-Inch
Frequency Range	200-10,000 cps	125-10,000 cps
*Power Capacity	20 Watts	40 Watts
**Vert. Distribution Angle	26-36 Degrees	22-32 Degrees
**Hor. Distribution Angle	120-160 Degrees	120-160 Degrees
Impedance (Total)	16 Ohms	16 ohms
Dimensions	28" x 5¼" x 5"	42" x 7¾" x 6"
Net Weight	8¼ Lbs.	18½ Lbs.
Net Price	$37.50	$57.00

Model MK-1 Columair stand attachment kit. ..... **Net Price $ 1.35**
Model SS-4 Speaker stand for Columair. ..... **Net Price $14.10**

New WR-7



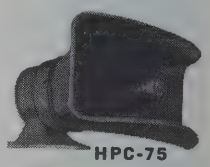
ATLAS WR-7 TWO-WAY SPEAKER SYSTEM

WR-7 A high fidelity design woofer/tweeter system for speech and music installations requiring above average sound quality. Positions horizontally or vertically on concealed wall brackets. Beige finish and grill cloth match ATLAS SOUND Columair. Construction is similar to C-46 and C-66. Ideal for auxiliary use with sound columns. ..... **Net Price $22.50**

WR-7 Specifications: Power: 15 watts. Impedance: 8 ohms. Response: 70-15,000 cps. Speakers: special 5" x 7" ellipsoid woofer with 6 oz. ceramic magnet, special 3" tweeter. Dimensions: 18" long, 8" wide, 5½" thin. Shipping wt. 8 lbs.

ATLAS HIGH POWER ELECTRONIC SIREN AND MOBILE SPEAKERS

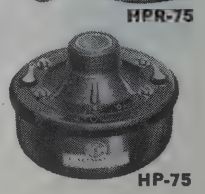
HPC-75 Designed specially for electronic siren applications and high power mobile public address use. Low silhouette, fiber glass, cobra-flare horn gives wide dispersion. Rigid, one-piece cast bracket for fail-safe mounting. Weatherproof. Power: 75 watts. Impedance: 16 ohms. Response: 225-8,000 cps. Dispersion: 120° x 160°. Dimensions 6" high x 14" wide x 11¼" deep. Shipping wt: 8½ lbs. **Net Price $57.00**


HPC-75

HPR-75 Same as HPC-75 except with round horn and 100° dispersion. Dimensions: 9" bell diameter, 8¾" deep. Wt.: 7 lbs. **Net Price $50.25**


HPR-75

HP-75 High power public address and electronic siren driver unit only. 1⅜"-18 driver threads for use on any industry-standard horn. Power: 75 watts. Impedance: 16 ohms. Response: 125-8,000 cps. Dimensions: 4⅜" diameter, 3⅞" deep including threads. Shipping wt.: 4¾ lbs. **Net Price $34.50**


HP-75

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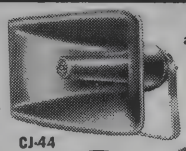
ATLAS SOUND

ATLAS COBRA-JECTOR

MODEL CJ-44 ALL PURPOSE WIDE ANGLE PROJECTOR—COMPLETE WITH SUPER POWER DRIVER—POLYESTER FIBRE GLASS CONSTRUCTION

All weather speaker with "Acousti-Matched" built in driver unit. The projector and reproducer is a single package, matched design resulting in maximum conversion efficiency. (Power input in watts versus sound pressure output.) The CJ-44 controlled response has been carefully restricted within frequency limits most useful in PA and high level music reproduction. As a result, speaker output energy is not wasted in the reproduction of frequencies that do not contribute to efficient performance.

Net Price $47.70



CJ-44

All speakers approved by Federal Civil Defense Administration.



DR-54
DR-42
DR-32



GB-1

Input Power (cont.)	40 watts
Power Equalized Response*	60 watts
Input Impedance	16 ohms
Response	115-12,000 cps
Dispersion	120° x 60°
Dimensions—Bell	23″ x 13″
Overall length	19″
Weight	16 lbs. net 19 lbs. shipping

*Input range limited to frequencies above horn cut off.

MOUNTING BRACKET FOR CJ-44 AND ALL DR PROJECTORS

MODEL GB-1 For all Atlas projectors using "U" type bracket mounting. It permits the speaker to be quickly adjusted in both a horizontal and vertical plane and securely locked in position. Average adjustment limits 160° on the horizontal and 65° on vertical direction. Bonderized steel, baked enamel finish, all hardware supplied. Shipping weight 3 lbs. .....**Net Price $3.60**

ATLAS DR PROJECTORS

NON-RESONANT—STURDY—WEATHERPROOF

Atlas DR projectors are the result of many years of acoustic research. This costly engineering and elaborate tooling has resulted in projectors that are without acoustical or mechanical equal. All acoustical sound paths are clean and uniform without steps or pockets to disturb the normal function of the horn. These critical design features eliminate conditions of turbulence, frequency cancellation and resultant signal distortion. All models are equipped with a heavy duty "U" bracket. This bracket is securely fastened to a main body casting which will not fail when subjected to extreme conditions of stress, strain and vibration.

SPECIFICATIONS	DR-54	DR-42	DR-32
Air Column	4½ ft.	3½ ft.	2½ ft.
Low Frequency	115 cps	140 cps	190 cps
Bell Diameter	26 inches	21 inches	16½ inches
Length (less driver)	19 inches	16 inches	12½ inches
Shipping Weight	23 lbs.	14 lbs.	10 lbs.
Net Price	$29.40	$21.60	$18.00

NEW ATLAS AP-30 PROFESSIONAL SPEAKERS

BUILT-IN TRANSFORMERS • WATTS/IMPEDANCE SWITCH • SCREW-TO-LINE TERMINALS



New AP-30

A screwdriver is the only tool required to mount, connect and adjust new AP-30 Series with exclusive ATLAS SOUND VARI-TAP CONTROL/CONNECT CENTER. Screw line terminals, built-in transformers and externally adjustable watts/impedance switch save time and costs of installation. Silver plated switch contacts, varnish impregnated transformers and AP-30 driver units are sealed in against water, dirt and corrosion. Terminal/switch cover plate is cable strain relief and omni-directional mounting bracket adjusts in three planes. New driver unit provides high efficiency needed with low wattage amplifiers, rugged 30 watt power handling when needed for noise penetration and distance coverage. Professional, metal construction with special corrosion-proofing and melamine enamel finish. Voice/coil diaphragm assembly field replaceable without soldering.

BX-1 Armored cable adaptor for all Series AP-30. **Net Price $1.50**

MODEL	POWER	IMPEDANCE	POWER TAPS	SHIPPING WT.	NET PRICE
AP-30	30 watts	8 or 45 ohms	——	5 lbs.	8Ω$23.10 45Ω$24.00
AP-30T	30 watts	4,000, 2000, 1000, 666, 333, 167 Ω	1.2, 2.5, 5, 7.5, 15, 30	6 lbs.	$29.10
AP-30T-25	30 watts	500, 250, 125, 83, 42, 21 Ω	1.2, 2.5, 5, 7.5, 15, 30	6 lbs.	$29.10

All Series AP-30: FREQUENCY RESPONSE: 225-14,000 cps. SOUND LEVEL: 125 db. DISPERSION: 100° DIMENSIONS: 10″ wide, 9½″ high, 10½″ deep.

ATLAS EXPLOSION-PROOF HIGH EFFICIENCY SPEAKERS

APPROVED BY UNDERWRITERS LABORATORIES FOR USE IN HAZARDOUS LOCATIONS WHERE EXPLOSIVE ATMOSPHERES EXIST



HLE-1-30
HLE-2-30



HLE-1-32
HLE-2-32

Highly efficient due to exclusive design of explosion barrier. **Class 1** speakers for use in atmospheres containing ethyl ether, cyclopropane, gasoline, naphtha, benzine, butane, acetone, lacquer, natural gas, etc. **Class 2** can be used in Class 1 conditions as well as in atmospheres containing dust of magnesium, coal, coke, flour, starch, grain, etc.

NET PRICE			
HLE-1-30	$73.50	HLE-1-32	$82.20
HLE-2-30	$85.50	HLE-2-32	$94.20

FULL SPECIFICATIONS IN ATLAS SOUND CATALOG

ATLAS HEAVY DUTY SPEAKERS



SPB-1

SPB-1 Industrial duty speaker with heavy guage bell, protective screen and fully adjustable Versalock bracket. Weatherproof. Power: 25 watts. Impedance: 8 ohms. Response: 300-13,000 cps. Dispersion: 110°. Dimensions: 7¼″ bell diameter, 6⅛″ deep. Shipping wt. 5½ lbs. **Net Price $27.00**

SPB-3C Ruggedized, weatherproof speaker with cast aluminum conduit/armored cable box for industrial service. Combination bulkhead mounting plate and adjustable U bracket adapts to any surface. Power: 25 watts. Impedance: 16 ohms. Response: 300-13,000 cps. Dispersion: 130°. Dimensions: 6-11/16″ wide, 9⅛″ high, 4¾″ deep. Shipping wt. 6½ lbs. **Net Price $33.00**



SPB-3C New

ATLAS MOBILE SPEAKERS

MO-1 Weatherproof speaker with special, rigid, one-piece cast bracket for fail-safe use on vehicles. Concealed wiring and special, one-piece horn discourage tampering. High efficiency for use with mobile radio transceivers. Power: 25 watts. Impedance: 8 ohms. Response: 300-13,000 cps. Dispersion: 120°. Dimensions: 7¼″ bell diameter, 6⅜″ deep. Shipping wt. 4½ lbs. **Net Price $26.40**



MO-1 New

MO-2 Compact mobile communications speaker with welded steel, bracket for concealed, limited space use in vehicles. Power: 25 watts. Impedance: 8 ohms. Response: 300-13,000 cps. Dispersion: 130°. Dimension: 6⅝″ wide, 8″ high, 4¾₁₆″ deep. Shipping wt. 5 lbs. **Net Price $26.40**

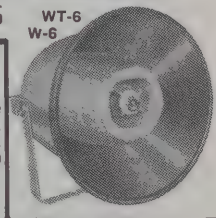


MO-2 New

ATLAS ALL WEATHER HI-FI SPEAKERS

WT-6 Weatherproof, high fidelity type two-way system. Attractive beige color for indoor and outdoor use wherever wide range, clean music reproduction is important. Adjustable bracket. Power: 15 watts. Impedance: 8 ohms. Response: 100-15,000 cps. Dispersion: 120°. Dimensions: 15″ bell diameter, 12″ deep. Shipping wt. 16 lbs. **Net Price $36.00**

MODEL W-6 identical to WT-6, but less tweeter. Extended range to 8,000 cps with special cone speaker. Shipping wt. 14 lbs. **Net Price $27.00**



WT-6
W-6

ATLAS BI-DIRECTIONAL BAFFLES

TW-8 Grill openings on both sides gives coverage in opposite directions with any 8″ cone speaker. Decorative beige finish, 9″ diameter and 5″ thin, adjustable bracket. Less speaker. Shipping wt. 3½ lbs. **Net Price $6.60**

TW-10 Same as TW-8, but with speaker. **Net Price $9.60**

TW-9 with 5″ x 6″ bracket. Less speaker. Shipping wt. 4 lbs. **Net Price $8.40**

TW-11 Same as TW-9, but with speaker. **Net Price $11.40**



New

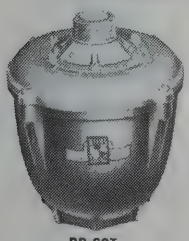
TW-8
TW-10



New

TW-9
TW-11

ATLAS DRIVER UNITS • SUPER POWER—SUPER EFFICIENT



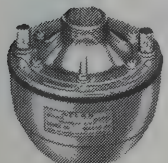
PD-60T
PD-60



PD-20
New



PD-4V



PD-5VH



PD-5VT

Lifetime guarantee against electro-acoustical failure when operated to specifications. New designs, materials and double weather sealing give the ultimate in response, efficiency and trouble-free, reliable service. Models PD-5VH, PD-5VT, PD-60 and PD-60T feature self-aligning, field replaceable diaphragm assemblies. Excellent for replacement in any trumpet with standard 1⅜″ x 18 driver threads.

SPECIFICATIONS	PD-60T	PD-5VT	PD-5VH	PD-4V	PD-20
Power (continuous)*	60 watts	40 watts	40 watts	30 watts	20 watts
Power (equalized response)†	100 watts	60 watts	60 watts	50 watts	25 watts
Voice Coil Impedance	16 ohms	16 ohms	16 ohms	16 ohms	16 ohms
Sound Intensity#	136 db	131 db	131 db	128 db	125 db
Frequency Response cps	70-12,000	80-12,000	80-12,000	85-7,000	120-7,000
Transformer Imp. ohms	16, 85, 125, 250, 500, 1000, 2000	16, 125, 250, 500, 1000, 2000			
Trans. Power Taps, Watts 70 Volt Line	60, 40, 20, 10, 5, 2.5	40, 20, 10, 5, 2.5			
Shipping Weight	8 lbs.	7 lbs.	5 lbs.	4 lbs.	2¾ lbs.
Net Price	$37.20	$30.60	$22.50	$17.70	$13.80

PD-60 Same as PD-60T Less Transformer $30.60

* Integrated speech and music full range. † Input range limited to frequencies above horn cut off.
Measured 4 ft. on axis, 6 ft. air column with integrated full power input

ATLAS SOUND, Division of AMERICAN TRADING AND PRODUCTION CORPORATION

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ATLAS SOUND

ATLAS MICROPHONE STANDS AND ACCESSORIES

ATLAS SOUND microphone stands and accessories are noted for variety, quality and reliable performance. The famous, extra-long clutch for secure, full hand grip is standard on all manual models. Clutch operation is velvet-smooth, wear proof parts are jam free and positive locking; the adjustable tube cannot slip and drop unexpectedly.

New, low profile bases with modern, slim silhouettes are less conspicuous and more functional. Improved designs concentrate base weight at the outer edge for maximum stability. Additional anti-tip bumpers are located between self-leveling, shock-absorbing pads which protect desk, table and floor.

Superchrome plated finishes are lifetime wear and rust resistant. Stand parts and accessories are precision threaded for easy assembly and versatile interchangeability. All models have standard ⅝"-27 threads for microphone attachment.

MS-10C Popular, budget-priced floor stand for low cost applications. Sturdy, wrinkle gray base with stability for average weight microphones.

New Low Profile Bases

MS-4 Three tubes with two clutches adjust from standard height for adults to special low of 25" for children and seated performers. Ideal for instrumentalists requiring low microphone placement. New, low silhouette base with dark gray wrinkle finish.

MS-11C General purpose, all chrome design with new, low profile base contour and more weight for greater stability. Slim, inconspicuous silhouette is both elegant and modern, suits any decor where styling and appearance are important.

MS-14G Identical to MS-11C, but all gold finished for special decor requirements. Complements both black and gold model microphones.

MS-11S Self-locking version of MS-11C with unique, automatic clutch for effortless, instantaneous changes in height. The stand is adjusted by simply grasping the decorative black control sleeve and raising or lowering the microphone. Removing the hand automatically locks the position. All chrome with new, low profile base.

MS-12C Same general purpose, stable design as new MS-11C, with base finished in dark gray wrinkle.

MS-12S Special, automatic clutch action for easy, quick height adjustments. Identical in size, unique operation and applications to MS-11S, except with wrinkle gray base.

MS-20 Rugged, heavy duty combination for safer support of any microphone. Larger 12", low contour base has more anti-tip weight at the outer edge for maximum stability. Oversize 1⅛"-⅞" tube assembly includes adaptor for ⅝"-27 threads.

MS-25 Professional floor stand. Integral air suspension system counterbalances microphone weight to prevent out of control crashdown, take effort out of height changes. Air cushioning action is adjustable, floats microphone tube gently down without severe mechanical shock if clutch is accidently not tightened or released. Heavy duty, gray and chrome base contacts floor on large, 17" circle. Triangular shape and concave sides permit standing close for easy handling without stepping on base. Oversize 1⅛"-⅞" tube combination includes ⅝"-27 thread adaptor. MS-25 gives maximum stability and safety for all microphones, including the finest and most expensive — at home, on stage and in the studio.

CS-1 Tripod base infinitely adjustable from 10" diameter standing, to 42" circle flat on floor. Reverse-collapses to compact 23" for storage. Useful in restricted space, on uneven surfaces, for clustering microphones and indoor/outdoor portability.

CS-52 Handsome, three-legged floor stand. Combines the slim, less conspicuous appearance of modern, low profile design with large, 15" base stability. Packaged in one, reshippable carton.

CS-42 Similar to CS-52 in design, except that base is readily collapsible for portable use or convenient storage. Packaged in one, reshippable carton.

	Model	Type	Height	Base	Tube	Weight	Net Price
	MS-10C	Economy	35" to 63"	10" Gray	Chrome	10 lbs.	$ 6.45
	MS-4	Wide range	25" to 65"	10" Gray	Chrome	10 lbs.	10.05
	MS-11C	General use	34" to 62"	10" Chrome	Chrome	13 lbs.	8.70
NEW	MS-14G	Gold Special	34" to 62"	10" Gold	Gold	12 lbs.	11.25
	MS-11S	Auto-locking	39" to 62"	10" Chrome	Chrome	13 lbs.	15.60
	MS-12C	General use	34" to 62"	10" Gray	Chrome	12 lbs.	6.90
	MS-12S	Auto-locking	39" to 62"	10" Gray	Chrome	12 lbs.	14.10
	MS-20	Heavy duty	37" to 66"	12" Gray	Chrome	15 lbs.	10.80
	MS-25	Professional	38" to 67"	17" Gray	Chrome	22 lbs.	17.70
	CS-1	Collapsible	23" to 62"	Cadmium	Chrome	5 lbs.	13.50
	CS-52	Three-legged	34" to 62"	15" Gray	Chrome	9 lbs.	7.50
	CS-42	Portable	34" to 62"	16" Gray	Chrome	9 lbs.	8.70

CS Type Demountable Microphone Floor Stands—with full grip—"Velvet Action," fully collapsible—quick and simple "Come Apart" base design. This new and revolutionary design in microphone stands is ideal for fixed as well as portable applications. Excellent for use when it is desired to contain the stand within the amplifier or speaker carrying case. The stability of the assembled stand is equal to many types employing heavy cast iron base construction. The base legs are easily removed to permit minimum size, lightweight transportation. The spring lock leg-holding mechanism of this ingenious design offers a quick and simple "Come Apart" feature. No tools or screw fastenings are required to hold the base assembly together. No small parts to become lost. The self-leveling legs are chrome plated, tipped with skid-proof rubber shock absorbent bumpers —eliminates vibrational conductivity . . . protects polished floor surfaces against damage.

Model	Finish	Height Adj.	Shipping Weight	Net Price
CS-32	Full Chrome	36" to 64"	5 lbs.	$7.95
CS-33	Full Chrome	26" to 64"	4 lbs.	9.30

Each stand is individually packed complete in a single carton.
Model CS33 can be collapsed to a total length of only 22½".

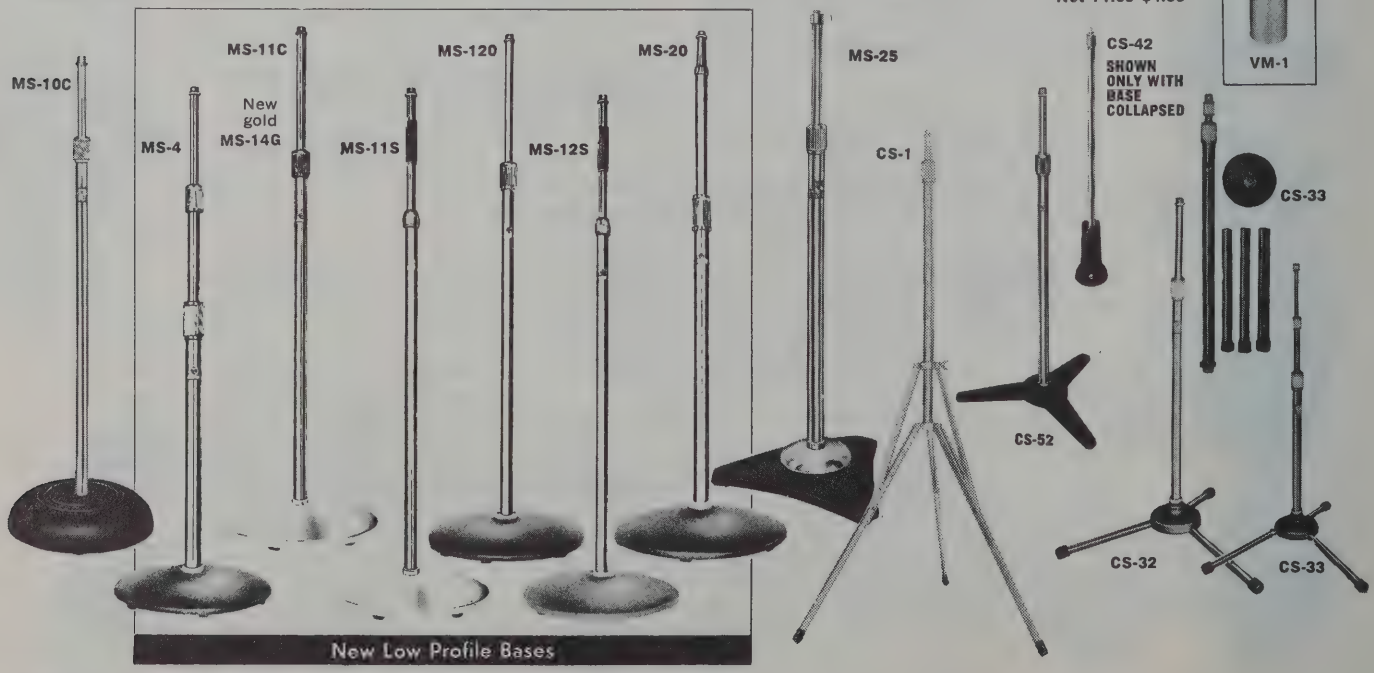
VM-1 SHOCK MOUNT The VM-1 shock mount will eliminate or greatly reduce microphone pick up of external mechanical shock and stand vibrations.

The shock mount is equipped with male and female ⅝"-27 threads permitting convenient insertion between the microphone and the microphone stand.

The VM-1 is constructed of die castings and brass turnings finished in bright polished chrome — overall length 4¾", diameter 1"

Net Price $4.50





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ATLAS SOUND

ATLAS MICROPHONE DESK STANDS AND ACCESSORIES

DS-4 Highly polished molded phenolic base is light beige in color with chrome upright tube. The smooth base will not scratch or mar table tops. Upright tube can be easily removed from base. Base diameter 5", height of tube 4", thread size ⅝"-27. Shipping weight ½ lb. **Net Price $1.50**

DS-5 Non-Adjustable Desk Stand. Base cast iron, finished in gun metal shrivel. Stable base is equipped with pads to prevent damage to desk or table tops. Base diameter 6", tube height 4" chrome finish. Shipping Weight 2 lbs. **Net Price $2.10**

DS-7 Same as above but equipped with upright adjustable from 8 to 13 inches. Equipped with standard "Velvet Action" clutch adjustment. Thread ⅝"-27. Shipping Weight 3 lbs. **Net Price $3.60**

DS-10 "Stream Liner" Desk Stand. Features "Rear Cable Exit". Mike cable is concealed under center section of chrome trim and directed out at rear of base; results in added stability and improved appearance. Constructed of precision die castings, finish gun metal grey, bright chrome trim. Rubber bumpers prevent damage. ⅝"-27 thread. Shipping Weight 1½ lbs. **Net Price $3.60**

TS-8 Adjustable Banquet Stand. Low silhouette base is a trim, modern design. Upright adjustable from 14½" to 26". Both base and upright finished in full super-chrome. Shipping wt. 5½ lbs. **Net Price $6.45**

DS-9 Professional Desk Stand. Handsome appearance of modern, low silhouette base and tapered upright, both finished in satin chrome, complements the finest microphones. Stable 8" diameter base protects against accidental microphone damage. 4" upright tube. 5 felt base pads (4 lbs.) **Net Price $5.10**

DS-14 Desk stand is functionally and aesthetically suited to slim, elongated microphones. Gun-metal shrivel finished base with protective felt pads and 3" polished chrome upright tube with ⅝"-27 thread. (2 lbs.) **Net Price $2.70**

SB-1 Dispatcher and Switchboard Mike Support. For use over telephone switchboards, dispatcher's desk, dais, banquet table, etc. 12 inch long, flexible, chrome plated "goose neck" arm is mounted on a spring loaded swivel, can be swung aside when not in use. A feed thru hole is located at the mike end of the "goose neck" so that the mike cable can be concealed within the flexible arm. Base casting is rear loaded so that the base will not tip forward. Finish grey shrivel. Shipping Weight 13 lbs. **Net Price $10.80**

SW-1 Gyromatic Swivel permits microphone to be adjusted to any angle, up, down, around. Locks in any position. Die cast finished in chrome. **Net Price $3.15**

LO-2 "Lock-On" accessory for instantaneous microphone attachment or removal without threading on or off any stand or support. One half of LO-2 remains fastened to the microphone, the other half stays on the stand. Excellent for floor show, sports announcing and similar uses where microphones must often be removed. Positive lock holds microphone safely in hanging positions on booms, ceiling supports and stage battens. Chrome finish. **Net Price $2.10**

SO-1 "Snap-On" accessory. Identical to LO-2 but less locking feature. Spring loaded, ball bearing design for secure, safe microphone attachment and quick disconnect on any upright floor stand. **Net Price $1.65**

FS-1 Foot Switch for press-to-talk paging applications using any microphone with a single ended input. May also be hand operated on desks and switchboards. Easily rewired for press-to-open circuit requirements. **Net Price $8.40**

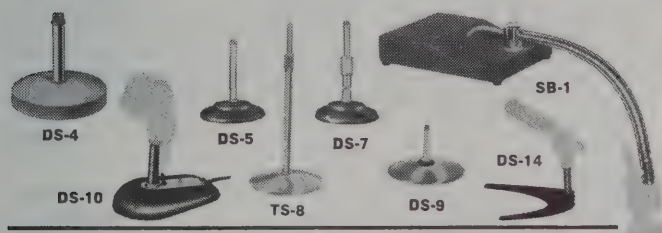
NS-1 "The Chesty" Neck Supported Mike Holder. Permits a quick and simple "three way" adjustment. Mike is always in a suitably "close talking" position reducing acoustic feedback problems. Wide comfortable chest support prevents rolling due to sudden movement. Cool and lightweight, weighing only 6 oz. **Net Price $3.90**

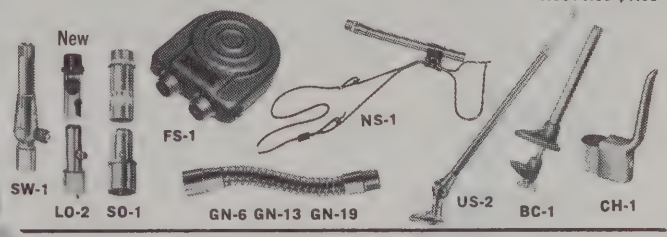
GN "Goose Necks" can be attached to any microphone stand or fixture; ends have ⅝"-27 male and female threads—all finished in bright chrome, model numeral indicates overall length of "goose neck" in inches.
Net Price GN-6 $1.20, GN-13 $1.65, GN-19 $2.40

US-2 The Atlas US-2 Multi-Purpose microphone support. Excellent for use with language laboratories, dispatcher desks, telephone switchboards, pulpits, etc. The boom arm vertical adjustment and the rotation motion is spring loaded and will "float" the mike in the desired position without requiring a locking adjustment. The microphone cable may be concealed within the boom arm and will feed thru the swivel assembly and base flange. A small opening is provided at the microphone end of the boom for cable entry. Finished in "super-chrome". Specifications—Boom arm length 12¾"; vertical adjustment of boom 180°; rotation 360°; base length 2⅝". **Net Price $5.70**

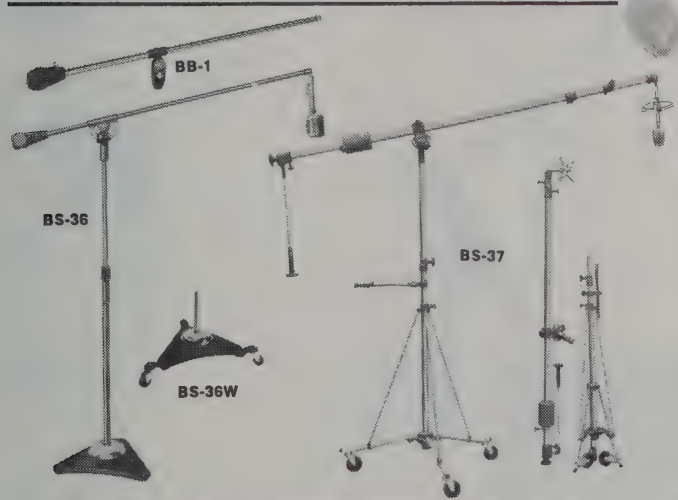
BC-1 Bracket Clamp. A multitude of useful applications. Can be used with a boom arm, goose neck, etc. Chrome tube 6" long. Clamp can be removed and top flange screwed or bolted in position. ⅝"-27 thread. **Net Price $2.40**

CH-1 Cable Hanger. Fits all tubes ⅞" to 1¼" diameter. The mike cable can be quickly coiled and looped over the cable hanger when moving, storing or transporting the mike and stand. Finished in polished chromium. **Net Price $1.65**





ATLAS BOOM STANDS



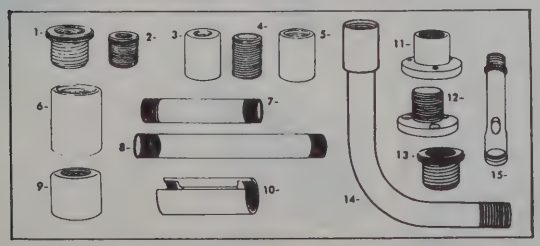
BB-1 "Baby Boom" Attachment. Versatile device that can be attached to any type of floor stand. All swivel parts are precision die castings resulting in smooth operation and secure positioning. Length of boom 31"—Chrome plated ⅝"-27 thread. Shipping weight 3½ lbs. **Net Price $5.10**

BS-36 Professional Boom Stand with "Safety Air Lock Cushion" offers all the advantages of "Floating Action" plus a secure and dependable locking adjustment. The Air Lock built into the vertical section prevents any accidental or sudden slippage of the upright section. A gyromatic swivel joint is provided at the microphone end. The base casting is equipped with shock absorbent chrome plated, "domes of silence". Specifications: Boom length 62" (extension may be added). Vertical extension from 48" to 72". All tubular sections super-chrome plated. Base finished in polished chrome and gun metal. Shipping weight 36 lbs. **Net Price $42.00**

BS-36W Mobile Model. Identical to the BS-36 except that the base is supplied with ball bearing swivel casters, permitting the entire stand to be wheeled to various positions in the studio. Shipping weight 40 lbs. **Net Price $48.00**

BS-37 Porto Boom. For most exacting TV studio, sound motion picture application, etc., ideal for portable service. Fully collapsible down to dimensions permitting its transportation in all automobiles. Air check prevents any accidental collapse of the upright. Detailed description sheet available. Specifications: Upright retracted, 5¼ ft., extended 9 ft. Boom retracted 7 ft., extended 18 ft. All tubular sections aluminum processed in "Alumilite". Counter weight cast iron with bronze locking mechanism. Base casters 4" swivel type. Base spread 42" on radius. Shipping weight 73 lbs. **Net Price $420.00**

ATLAS MICROPHONE ADAPTORS AND FITTINGS



Model	Description	Net Price
AD- 1	⅝"-27 female to ½" pipe thread male (RCA Adaptor)	$ .63
AD- 2	⅛" pipe female to ⅝"-27 male	.45
AD- 3	⅛" pipe female to ⅝"-27 female	.48
AD- 4	¾" long, ⅝"-27 male running thread	.30
AD- 5	⅝"-27 female to ⅝"-27 female, coupling	.48
AD- 6	⅞"-27 female to ⅞"-27 female, coupling	.81
AD- 7	3" long tube ⅝"-27 male each end	.54
AD- 8	6" long tube ⅝"-27 male each end	.60
AD- 9	⅞"-27 female to ⅝"-27 female	.60
AD-10	⅝"-24 female to ⅝"-27 female (W. E. Adaptor)	.90
AD-11	Flange, ⅝"-27 female. Base Diameter 1¾"	.60
AD-12	Flange, ⅝"-27 male. Base holes on 1¼" mounting centers	.60
AD-13	⅞"-27 male to ⅝"27 female	.57
AD-14	Right angle bent tube: ⅝"-27 male and female each end	1.05
AD-15	Cable "Feed-Thru" adaptor: ⅝"-27 male and female each end	.99

Note: Thread sizes specified as ⅛" pipe is I.P.S. (Electrical fitting) Measures Approx. ⅜" dia. All adaptors chrome plated.

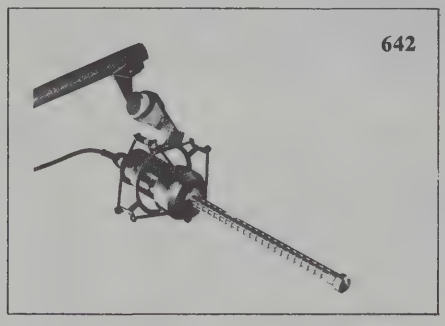
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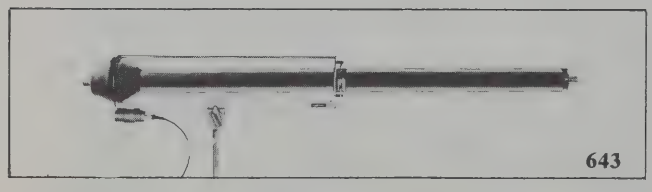
BC-TV-RECORDING MICROPHONES-DYNAMICS

Cardiline™ Unidirectional Microphones

MODEL 642—A highly directional dynamic microphone combining the best characteristics of cardioid and distributed front-opening designs.* Essentially cardioid unidirectional up to 500 cps; highly directional over balance of range. Working distance is 2 to 3 (or more) times that of conventional types. Excellent for boom use with Model 356 shock mount. Minimum mechanical shock transfer and wind noise interference. Response: Flat from 30 to 10,000 cps or choice of 5 or 10 db low frequency reduction steps by screwdriver adjustment. Acoustalloy® diaphragm. Impedance: 50, 150 and 250 ohms, externally adjustable. Output level: —48 db. Cast aluminum case with non-reflecting gray finish. Supplied with Cannon UA-3-14 connector, 20′ 3-conductor shielded broadcast cable and UA-3-11 Cannon connector. Length, 17⅞″; max. diameter, 3 3/16″. Must be used with Model 356 or 327. Net weight, 3 lbs., 4 oz.
Net Each **$234.00**
*U.S. Patent No. 3,095,084

MODEL 643 — A highly refined application of the distributed front-opening principle*, for more specialized and extended long-range pickup. Provides cardioid pickup pattern to 100 cps and is highly directional over balance of range. Includes integral 3-position switch for selecting flat response or one of two bass tilt-down positions. Integral 100 cps cutoff filter. Impedance: 50, 150, or 250 ohms, selected by changing internal connector pin. Light weight extruded and cast aluminum case with integral shock mount and removable wind filter. Output: —48 db. Response: 30 to 10,000 cps. Length, 7′2″. Maximum diameter, 4″. Cannon UA-3-14 and UA-3-11 connectors. Supplied with 20′ cable and storage case. Fits ⅝″-27 or ½″ pipe threads. Net weight, 12 lbs. **Net Each** **$936.00**


642


643

Electro-Voice®

Cardioid Unidirectional Microphones

MODEL 666 SUPER CARDIOID—Variable-D®† principle for high discrimination against sounds from back. Permits close talking without bass accentuation. Working distance increased by 1.7:1 over pressure microphones. Single moving element is exclusive, rugged Acoustalloy® diaphragm. Response: 30 to 16,000 cps. Output: —58 db. Internal connector pin impedance change. Wired for 150 ohms; taps at 50 and 250 ohms. Non-reflecting gray finished aluminum case. Built-in Cannon UA-3 connector. Clamp-on stand mount with ⅝″-27 thread and 20′ cable. Length, 7¾″. Diameter, 1¾″. Net weight, 11 oz.
Net Each **$153.00**

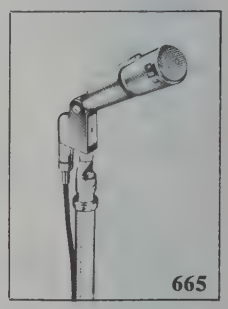
MODEL 666R RISING RESPONSE CARDIOID—Like Model 666, but with response which rises 4½ db from 100 to 2,000 cps, reducing pickup of low frequency reverberations, room "rumble" and prop noise. Particularly suited to boom use. Output: —57 db.
Net Each **$153.00**

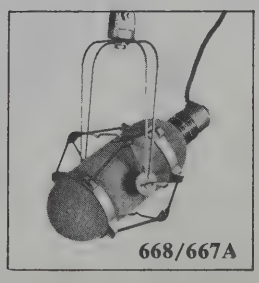
MODEL 665 CARDIOID—Similar in design and function to the Model 666, but for less exacting applications. Uniform response 50 to 14,000 cps. Recessed switch provides 50 or 250 ohms. Pressure-cast zinc case. Non-reflecting gray finish. Diameter, 1⅞″; length, 7 3/16″; 18′ cable. Fits ⅝″-27 threaded stand. Net weight, 1 lb. 10 oz. **Net Each** **$90.00**

MODEL 668—Entirely new Continuously Variable-D®† cardioid designed specifically for boom use in broadcasting and recording. Extremely smooth cardioid pattern for maximum reduction of ambient noise and reverberation. Integral windscreen eliminates noise caused by motion of boom-mounted microphone through the air. Built-in equalizer provides choice of four response curves in both high and low frequency ranges. Acoustalloy® diaphragm. Response: 40-12,000 cps. Output: — 51 db. Internal impedance selector permits 50, 150 or 250 ohm connection. Non-reflecting gray finished aluminum case. Two-foot mechanical isolation cable and twenty-foot three-conductor shielded broadcast type cable included. Supplied complete with shock isolating boom mount. Length: 9⅝″. Diameter, 3¼″. Net weight, 1 lb. 11 oz.
Net Each **$297.00**
†U.S. Patent No. 3,115,207

MODEL 667A — Identical to Model 668 except incorporates selection of three low-frequency and two high-frequency response curves. **Net Price** **$207.00**


666


665


668/667A

© U.C.P., Inc.

Electro-Voice®

Omnidirectional Microphones

MODEL 655C SLIM-TRIM TV DYNAMIC—Frequency response, 40 to 20,000 cps. Output level, —58 db. Excellent level affords high signal-to-thermal noise ratio. Can be used on stand, in hand or on boom. Easily concealed in studio props. Acoustalloy® diaphragm. Pop-proof grille. Impedance: 50, 150 and 250 ohms. Impedance easily changed. Non-reflecting gray finish. Cannon UA-3 connector. No. 300 clamp-on stand mount included, has 5/8"-27 thread. Length, 10½" less connector. Diameter, 1". 20' cable. Net weight, 7 oz. **Net Each** **$120.00**

MODEL 654A SLIM-TRIM BROADCAST DYNAMIC—Frequency Response, 50 to 16,000 cps. Output level: —57 db. Can be used stand-mounted, hand-held or as lavalier. Matches all low impedance inputs. Built-in Cannon XLR-3 connector. Acoustalloy® diaphragm. 18' cable. Length, 6 15/16" diameter, 1⅛". Non-reflecting gray finish. Net weight, 17 oz. Supplied with Model 300 clamp and lavalier neck cord.
Net Each **$60.00**

MODEL 635A BROADCAST DYNAMIC — Completely redesigned and improved omni-directional microphone, perfect for hand and stand use by entertainers and vocalists. Light weight turned steel case is extremely rugged and provides magnetic shielding. Finished in non-reflecting matte satin chrome. Effective four-stage pop and dust filter virtually eliminates need for external wind screen. Response: 60-15,000 cps (rising). Output, —55 db. Acoustalloy® diaphragm. Low impedance. Cannon XL-3 connector. 3-conductor, 18' cable. Supplied with model 310 clamp. A cable which eliminates connector attached to microphone with no modification is available as optional equipment. Microphone size: 6" l. x 1⅜" diameter (head). Net weight, 6 oz. **Net Each** **$49.20**

MODEL 649B MINIATURE LAVALIER—Smallest dynamic lavalier—weighs only 31 grams without cable; length, 2¼"; diameter, ¾". Ideal for programming where unobtrusive or concealed microphone placement is desirable. Frequency response: 70 to 10,000 cps. Output: —61 db. Acoustalloy® diaphragm. Omnidirectional. Matches all low impedance inputs. 30' shielded cable. Aluminum case finished in non-reflecting gray. Complete with neck cord, belt clip and stand mounting clamp.
Net Each **$63.00**

"Thin-Trim" Dynamic Microphones

MODEL 652—Almost invisible dynamic microphone. Microphone is mounted on the end of the semirigid tube bringing the moving coil element closer to the user for full range, pop free response. Breath and wind filter is an integral part of the microphone. Two clear plastic baffles provided to give either 8 db or 5 db boost in the brilliance range of 5,000 cps for added articulation. The microphone without the baffles gives a smooth response from 80 to 8,000 cps. Acoustalloy® diaphragm. The Model 652 is mounted in a 3/16" steel tube and finished in non-reflecting gray. Output level, —60 db. Matches all low impedances. Furnished with 3-conductor shielded 20' cable and Model 300 stand coupler. Length, 24". Net weight, 10 oz. **Net Each** **$72.00**

MODEL 652A — Same as model 652 except 15" long. Net weight, 8 oz. **Net Each** **$72.00**

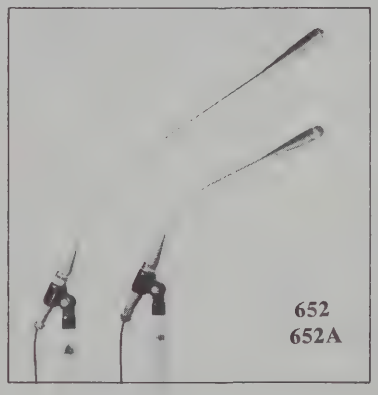
Sentry Series Studio Monitor Speaker Systems

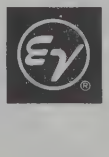
SENTRY I WALL OR CEILING MODEL — The first loudspeaker system designed specifically for monitor use in recording and broadcast studios. Permits precise monitoring and equalization uncolored by monitor speaker. Extremely wide, flat response allows use as studio reference standard. Precision driver components include 12" Radax loudspeaker, Diffraction Horn high frequency driver and special crossover. Provides smooth frequency response from 30 to 20,000 cps. Internal matching transformer accommodates 16, 150, and 600-ohm amplifier impedances. Quality hardwood cabinet, smooth sanded and sealed, ready for finishing in your choice of colors if desired. Neutral cane grille cloth. Dimensions: 21¾" h x 37" w x 17" d. Net weight, 82 lbs. **Net Price** **$165.00**

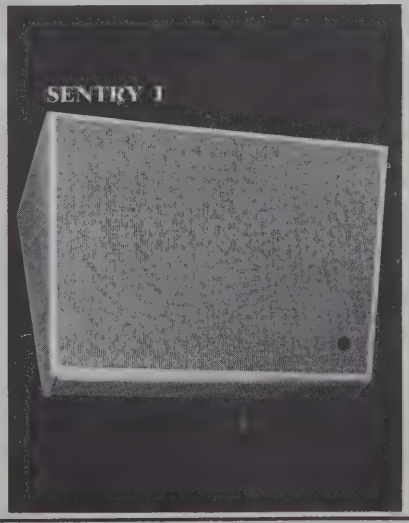
SENTRY II FLOOR MODEL — Same specifications as those shown for Sentry I. Finished on all four sides to permit vertical or horizontal mounting. Includes protective metal trunk-type corners which may be attached for portable applications. Dimensions: 32" x 20" x 13" deep. Net Wt. 68 lbs. **Net Each**...**$174.00**

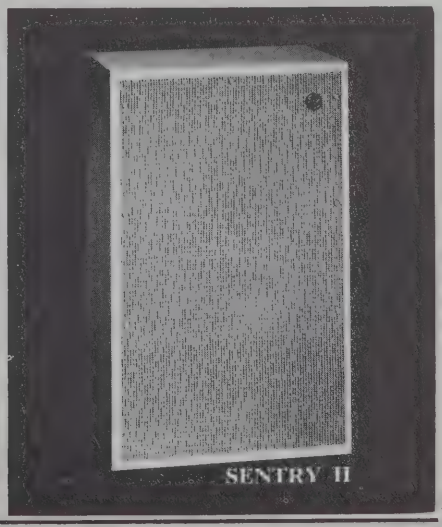
















GENERAL PURPOSE MICROPHONES

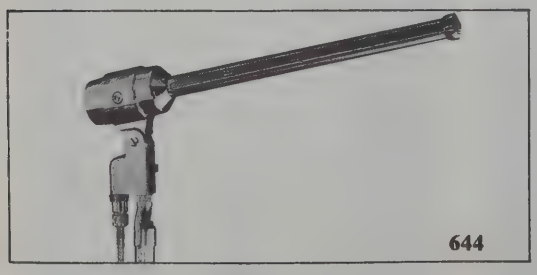
Electro-Voice®

Unidirectional Line Microphone

MODEL 644 SOUND SPOT® — Another Electro-Voice revolutionary development, the Sound Spot Model 644 is a combination cardioid and distributed front opening* instrument, making it the most directional P.A. microphone ever. The Model 644 has the farthest front pickup, or better than 2.5 times the working distance of pressure types. Work close or far away without change of frequency response.
Cancellation from the rear and sides exceeds 20 db above 700 cps giving practically complete rejection of unwanted sound. Cardioid below 700 cps. This feature gives extremely high rejection of random noise. Reverberation and feedback are vastly lower than with any other P.A. microphone, allowing much greater leeway in loudspeaker placement.
The effective front acceptance angle is 45° each side of center, providing best isolation of individual performers. The Model 644 is 9 db better on the reduction of wind noise and has far less response to shock than most other microphones.
Frequency response is smooth from 40 to 10,000 cps. Acoustalloy® diaphram. High output: —53 db. Dual high and low impedance selected by changing one tap on MC4M cable connector. The case is high-pressure die-cast zinc with ¾" aluminum tube; satin chrome finish. Rear diameter 2 5/16", length 16". Cable is 16'. Net weight, 2 lbs. 9 oz. **Net Each** **$66.00**
*U.S. Patent No. 3,095,084

Cardioid Unidirectional Dynamic Microphones

NEW MODEL 676 CARDIOID DYNAMIC — Radically new design brings truly professional quality to public address, recording, communications, and other general purpose microphone applications. Exclusive Continuously - Variable-D®* principle assures uniform, symmetrical cardioid pattern at all frequencies. Frequency response 40 to 15000 cps. Highest discrimination against feedback and unwanted sound. Exclusive three position switch offers controlled low-frequency attenuation to overcome rumble and feedback when microphone is used at a distance. Slim design permits full view of person speaking. May be used hand held or with stand mounting clamp supplied. Rugged high pressure die-cast construction. Acoustalloy® diaphragm. Dual Lo-Z and Hi-Z, impedance changed by moving one wire in cable connector. Output, —58 db. Satin chrome finish. 16' cable. Size: 7⅜" l. x 1¼" dia. Net weight, 12 oz. less cable.
Net Each **$60.00**
MODEL 676A—Non reflecting Gray finish. Shipped wired for Lo-Z. **Net Each** **$60.00**
MODEL 676G—Gold finish. **Net Each** **$66.00**
MODEL 664 CARDIOID DYNAMIC — Similar to Model 666 in function, but designed for quality tape recording, communications, and public address applications. Cardioid pattern at all frequencies, with Variable-D* feature. Permits close talking without "booming" or bass accentuation. Provides better discrimination against unwanted sound. Blast filter minimizes wind effect. Acoustalloy® diaphragm shielded from dust and magnetic particles. Response 40-15,000 cps. Output —58 db. On-off switch. Dual Lo-Z and Hi-Z, impedance changed by moving one wire in cable connector. Pressure-cast case. Chrome finish. 16' cable. Size: 7¼" l., less connector; 1⅞" dia. Net weight, 1 lb. 10 oz. **Net Each** **$51.00**
MODEL 664A—Non-reflecting Gray finish. Shipped wired for Lo-Z. **Net Each** **$51.00**
MODEL 664G—Gold finish. **Net Each** **$54.00**


644

Omnidirectional Dynamic Microphones

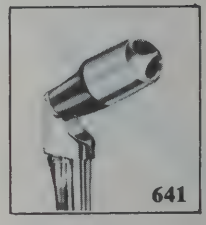
MODEL 641—Modern two-tone design dynamic microphone. High output level, wide-range response. For public address, home recording, communications, electronic teaching aids, paging systems. Integral On-Off switch, wide frequency response. 70 to 10,000 cps. Output —57db. 16 foot cable. Case is chrome plated die-cast zinc and gray high impact plastic. Standard ⅝"-27 stand connector. Available in Hi-Z or balanced Lo-Z, must be specified. Size: 4½" l. x 1¾" dia., not including stud. Net weight, 8 oz. less cable. **Net Each** **$21.00**

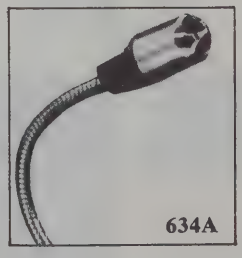
MODEL 634A—Similar to Model 641 (above) except furnished without stand mounting stud or on-off switch. Fits any stand, boom or gooseneck with complete cable concealment. Ideal for desk mounting on electronic teaching aids, amateur and commercial communications and switchboard mounting for paging systems. 6 foot cable and standard ⅝" -27 threads in rear of case. Hi-Z or balanced Lo-Z, must be specified. Size: 4" l. x 1¾" dia. Net weight, 8 oz. **Net Each** **$18.00**

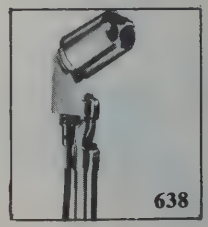
MODEL 638—Rugged, compact general purpose microphone. Ideal for all applications requiring maximum performance from microphone of minimum size. Response: 70 to 10,000 cps. Output: —57 db. 16-foot cable. Die-cast case with satin chrome finish. Standard ⅝"-27 stand connector. Available in Hi-Z or balanced Lo-Z, must be specified. Size: 3" l. x 1¾" dia., not including stud. Net weight, 8 oz. **Net Each** **$20.10**
*U.S. Patent No. 3,115,207


676


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641


634A


638

© U.C.P., Inc.

Electro-Voice®

MODEL 636 "SLIMAIR" DYNAMIC—Exceptionally fine for PA, recording and general use. Response 60-13,000 cps. Output —58 db. Pop-proof head. Wide pickup range. On-Off switch. Satin chrome finish. Tiltable head. 5/8"-27 thread. Dual Hi-Z or Lo-Z selected by changing one wire in connector. 16' cable. Length: 10¼" including stud. 1⅛" maximum diameter. Net weight, 15 oz. **Net Each**.....**$43.50**

MODEL 636G—Gold finish. **Net Each**.....**$46.50**

MODEL 630 HIGH FIDELITY, HIGH-OUTPUT DYNAMIC—Famous for quality at low cost. Response 60-11,000 cps; output level–55 db. Unaffected by heat or humidity. Acoustalloy® diaphragm. Tiltable head. Built-in MC-3 connector. On-Off switch. Satin chrome finish. Available in Hi-Z or balanced Lo-Z, must be specified. Size: 6¼" h. x 2" dia. 16' cable. Net weight, 1 lb. **Net Each**.....**$31.50**

MODEL 647A DYNAMIC LAVALIER—Smallest high quality microphone in the entire public address field delivers big microphone performance. Extremely rugged dynamic construction assures long life. Frequency response, 60 to 12,000 cps. Acoustalloy® diaphragm. Hi-Z or balanced Lo-Z, must be specified. Output: —60 db. Non-reflecting gray finish. 18' cable. Complete with neck cord, clip, and stand mounting clamp. Size: 3¾" l. x ¾" dia. Net weight, 2 oz. **Net Each**.....**$49.50**

MODEL 623 SLIM DYNAMIC—Ideal for PA, recording and general use. Use on stand or in hand. Omnidirectional. Response 60-12,000 cps; output level —56 db. Acoustalloy® diaphragm. Dual Hi-Z or Lo-Z selected by changing one wire in connector. Pressure-cast case, satin chrome finish. Tiltable head. On-off switch. 5/8"-27 thread. Size: 7½" l. x 1 5/16" dia. 16' cable. Net weight, 15 oz. **Net Each**.....**$34.20**

MODEL 611 "MERCURY" DYNAMIC—Traditional styling, fine performance for general sound pickup. Response 50-9000 cps; output level—55 db. Omnidirectional. Acoustalloy® diaphragm. Tiltable head. On-Off Switch. Built-in MC-3 connector. 5/8"-27 thread. Satin chrome finish. Available in Hi-Z or balanced Lo-Z, must be specified. 16' cable. Size: 2⅞" w. x 6¾" h. x 2⅜" d. Net weight 1 lb. 4 oz. **Net Each**.....**$27.00**

MODEL 624 DYNAMIC LAVALIER—Most economical dynamic lavalier on the market. For chest or hand use. Supplied with neck cord, support clip and 18' cable. Non-reflecting gray finish. Wire mesh head acoustically treated for wind and moisture protection. Output —56 db, response 100-7,000 cps. Acoustalloy® diaphragm. Available in Hi-Z or Lo-Z (not balanced to ground), must be specified. Cable has integral strain relief. Size: 3⅛" l. x 1¼" dia. Net weight, 14 oz. **Net Each**.....**$25.50**

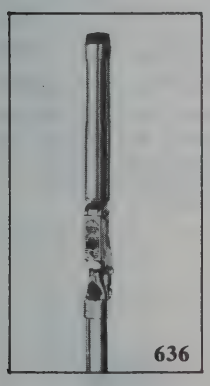
MODEL 619 "PRESS TO TALK" DYNAMIC—Modern, reliable base-station microphone ideal for ham, CB, or business communications and paging. Rugged die-cast stand in communications gray and contrasting, chrome plated die-cast head. Press-to-talk switch located on base may be moved into upper part of stand for grip-to-talk operation. Switch shorts microphone in "off" position and provides for relay operation or electronic switching. Response: 70-10,000 cps. Output: —57 db. Hi-Z or balanced Lo-Z, must be specified. 16' cable. Size: 4⅜" w. x 9" h. x 4¾" d. Net weight, 2 lbs. 2 oz. **Net Each**. **$28.50**

Crystal and Ceramic Microphones

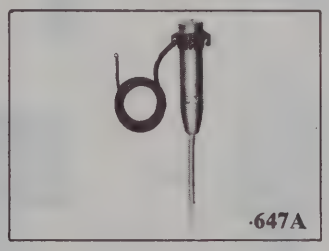
MODEL 951 CARDIOID CRYSTAL—Uses same Variable-D®* principle as E-V's BC-TV cardioids to obtain uniform directivity at all frequencies, high discrimination against unwanted sound. The 951 is an excellent wide-range, all-purpose PA microphone for a great variety of acoustic conditions, and especially useful where background noise and reverberation are a problem. Response 50-11,000 cps. Output —60 db. Hi-Z. On-Off switch. Pressure-cast case. Metalustre gray finish. 16' cable. MC-1 connector. 5⅜" l. (excluding stud), 1¾" dia. overall. Net wt., less cable, 1¼ lbs. **Net Each**.....**$32.70**

*U.S. Patent No. 3,115,207

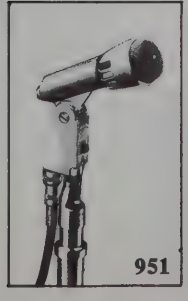
MODEL 924 LAVALIER CRYSTAL—Unique crystal lavalier for chest or hand use. Supplied with neck cord, support clip and 18' cable. Non-reflecting gray finish. Wire mesh head acoustically treated for wind and moisture protection. Output—60 db. Response 60-8,000 cps. Hi-Z. 3 9/32" l. x 1 7/32" dia. Cable has integral strain relief. Net weight 8 oz. **Net Each**.....**$12.00**

















GENERAL PURPOSE MICROPHONES

Electro-Voice®

MODEL 9 CRYSTAL—Same smart design and fine performance as Model 611. Response 50-10,000 cps. Output—50 db. Metal Seal Crystal. MC-1 connector. Hi-Z. 16′ cable. Net weight 1½ lbs. **Net Each** **$19.50**

MODEL 926 SLIM CRYSTAL—Level and response ideal for general purpose use. Response 60-8000 cps; output level —60 db. Hi-Z. Pressure cast case, satin chrome finish. Tiltable head. 5/8″-27 thread. 6¾″ l. x 15/16″ dia. 16′ cable with integral strain relief. Net weight 11 oz. **Net Each** **$17.70**

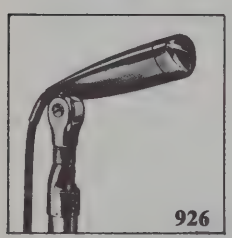
MODEL 920 "SPHEREX" CRYSTAL—Omnidirectional pickup. Response 60-10,000 cps; output level —50 db. Strong wire-mesh head acoustically treated for wind and moisture protection. High capacity, moisture sealed crystal. Hi-Z. Satin chrome. 5/8″-27 thread. Diam. 2¼″. 16′ cable. Net Weight 8 oz. **Net Each** **$16.50**

MODEL 714—A high output, ceramic hand-held communications microphone for paging, ham radio, and Citizens Band use. Molded, tough, gray Cycolac case, usually found only in most expensive mobile microphones, assures long life and protection from accidental shock damage. Response tailored for maximum intelligibility. High level, high impedance output —55 db over range of 100 to 7,000 cps. DPDT switch shorts microphone in "off" position and closes relay circuit in "on" position, may be used for electronic switching. 3-conductor coiled cord extends to 5′. Size: 2½″ w. x 3⅝″ h. x 1 7/16″ d. Net weight, 8 oz. including cable. Complete with hang-up bracket. **Net Each** **$9.90**


911


920


714 / 717


926


719


729


727SR

MODEL 717—Similar to Model 714 above except close talking cardioid pickup pattern for rejection of unwanted background noise and feed-back. Specially designed ceramic element with apertures on either side of diaphragm provides effective attenuation of sounds arriving from the rear and sides. Output level —55 db. Frequency response 100 to 7000 cps. **Net Each..$11.70**

MODEL 719 "PRESS TO TALK" CERAMIC — Versatile, modest cost base-station microphone for any communications or paging work. Integral stand and head are both die-cast, communications gray and chrome plated, respectively. Switch may be used for press-to-talk in base, or moved to upper part of stand for grip-to-talk use. Switch shorts microphone in "off" position, allows relay operation or electronic switching. Hi-Z. Output: —56 db. Response: 70-7,000 cps. 16′ cable. Size: 4⅜″ w. x 9″ h. x 4¾″ d. Net weight, 2 lbs. 2 oz. **Net Each** **$16.50**

MODEL 729 CERAMIC CARDIOID—The Model 729 is the lowest priced cardioid ever built. Random noise, reverberation and feedback reduced by a factor of 67%. Front pickup range nearly double that of pressure microphones. For public address, call and paging systems, home recorders, especially stereo, and general communications. Discrimination against sound from the rear makes the 729 execellent for amateur radio VOX operations. Tailored for single sideband. Output: —60 db. Response: 60 to 8,000 cps. High impedance only. Metalustre gray front with medium gray back. 8½′ cable. Attractive desk stand and floor stand adapter supplied. Size: 1½″ w. x 8¼″ h. x 1⅜″ d. Net weight, 9 oz. less cable and stand. **Net Each** **$14.70**

MODEL 729SR—With relay control switch. **Net Each** .. **$15.90**

MODEL 727 SLIM CERAMIC—A new approach to the design of ceramic microphones for PA, recording and general use; similar in appearance to Model 729. Withstands extremes of temperature and humidity. Response 60-8000 cps. Output —55 db. High impedance only. 8½′ cable. Metalustre gray front with medium gray back. Supplied with attractive desk stand and floor stand adapter. Size: 1½″ w. x 7¾″ h. x 1⅜″ d. Net weight, 9 oz. less cable and stand. **Net Each** **$10.80**

MODEL 727SR—With relay control switch. **Net Each** .. **$12.00**

MODEL 715 "CENTURY" CERAMIC—Use in any position—in hand, on table, on stand or overhead. Ceramic element. 60-7000 cps; output —55 db. Hi-Z. 5′ cable. Omnidirectional. Metalustre gray finish. Rugged, lightweight. AC-DC insulated. With 5/8″-27 adapter. Size: 2¼″ w. x 3″ h. x 1″ d. Net weight, 6 oz. **Net Each** **$7.80**

MODEL 715S — With on-off switch. **Net Each**..... **$9.00**

MODEL 715SR—With relay control switch. **Net Each** .**$10.50**

MODEL 712 CERAMIC—Low cost ceramic microphone. Fits need of low cost PA, home recording, paging and general use. Handheld. Moisture sealed ceramic. Response 70-7000 cps. High output —55 db. Hi-Z. Attractive gray Styron case. Size 2¼″ w. x 3″ h. x 1⅜″ d. 5′ cable. Net weight, 4 oz. **Net Each** **$4.50**


715


712

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Electro-Voice®

Differential And Special Purpose Microphones

MODEL 606 DIFFERENTIAL DYNAMIC—Close talking, noise cancelling. Accepts sounds of close origin (¼") and rejects sounds of distant origin. Response: 100 to 5,000 cps. Output at ¼": —55 db. Acoustalloy® diaphragm. ⅝"-27 thread. Built-in connector. Satin Chrome finish. Size: 3¼" h. including stud x 2" dia. Hi-Z or balanced Lo-Z, must be specified. 16' cable. Net weight, 8 oz. less cable. **Net Each** **$31.50**

MODEL 600E DYNAMIC MOBILE MIKE—Reliability factors have been improved over all previous designs. High-impact Cycolac case and rugged dynamic construction assure protection against shock damage. Easy-action switch provides years of use—shorts microphone in "off" position to eliminate electrical noise pickup and closes relay circuit when depressed. High output level —55 db. Response 100 to 7,000 cps specifically matched to high intelligibility requirements. Size: 2½" w. x 4" h. x 1½" d. Color, communications gray. Shielded coiled cord extends to 5'. Complete with hang-up bracket. Hi-Z or balanced Lo-Z, must be specified. Net weight, 10 oz. **Net Each** . . . **$23.40**

MODEL 600ES — Identical to 600E, except switch does not short microphone line when in off position. Use where a number of microphones are wired in parallel. Lo-Z only.
Net Each **$23.40**

MODEL 602F NOISE CANCELING DYNAMIC MOBILE MICROPHONE — New differential close-talking microphone featuring superior rejection of unwanted background noise. Two balanced rear port openings phase out sound originating more than ¼" away. Output, —55 db. Response, 200-5,000 cps. High-impact, rugged Cycolac case, communications gray. Press-to-talk switch shorts microphone in "off" position and closes relay contacts in "on". Shielded coiled cord extends to 5'. Hi-Z or balanced Lo-Z, must be specified. Size: 2½" w. x 4" h. x 1¾" d. Net weight, 10 oz. **Net Each** **$34.50**

MODEL 603TR TRANSISTORIZED NOISE CANCELING MOBILE — Developed especially for aircraft applications, the 603TR is a superior, highly reliable microphone providing all dynamic advantages for direct replacement of carbon units. Rejects sounds originating more than ¼" away for elimination of high ambient background noise. Built-in transistor amplifier with 48 db. gain matches output level of carbon circuits. Output adjustable with internal potentiometer up to —16 db. Magnetic hanger bracket furnished, holds face of microphone. Acoustalloy® diaphragm. Response: 200-4,000 cps. Coiled cord extends to 5'. Press-to-talk switch shorts microphone in "off" position and provides relay control. Lo-Z. Size: 2¼" w. x 3 9/16" h. x 1⅜" d. Net weight, 8 oz. **Net Each** **$44.00**

MODEL 602TR — Similar to 603TR with different case design, uses conventional hanger which is supplied. Fixed output level, —23 db. Response: 100-5,000 cps. Size: 2⅜" w. x 4" h. x 2" d. Net weight, 13 oz. **Net Each** **$55.80**

MODEL 210E CARBON — Similar to 600E but single-button carbon. Output — 50 db. Lo-Z. Press-to-talk switch closes microphone and relay circuit. Coiled cord extends to 5'.
Net Each **$21.00**

MODEL 205STCKK Differential Carbon — Close-talking, noise-cancelling, single button carbon. For aircraft and emergency communications. FAA approved — Certificate No. 1040. Blastproof, waterproof and shock resistant. Output at ¼": —50 db. Lo-Z. Black phenolic case. Press-to-talk switch closes microphone and relay circuit. Mounting bracket furnished. Coiled cord extends to 5'. Size: 2¼" w. x 4" h. x 2" d. Net weight 12 oz.
Net Each **$30.00**

MODEL 205STCKKP — Same as above with PJ-068 plug.
Net Each **$32.85**

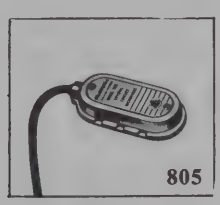
MODEL 625SKK DYNAMIC DIFFERENTIAL HANDSET — For paging, intercom, and communications. Sturdy phenolic case contains noise-canceling Lo-Z microphone and 150 ohm magnetic receiver. Response: 100-5,000 cps. Output: —55 db. Grip-to-talk switch closes microphone and relay circuit. Five-conductor coiled cord extends to 5'. Size: 2⅝" w. x 8½" l. x 3" d. Net weight, 1 lb. 8 oz. **Net Each** **$51.00**

MODEL 625TRSKK—Identical to Model 625SKK above except with two-stage transistor amplifier with gain of 35 db. for direct replacement in carbon microphone circuits. FAA type certificate: 3R42-2. **Net Each** **$73.50**

MODEL 648 INTERCOM MICROPHONE—Extremely versatile paging, intercom, or talk-back microphone. Omnidirectional. Acoustalloy® diaphragm. Non-reflecting gray. Does not include cable. Response: 50-10,000 cps. Output: —58 db. Hi-Z or Lo-Z, must be specified. Size: 6" l. x 1" dia., including ⅝"-27 thread adapter. Net weight, 8½ oz. **Net Each** **$33.60**

MODEL 805 CONTACT—For guitar, banjo, other stringed instruments. Hi-Z. Sealed crystal. Chrome finish. 15' cable.
Net Each **$12.00**



















MICROPHONE ACCESSORIES

Electro-Voice®

Clamps

MODEL 300 DETACHABLE MICROPHONE CLAMP—Light weight adapter fits any 1″ cylindrical microphone providing positive mounting to ⅝″-27 desk or floor stand. **Net Each**. . . **$6.00**

MODEL 301 SNAP-IN CLAMP — Similar to Model 300, but cut back to allow snap-in, snap-out mounting of 1″ dia. microphones. **Net Each** **$6.00**

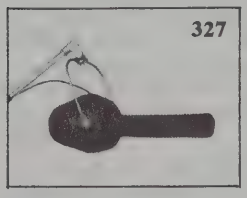
MODEL 310 DETACHABLE MICROPHONE CLAMP—Similar to Model 300 above, but designed for ¾″ diameter microphones. List Each **$6.00**

MODEL 311 SNAP-IN CLAMP — Similar to Model 301 for ¾″ dia. microphones. **Net Each** **$3.60**

Suspension Shock Mounts

MODEL 356 SUSPENSION SHOCK MOUNT—For use with Model 642 on boom or floor stand when no windscreen is used. **Net Each** **$30.00**

MODEL 366 SUSPENSION SHOCK MOUNT—Extremely light. Designed for use with 666 microphone. Installs without tools. Pigtail cable connection wth UA-3 connectors provides cable loop isolating boom shock noises. For any microphone with 1″ diameter. **Net Each**. **$24.00**



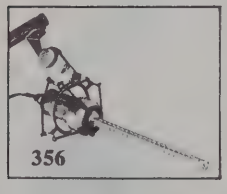


























Windscreens

MODEL 327 WINDSCREEN PACKAGE—Consists of 324 shock mount and 326 windscreen, for use with Model 642 microphone. Fabricated of Acoustifoam*, eliminates "blast" caused by fast panning of boom, or when used outdoors. Net weight, 1 lb., 8 oz. **Net Each**. **$60.00**

MODEL 324 SHOCK MOUNT—Suspension mount for Model 642 microphone. Will accept Model 326 windscreen. **Net** Each **$36.90**

MODEL 326 WINDSCREEN KIT—Acoustifoam* windscreen for Model 642 microphone. Compatible with Model 324 Shock mount. **Net Each**. **$26.10**

MODEL 335A WINDSCREEN—Acoustifoam* windscreen fits 630, 641, 634, 635 microphones. Net weight, ½ oz. **Net Each** **$7.50**

MODEL 355 WINDSCREEN—Designed to reduce or eliminate wind noise, this windscreen is constructed of Electro-Voice Acoustifoam*, a material which will not alter frequency response or polar characteristics of microphone. Also protects against mechanical shock damage and pickup of dust and magnetic particles. For use with models 655C, 654A, 676, 636, 623, and 926. Size, 9″ x 3¼″. Net weight, ½ oz. Color: gray. **Net Each** **$6.60**

MODEL 376 WINDSCREEN — One piece Acoustifoam* sleeve for 676 microphone. Gray. Size: 2½″ dia. x 6½″ l. Net weight, ¼ oz. **Net Each**. **$9.00**

MODEL 524A WINDSCREEN—Designed specifically for use with Model 666 microphone. Minimizes wind effect on boom operation or when used outdoors. Made of Acoustifoam.* Net weight, ½ oz. **Net Each** **$7.20**

Transformer and Filter

MODEL 502A MATCHING TRANSFORMER—Designed for use in series with mike line. Transformer windings have low distributed capacity and are amply shielded against inductive hum by a shield inside pressure-cast case. Designed for 50, 150, 250 and 500 ohms—to Hi-Z. Broadcast fidelity—response 40-20,000 cps ± 1 db. Size 2⅞″ l. x 2″ dia. **Net Each**. **$10.50**

MODEL 513 FILTER—Designed for use with low impedance microphones, has switch to match 50, 150 or 250 ohms. When used in line between microphone and preamp., it rejects unwanted noise below 100 cps. Terminals provided for cable connections. Size: 5⅝″ l. x 2¼″ dia. Net weight, 1 lb. 10 oz. **Net Each** **$42.00**

Microphone Stands

MODEL 415 RECLINING DESK STAND—Mounts 615, 715, 715S at 15° tilt. Metalustre gray. Size 2⅝″ x 2¾″ x 1″. Net Weight, 4 oz. **Net Each** **$1.05**

MODEL 418 DESK STAND—Use with microphones using small-type stud such as Models 611, 623, 630, 641, 635, 636, 911, and 951. Die cast base. Gray finish. **Net Each**. **$6.00**

MODEL 418-S—With switch. **Net Each** **$9.00**

MODEL 419 DESK STAND—Similar to Model 418 but for use with microphones using large-type stud such as Models 644, 664, and 665. **Net Each**. **$6.00**

MODEL 419S—With switch. **Net Each**. **$9.00**

MODEL 419G — Same as Model 419, except gold finish to match 664G microphone. **Net Each**. **$9.75**

MODEL 420 DESK STAND—Heavy cast iron stand finished in TV gray. Specifically designed for use with E-V 666, 655C, 654A, 652, 652A, 676 or other microphones with 1″ diameter. Clamp attachment for mounting 1″ cylindrical mikes, without tools. Base holds mike in position when subjected to ordinary strain. Net Weight, 3 lbs. **Net Each** **$12.00**

MODEL 420G — Same as 420, except gold finish to match 676G microphone. **Net Each** **$15.75**

MODEL 423A DESK STAND—Sturdy smartly styled, round die-cast base, 5⅛″ diameter. Rests firmly on rubber base buttons. Rich satin chrome. ⅝″-27 thread. 5″ matching stem riser. Net Weight, 1 lb. **Net Each** **$3.00**

MODEL 428 TOUCH-TO-TALK STAND—Fits standard ⅝″-27 thread. Lever-type DPDT switch for relay operation or microphone On-Off—closes or opens instantly or locks in "talk" position. Satin chrome; gray plastic switch lever with locking button. 7″ x 5⅛″ base diameter. Net Weight, 1¾ lbs. **Net Each**. **$10.50**

*Electro-Voice Trademark

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PUBLIC ADDRESS HORNS AND DRIVERS

Electro-Voice®

Compound Diffraction Projector

MODEL 848—Combines FC100 Compound Diffraction Horn plus DC30 Compound Driver for finest wide-angle sound, lowest distortion, highest quality of any projector. Specifications: Frequency response, 150-10,000 cps; impedance, 16 ohms; dispersion, 90° x 120°; power handling capacity, 30 watts; sound pressure level, 117 db; dimensions, 10½" x 20½" x 20". Net Weight, 13½ lbs. complete. **Net Price** **$49.50**

Projector Horns

Completely new designs assure finest performance with Electro-Voice projector horns. Two basic types from which to choose . . . compound and reentrant.

EXCLUSIVE COMPOUND HORNS permit widest range at lowest distortion, plus complete directional control of both highs and lows. Best wide-angle coverage with exclusive diffraction horns means better sound through entire coverage area. Concentrating compound horn provides highest efficiency at lowest distortion. Natural voice and music reproduction result in higher intelligibility without annoying peaks.

MODEL FC100—Similar to the famous CDP®, the FC100 provides two diffraction horns for uniform wide-angle coverage. Frequency response is not compromised since both horns are ideally designed to handle a specific portion of the range. Compound horn reduces distortion far below any other projector design. Flexible coverage control provided by individual adjustment of each horn. Large horn is fiberglass with Mesa Tan finish molded in. Use any E-V convertible driver. Specifications: Low-frequency horn — cut-off, 100 cps; taper, 100 cps; air column length, 58"; sound distribution, 90° x 120°. High frequency sound distribution, 90° x 120°; crossover, 1,000 cps. Mouth size 10½" x 20½", depth (less driver), 20". Net Wt. (less driver), 10¾ lbs. **Net Price** **$30.00**

MODEL AC100—Concentrating version of CDP®. Has all of the quality advantages of FC100, except utilizes round horns for most concentrated coverage with greatest efficiency. Retains compound design for lowest distortion—widest range. Use any E-V convertible driver. Specifications: Low-frequency horn—cut-off, 100 cps; taper, 100 cps; air column length, 56"; sound distribution, 80°. High-frequency sound distribution, 30°; crossover, 1,000 cps. Diameter, 21"; depth (less driver), 21"; Net Wt. (less driver), 11½ lbs. **Net Price** **$33.00**

REENTRANT HORNS provide wider range than ever before at lowest cost. Unique E-V ring reflector design provides better balanced highs than possible with conventional exponential designs, by reducing high-frequency losses often encountered in reentrant horns. Smoother response plus added useful range increases intelligibility and adds to more natural sound. Rugged aluminum die-cast mounting plate plus precision die-cast reentrant tubes assure long-lasting performance. Heavy spun aluminum round bell or fiberglass rectangular horn provides either concentrated coverage or medium angle coverage. Electro-Voice Reentrant Horns accept any standard driver with 1⅜"-18 threads.

MODEL FR150—Reentrant Horn. Medium-angle low-cost rectangular horn provides good coverage at low cost. Virtually indestructible fiberglass horn has Mesa Tan color molded in. Adjustable mounting angle allows best coverage. Can be stacked for multiple speaker applications. Ideal for car-top installation or wherever low silhouette is needed, and where bass response cannot be sacrificed. Accepts Electro-Voice convertible drivers or any standard driver with 1⅜"-18 thread. Specifications: Low-frequency cut-off, 150 cps; taper, 150 cps; air column length, 45"; sound distribution, 70° x 100°; mouth size, 10½" x 20½"; depth (less driver), 21"; Net Wt. (less driver), 9½ lbs. Shpg. Wt., 12 lbs. **Net Each** **$23.40**

MODEL AR150—Reentrant Horn. Round concentrating horn for maximum penetration at lowest cost. E-V ring reflector plus precision new exponential design contributes to widest range yet achieved from this horn type. Smoother curve results in high intelligibility, and remarkably natural voice and music quality. Rubber edge-damping ring eliminates resonances. High-efficiency design allows more useful volume from driver over entire range. Accepts Electro-Voice Convertible drivers or any standard driver with 1⅜"-18 thread. Specifications: Low-frequency horn—cut-off, 150 cps; taper, 150 cps; air column length, 41"; sound distribution, 85°; diameter, 21"; depth (less driver), 17". Net Weight (less driver), 6½ lbs. **Net Each** **$23.40**

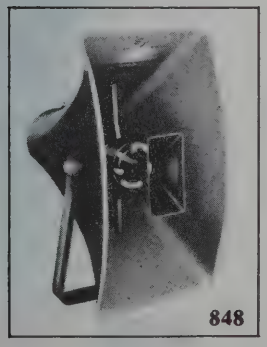
FR150





AR150





848

FC100



AC100



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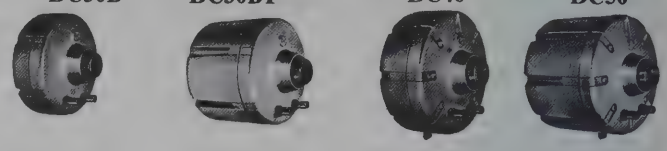
Electro-Voice®

Versatile Convertible Drivers

Now, for the first time, here are drivers that can be used interchangeably in compound or reentrant horns. Used on either type of horn, the new Electro-Voice Convertible Drivers feature highest efficiency available. Increased power handling plus extra increased efficiency make the 40- and 50-watt drivers uniquely useful where high power at minimum cost is essential. The high efficiency of all E-V Convertible Drivers is achieved without resorting to "peaked" response which may increase loudness, but does reduce intelligibility. The smooth response of these drivers insures most natural reproduction of voice and music for more satisfying quality with vastly reduced feedback problems and greatly increased tonal range. Double flux ceramic magnets provide long-lasting high efficiency in entirely new low-loss magnetic circuits. Edgewise-wound ribbon voice coils give 18% more efficiency.

The drivers are rugged and weatherproof; conversion to either reentrant or compound use can be made instantly in the field. Voice coils are also field replaceable, thus reducing repair costs to a minimum. E-V Convertible Drivers are available with 16-ohm voice coils or with built-in 70.7-volt line constant voltage transformers. This entirely new design concept gives better performance at minimum cost, making E-V Drivers your best buy.

DC30B **DC30BT** **DC40** **DC50**



Diaphragm Replacement Kits allow easy field maintenance of E-V Drivers.

DRIVER	8 Ohm	16 Ohm
828 or DC30 (Used on Model 848)	....	82016
DS30 (Used on Model 844)	8410	....
DC30B	....	83137
DC40	....	82088
DC50	....	82089
Net Price	$7.20	$7.20

Replacement kits not available for DC30BT, DC40T or DC50T.

		DC30B	DC30BT	DC40	DC40T	DC50	DC50T
Frequency Response††		150–10,000	150–10,000	140–11,000	140–11,000	140–11,000	140–11,000
Program Power Capacity		30	30	40	40	50	50
Sound Pressure Level†	FC100 Compound Horn	117 db	117 db	120 db	120 db	124 db	124 db
	AR150 Reentrant Horn	126 db	126 db	129 db	129 db	133 db	133 db
Voice Coil Impedance		16	16	16	16	16	16
Transformer Impedances, Ohms		.....	167, 333, 1000, 2000	.....	125, 250, 500, 1000	.....	100, 143, 200, 500
Transformer Power Taps, Watts		.....	30, 15, 5, 2.5	.....	40, 20, 10, 5	.....	50, 35, 25, 10
Dimensions (overall)		5½" dia. 3" l.	5½" dia. 5½ l.	6¼" dia. 4¼" l.	6¼" dia. 6" l.	6¼" dia. 4¼" l.	6¼" dia. 6" l.
Net Price		$19.80	$25.80	$25.20	$32.70	$32.70	$39.30

†Measured at 4' on-axis with full rated power from 750–1250 cps. ††Measured on-axis with FC100 horn.

Paging Speakers

MODEL PA7 REENTRANT PROJECTOR — Attractively styled horn is constructed completely of Implex — virtually indestructible. Non-resonant horn won't dent, finish can't wear off. Electro-Voice diaphragm design eliminates loading problems, provides cleanliness of reproduction never before achieved in small projectors. Handles 7½ watts over a range of 400 to 13,000 cps. Wide 120° dispersion angle provides excellent coverage. Mounting bracket allows horn to be positioned at any angle. 6¾" diameter by 6" deep. Net weight, 2 lbs.
Net Price **$16.20**

PA 7-45—Same as above but with 45-ohm voice coil.
Net Price **$17.10**

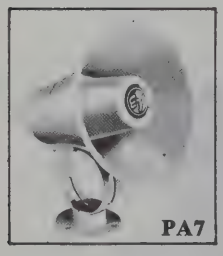
MODEL PA30—Entirely new thirty watt paging projector. Rectangular Implex horn design for maximum versatility, wide dispersion. Rugged, high—impact horn and conservatively rated driver assure maximum reliability. Smooth response for both voice and music. Universal swivel bracket permits placement in any position. Accepts Model TR3 line matching transformers for convenient, attractive installation in large systems. Frequency response: 250 to 14,000 cps. Power handling capacity: 30 watts. Nominal impedance: 8 ohms. Dispersion: 120 degrees by 90 degrees. EIA sensitivity rating 59 db. Sound pressure level 125 db. Dimensions: 11" H x 6½" W x 8½" D. Net weight, 5½ lbs. **Net Price** **$20.70**

MODEL PA30-45—Same as standard PA30, but with 45 ohm voice coil for simple installation in intercom systems.
Net Price **$21.60**

MODEL 844A For medium-angle sound distribution. Features smooth response with better lows to provide natural paging without feedback. Handles 30 watts—to reduce costs. Rugged die-cast horn, plus field-replaceable voice coil keeps service costs at a minimum. Frequency response, 250–13,000 cps; power handling capacity, 30 watts; nominal impedance, 8 ohms; dispersion, 90°; EIA sensitivity rating, 54 db; sound pressure level, 123 db; dimensions, 9⅞" diameter x 7⅞" deep; Net Weight, 5 lbs. 10 oz.; Shipping Weight, 8½ lbs.
Net Price **$23.40**

MODEL HC400—844A horn only. Will accept any driver with 1⅜"-18 threads. **Net Each** **$9.00**

MODEL 847—Utilizing the famous CDP® Principle—this wide-angle speaker provides higher articulation without annoying "peaked" response over a uniform 120° x 90° area. Low distortion results from use of TWO diffraction horns. 25-watt power handling capacity. Fiberglass horn has mesa tan color molded in. Frequency response, 250–10,000 cps; power handling capacity, 25 watts; sound pressure level, 114 db; dispersion, 90° x 120°; impedance, 16 ohms; dimensions, 11¾" x 7¾" x 10¼" depth. Net weight, 8 lbs. **Net Price** **$30.60**


PA7


PA30


847


844-A

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Electro-Voice®

Line Radiator™ Loudspeakers

Three new, wide-angle speaker designs permit wide horizontal dispersion while almost eliminating sound output above or below speaker. Superb for voice-reinforcement systems. Unusually wide frequency range coverage.

MODEL LR4A—Curved design* overcomes unwanted high-frequency dispersion at ends, eliminating echo and feedback. Contains nine 3″ x 5″ and three 3½″ cone speakers, 160° horizontal dispersion; 60° vertical dispersion. Frequency response: 200–15,000 cps. Power handling capacity: 25 watts program, 50 watts peak. Nominal impedance: 8 ohms. Size 49″ h. x 7″ w. x 13″ d. Mesa tan finished wooden enclosure. Net weight, 26 lbs.
Net Price **$75.00**

MODEL LR4S—Electrical filter removes end speakers from circuit as frequencies increase, eliminating high-frequency lobes at ends. Specifications like LR4A, except that dispersion is 160°, horizontal; 30°, vertical. Weatherproof enclosure with mesa tan finish. Size 52″ h. x 7 9/16″ w. x 4⅝″ d. Net weight, 28 lbs.
Net Price **$84.00**

MODEL LR7 — The largest of the revolutionary Electro-Voice Line Radiators. Both low- and high-frequency response extended. Utilizes nine 5″ x 7″ loudspeakers and two T35 vhf drivers for frequency range of 100 to 20,000 cps. Full half-section crossover at 3500 cps. Horizontal coverage 160°, vertical coverage 60°. Power handling capacity 50 watts, impedance 8 ohms. Non-resonant, curved* wood enclosure finished in Mesa Tan. Universal mounting brackets supplied. Dimensions: 60″ high x 11″ wide x 14″ deep. Net weight, 59 lbs.
Net Price **$165.00**

*U.S. Patent No. 3,125,181

Underwater Loudspeaker

MODEL DU30 — Pool Speaker. For use in swimming pools to provide voice and music audible underwater. May be mounted at any depth down to 4 feet. Specifications: Impedance, 16 ohms. Power handling capacity, 30 watts. Frequency response, 40 to 10,000 cps. Size, 5¾″ diameter x 2⅜″ deep. Net weight (with cable), 8¼ lbs. Twelve-foot Underwriters approved cable. Resistant to chlorine, bromine, salt water, oil, grease, gasoline.
Net Price **$58.50**

E-V Musicaster Hi-Fi Outdoor Weatherproof Speaker Systems

MUSICASTER—Provides high fidelity performance in a compact, portable system. Sturdy aluminum diecast housing protects weatherproof cone speaker and extends bass response through back-loaded folded horn. Dual Radax cone radiates smooth useful highs through 120° angle. Provision for mtg. 70.7-volt line transformer inside. Specifications: Frequency response, 60–13,000 cps; nominal impedance, 8 ohms; dispersion, 120°, power handling capacity, 30 watts program; sound pressure level, 110 db; dimensions, 21½″ x 21½″ x 8½″ depth. Net weight, 31 lbs.
Net Price **$60.00**

MUSICASTER II—Same fine performance as the Musicaster except has added brilliance and wider coverage from Very-High-Frequency Range Extender. Smooth response to 18,000 cps. Complete with crossover. Net weight, 33 lbs.
Net Price **$81.00**

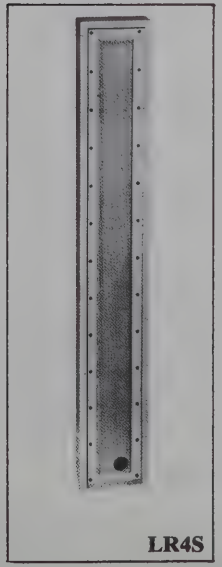
MODEL MB-1—Surface mounting bracket allows mounting of any Musicaster flat against wall for neat unobtrusive installation. Replaces standard "U" bracket. **Net Price** **$3.60**

Note: Sound Pressure Level is measured at 4′ on-axis with full rated power from 750 to 1250 cps.


MUSICASTER


DU30


LR4A


LR4S


LR7


MB-1

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Electro-Voice®

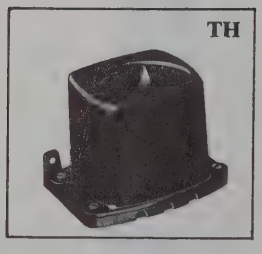
PA TRANSFORMERS AND ACCESSORIES











MODEL TR5—5-watt 70.7-volt line transformer. 5, 2.5, 1.25 and .625-watt line power taps. 4, 8 and 16 ohms secondary impedances. Accepts solderless terminals in TH housing. Frequency response ± 2 db, 35–20,000 cps. Insertion loss 0.8 db. Overall dimensions 2″ x 1 11/16″ x 1⅜″. Mounting hole centers, 1¾″. **Net Price** **$3.00**

MODEL TR15—Same as TR5 except 15-watt capacity with 15, 10, 5, 2.5-watt line power taps. Overall dimensions 1¾″ h., 2⅞″ w., 2 5/16″ d. **Net Price** **$3.60**

MODEL TR30—Same as TR5 except 30-watt capacity with 30, 20, 10 and 5-watt line power taps. Overall dimensions 1¾″ h., 2⅞″ w., 2 5/16″ d. Mounting hole centers, 2⅜″. **Net Price** **$4.20**

MODEL TR50—Same as TR5 except 50-watt capacity with 50, 40, 25 and 15-watt line power taps. Overall dimensions 2¼″ h., 2 5/16″ w., 2¼″ d. Mounting hole centers, 2⅜″. **Net Price** **$5.40**

MODEL TM5—Universal 5-watt 25- and 70.7-volt line transformer. Primary line power taps 5, 2.5, 1.25, .625 watts. Secondary impedance 8, 16 ohms. Accepts solderless terminals in TH housing. Frequency response ± 2 db, 35-20,000 cps. Insertion loss 0.8 db. Overall dimensions 2⅜″ x 1 15/16″ x 1⅝″. Mounting hole centers, 2″. **Net Price** **$3.60**

MODEL TM15—Same as TM5 except 15-watt capacity with 15, 7.5, 3.75, 1.875 watt line power taps. Overall dimensions, 2⅞″ x 2⅜″ x 1⅞″. Mounting hole centers, 2⅜″. **Net Price** **$4.20**

MODEL TM30—Same as TM5 except 30-watt capacity with 30, 15, 7.5, 3.75 watt line power taps. Overall dimensions 3⅛″ x 2¾″ x 2″. Mounting hole centers, 2 13/16″. **Net Price** **$5.40**

MODEL TM60—Same as TM5 except 60-watt capacity with 60, 30, 15, 7.5 watt line power taps. Overall dimensions 3 9/16″ x 3 1/16″ x 2½″. Mounting hole centers, 3⅛″. **Net Price** **$7.20**

MODEL TR7-2—7½-watt 25-volt line transformer and weatherproof housing designed specifically for use with the Model PA7. Mounts quickly and easily inside PA7 bracket. Primary impedance taps 83, 156, 312, 624, and 1248 ohms; 7½, 4, 2, 1, and ½ watt line power taps. 8 ohms secondary impedance. **Net Price** **$3.60**

MODEL TR7-7—Same as TR7-2 above except designed for 70.7 volt line applications. Primary impedance taps 660, 1250, 2500, 5000 and 10,000 ohms; 7½, 4, 2, 1 and ½ watt line power taps. 8 ohms secondary impedance. **Net Price** **$3.60**

MODEL TR3-2—30-watt 25-volt line transformer and weatherproof housing designed specifically for use with the Model PA30. Line power taps at 30, 15, 8, 4, 2 watts. Secondary impedance 8 ohms. **Net Price** **$9.00**

MODEL TR3-7—Same as TR3-2 above except designed for 70.7-volt line applications. **Net Price** **$9.00**

Transformers

MODEL TH — Transformer Housing provides neat weatherproof mounting of any E-V transformer. Mount vertically or horizontally on any flat surface or on horn bracket. Exclusive wattage indicator tells power setting at a glance. No soldering required with E-V transformers. Size: 4″ h., 5″ w., 3½″ d. Net weight, 1¾ lbs. **Net Price** **$5.10**

Accessory

MODEL AP-1—Pipe stand adapter for mounting any E-V speaker "U" bracket to standard ½″ pipe.
Net Price **$3.00**

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QUAM *Quality Line* SPEAKERS

These speakers are engineered and manufactured solely for replacement, public address, high fidelity and outdoor applications. EIA standard dimensions. Fully dust-proofed. Baked gold enamel finish. EIA service guarantee. Only Quam speakers have the U shaped coil pot construction which provides an unbroken flux path of sufficient cross section to carry the full energy of the magnetic field.

ANY QUAM SPEAKER CAN BE SUPPLIED WITH VOICE COIL IMPEDANCES OTHER THAN THOSE LISTED FOR AN ADDITIONAL $.60


Fig. R

SPECIAL REPLACEMENT SPEAKERS FOR COLOR TV

MODEL No.	SIZE	FIGURE	MAGNET WEIGHT OR FIELD	POWER HANDLING WATTS	DEPTH	SHIP WT., LBS.	DEALER NET
35A2C*	3"x5"	R‡	1.1 oz. Alnico V	4	1-11/16	3/4	$3.00
4A2C*	4"	R‡	1.1 oz. Alnico V	4	1-3/8	3/4	2.86
46A2C*	4"x6"	R‡	1.1 oz. Alnico V	4	1-11/16	1	3.14
52A2C*	5¼"	R‡	1.1 oz. Alncio V	5	1-7/8	1	3.27
8A2C*	8"	R‡	1.1 oz. Alnico V	6	2-11/16	1-1/4	4.23


Fig. A

REPLACEMENT SPEAKERS Voice coil impedance 3.2 ohms ± 10%

22A06Z8**	2¼"	J	.45 oz. Alnico V	.25	1	1/4	$ 2.85
22A06Z100**	2¼"	J	.45 oz. Alnico V	.25	1	1/4	3.15
25A07	2½"	A	.65 oz. Alnico V	1.5	1-1/4	1/4	2.18
26A07	2"x6"	L	.65 oz. Alnico V	2	1-19/32	1/2	2.35
27A06Z12**	2¾"	J	.55 oz. Alnico V	.25	1	1/4	2.82
30A05	3"	I	.55 oz. Alnico V	2	1-3/16	1/2	1.72
3A05*	3½"	I	.55 oz. Alnico V	2	1-9/32	1/4	1.72
3A07*	3½"	A	.65 oz. Alnico V	2.5	1-33/64	1/2	2.18
15A05*	3"x5"	L	.55 oz. Alnico V	2	1-1/2	1/2	2.29


Fig. B

4A05*	4"	I	.55 oz. Alnico V	2.5	1-1/2	1/4	1.61
4A07*	4"	A	.65 oz. Alnico V	3	1-23/32	1/2	2.35
4A1	4"	A	1.0 oz. Alnico V	3	2-1/16	3/4	2.51
4A15	4"	A	1.47 oz. Alnico V	3	2-1/16	3/4	2.75
46A07*	4"x6"	E	.65 oz. Alnico V	3.5	1-15/16	3/4	2.59
46A1	4"x6"	E	1.0 oz. Alnico V	3.5	2-1/4	1	2.78
46A15	4"x6"	E	1.47 oz. Alnico V	3.5	2-1/4	1	3.00
48A2*	4"x8"	K	1.4 oz. Alnico V	4.5	2-3/16	1	4.34
410A2*	4" x 10"	M	1.4 oz. Alnico V	6	2-11/16	1¼	4.88


Fig. C

5A05*	5"	I	.55 oz. Alnico V	3	1-11/16	1/2	1.91
5A07*	5"	C	.65 oz. Alnico V	3.5	1-7/8	3/4	2.45
5A1	5"	C	1.0 oz. Alnico V	3.5	2-5/16	1	2.64
5A15	5"	C	1.47 oz. Alnico V	3.5	2-5/16	1	2.86
52A1	5¼"	C	1.0 oz. Alnico V	4	2-25/64	1	2.70
52C10#	5¼"	N	10.0 oz. Ceramic	10	2-1/4	2-1/8	5.43


Fig. D

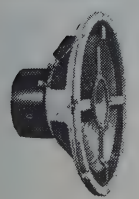
57A1	5"x7"	D	1.0 oz. Alnico V	5	2-11/16	1	3.00
57A15	5"x7"	D	1.47 oz. Alnico V	5	2-11/16	1	3.33
57A21	5"x7"	D	2.15 oz. Alnico V	5	2-61/64	1-1/4	3.68
58A15Z8	5"x8"	F	1.47 oz. Alnico V	5	2-3/4	1-1/4	4.26
6A1	6½"	C	1.0 oz. Alnico V	5	2-5/8	1	2.89
6A15	6½"	C	1.47 oz. Alnico V	5	2-5/8	1	3.14
6A31	6½"	C	3.16 oz. Alnico V	6	3-11/64	1-3/4	4.14


Fig. E

69A1*	6"x9"	D	1.2 oz. Alnico V	6	2-3/4	1-1/4	3.27
69A1S*	6"x9"	D	1.2 oz. Alnico V	6	2-1/8	1	4.64
69A2*	6"x9"	D	1.4 oz. Alnico V	8	2-15/16	1-1/2	4.09
69A3	6"x9"	D	3.2 oz. Alnico V	10	3-5/16	2	5.02
610A1Z8	6"x10"	F	1.2 oz. Alnico V	8	2-13/16	1-3/4	5.10


Fig. F

7A21*	7"	C	1.4 oz. Alnico V	6	2-31/32	1	3.95
8A1	8"	C	1 oz. Alnico V	6	3-1/2	1	3.24
8A21	8"	C	2.15 oz. Alnico V	7	3-13/32	1-1/2	4.23
8A31	8"	C	3.16 oz. Alnico V	9	3-21/32	2	4.91
10A31	10"	B	3.16 oz. Alnico V	9	4-1/2	2-3/4	6.27
10A6A	10"	B	6.8 oz. Alnico V	12	4-5/8	3-1/2	7.91
12A31	12"	B	3.16 oz. Alnico V	10	4-19/32	3-3/4	6.52
12A6A	12"	B	6.8 oz. Alnico V	14	5-1/4	4-1/2	8.70


Fig. G

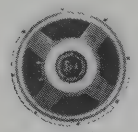
* Cup pot; very shallow construction. **Impedance of 22A06Z8 is 8 ohms, 22A06Z100 is 100 ohms, 27A06Z12 is 12 ohms.

Ceramic magnet. • Dual cone. † 20 ohms, center tapped

‡ Illustrates magnet construction; see same size standard speaker for basket shape.

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QUAM *Quality Line* SPEAKERS


Fig. H

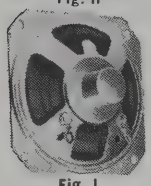
OUTDOOR SPEAKERS

Voice coil impedance 3.2 ohms ±10%

These long-life speakers have the improved Humi-Gard Cone which utilizes a Mylar plastic film to provide maximum resistance to moisture and dirt and sand abrasion, yet does not interfere with response characteristics. Air gap surfaces cadmium plated and enameled. Quantity quotations on request.

All Quam speakers are available weather-proofed for an additional 70c list. When ordering weather-proofed speakers use part numbers appearing in this catalog and add suffix "OT" to part number. (Humi-Gard Cone available only on 3½", 4" 5", and 6½" speakers.)

MODEL No.	SIZE	FIGURE	MAGNET WEIGHT OR FIELD	POWER HANDLING WATTS	DEPTH	SHIP. WT., LBS.	DEALER NET
3A07 OT*	3½"	A	.65 oz. Alnico V	2.5	1-33/64	1/2	2.18
4A2 OT**	4"	R‡	1.1 oz.	5	1-21/32	3/4	5.43
4A05 OT*	4"	I	.55 oz. Alnico V	2½	1-1/2	1/4	1.77
5A05 OT*	5"	I	.55 oz. Alnico V	3	1-11/16	1/2	2.07


Fig. I

PUBLIC ADDRESS SPEAKERS

Voice coil impedance 8 ohms ± 10%

8A1PA	8"	C	1 oz. Alnico V	8	3-1/2	1-1/4	$3.57
8A21PA	8"	C	2.15 oz. Alnico V	10	3-9/16	2	4.92
8A31PA	8"	C	3.16 oz. Alnico V	10	3-9/16	2	5.70
8A4PA	8"	B	4.64 oz. Alnico V	12	3-3/4	2-3/4	6.60
8A6PA	8"	B	6.8 oz. Alnico V	12	3-7/8	3-1/4	7.80
8C6PA#	8"	O	6.0 oz. Ceramic	12	3	2-1/2	6.00
8C10PA#	8"	O	10.0 oz. Ceramic	12	3-1/8	3	7.17
10A31PA	10"	B	3.16 oz. Alnico V	12	4-13/32	2-3/4	6.90
10A6PA	10"	B	6.8 oz. Alnico V	14	4-5/8	3-1/2	8.70
12A31PA	12"	B	3.16 oz. Alnico V	12	5	3-1/4	7.17
12A4PA	12"	B	4.64 oz. Alnico V	15	5-1/8	3-3/4	8.55
12A6PA	12"	B	6.8 oz. Alnico V	15	5-1/4	4	9.57
12C12PA#	12"	O	12 oz. Ceramic	25	4-1/2	4-1/2	11.97

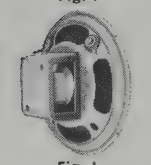

Fig. J


Fig. K

BACKGROUND MUSIC SPEAKERS

Voice coil impedance 8 ohms

MODEL NUMBER	SIZE	FIGURE	FREQUENCY RESPONSE (CPS)	MAGNET WEIGHT	POWER HANDLING WATTS	DEPTH	SHPG. WEIGHT POUNDS	DEALER NET
8C6PAX#•	8"	P	50-20000	6.0 oz.	12	3"	2	6.57
8C10PAX#•	8"	P	50-20000	10.0 oz.	15	3-1/8"	2-1/2	7.77
8C6PAS#	8"	Q	50-6000	6.0 oz.	10	2-1/8"	2-1/4	6.00
12C6PAS#•	12"	Q	40-12000	6.0 oz.	15	3-1/2"	2-3/4	8.97
12C10PAX#•	12"	P	50-15000	10.0 oz.	15	4-3/8"	4	10.17


Fig. L

INTERCOM SPEAKERS

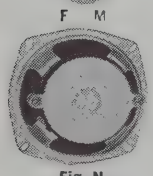
Voice coil impedance 45 ohms ±10%

3A07Z45*	3½"	A	.65 oz. Alnico V	2.5	1-33/64	1/2	2.55
4A07Z45*	4"	A	.65 oz. Alnico V	3.0	1-23/32	1/2	2.73
4A1Z45	4"	A	1.0 oz. Alnico V	3.0	2-3/16	3/4	2.91
5A1Z45	5"	C	1.0 oz. Alnico V	3.5	2-5/16	1	3.06


F M

HIGH FIDELITY SPEAKERS

MODEL No.	SIZE	FIGURE	SPEAKER TYPE	FREQUENCY RESPONSE CPS	Pwr Hndlg Watts	V.C. Impedance	Shippg Wt. Lbs.	DEALER NET
15C12CO#	15"	G	Coaxial, 2000cps. Xover	25-18,000	25	8	8	31.50
12A6CO	12"	G	Coaxial, 2000cps. Xover	50-15,000	14	8	6-1/2	20.70
8A4CO	8"	G	Coaxial, 2000cps. Xover	50-15,000	10	8	2-3/4	12.77
12C12X#•	12"	H	Extended range dual cone	30-16,000	18	8	5-1/2	15.60
8C12X#	8"	H	Extended range	50-14,000	15	8	3-1/4	12.00
69C6X#•	6"x9"	D	Extended Range dual cone	50-15,000	12	8	2-1/2	8.37
15C12L#	15"	H	Low frequency woofer	20-4,000	15	8	7	21.00
12C12L#	12"	H	Low frequency woofer	30-3,000	15	8	5-1/2	15.60
5A15T	5"	A	High frequency tweeter	2,000-15,000	10	14	1	3.90
3A15T	3½"	B	High frequency tweeter	2,000-15,000	10	14	3/4	3.45
CO2-50			Crossover Unit for use with 5A15T&3A15T				1/8	1.20


Fig. N

REAR SEAT AUTO SPEAKER KITS

These kits contain everything required for the installation of the speaker. They include a dash-mounting fader control, cable, flocked screen grill, baffle plate, all necessary hardware and complete installation instructions.

†Chrome plated grill. ■ Multi-Tap Speaker
▲Sponge rubber baffle plate gasket

MODEL NUMBER	SIZE	FIELD OR MAGNET WEIGHT	POWER HANDLING WATTS	VOICE-COIL IMPEDANCE (OHMS)	SHPG. WEIGHT POUNDS	DEALER NET
AS-1	6-1/2"	1.47 oz.	5	3.2	2	5.43
AS1MT■	6-1/2"	1.47 oz.	5	10-20-40	2	6.57
AS-2▲	6" x 9"	2.15 oz.	9	3.2	3-1/2	7.61
AS-4	6" x 9"	1.2 oz.	6	3.2	1-3/4	4.09
AS5MT■	6" x 9"	1.4 oz.	8	10-20-40	1-3/4	8.37

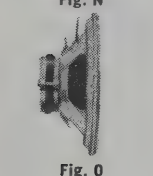

Fig. O


FIG. P

AUTOMOTIVE SPEAKERS

MODEL NUMBER	SIZE	FIGURE	MAGNET WEIGHT	POWER HANDLING WATTS	DEPTH	VOICE-COIL IMPEDANCE OHMS	SHIPPING WEIGHT POUNDS	DEALER NET
410A2MT■	4" x 10"		1.4 oz.	6	2-11/16"	10-20-40	1	5.97
410A2Z10	4" x 10"	M	1.4 oz.	6	2-11/16"	8-12	1	5.67
410A2Z20CT*	4" x 10"	M	1.4 oz.	6	2-11/16"	18-22	1	5.97
410A2Z40CT*	4" x 10"	M	1.4 oz.	6	2-11/16"	35-45	1	5.97
57A2MT■	5" x 7"		1.2 oz.	5	2-5/16"	10-20-40	1	3.99
69A2MT■	6" x 9"		1.4 oz.	8	2-15/16"	10-20-40	1¼	5.04
69A2Z10	6" x 9"	D	1.4 oz.	8	2-15/16"	8-12	1¼	4.77
69A2Z20CT*	6" x 9"	D	1.4 oz.	8	2-15/16"	18-22	1¼	5.04
69A2Z40CT*	6" x 9"	D	1.4 oz.	8	2-15/16"	35-45	1¼	5.04


FIG. Q

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UNIVERSITY
SPEAKERS / MICROPHONES
A DIVISION OF LTV-LING ALTEC, INC.

PUBLIC ADDRESS SPEAKERS

drivers

MODEL ID-20 (20 watts) For speech and music systems requiring moderate sound power output, and where performance with economy is a primary consideration. Designed to deliver maximum output, the ID-20 utilizes its efficiency to the best advantage, producing a substantial "punch" with clear, penetrating sound.

MODEL ID-30 (30 watts) Redesigned version of the world famous MA-25—ideal for installations requiring single medium power units or multiple driver/horn arrangements. The ID-30, with its unusually wide upper midrange response (up to 7500 cycles), produces musical balance and noise penetration far in excess of higher-cost competitive models. Completely weatherproof with tropicalized 2" voice coil and breakdown-proof linen base diaphragm. A top value!

MODEL ID-40 (40 watts) Latest, maximized version of the famous, earlier Model SA-HF, often referred to as the "workhorse" of the sound industry, and widely used by high fidelity manufacturers and audio hobbyists as well. Extended high frequency response and excellent efficiency assure an essentially uniform response characteristic for pleasing, natural reproduction of speech and music, while delivering that extra "punch" needed to cut through heavy noise. Tropicalized and weatherproofed, the ID-40 can be relied upon to give continuous top-flight performance under adverse weather conditions.

MODEL ID-40T (40 watts) Offers the same power capacity, efficiency and frequency response as the ID-40, and incorporates a built-in line-matching transformer. The transformer terminal plate is inside the rugged, die cast aluminum housing; entrance is made through an exclusive watertight dural gland nut, assuring positive weatherproofing after connections have been made. Terminals are labeled in impedances and in wattage consumed on "constant voltage" lines. Transformer impedances: 45/122/250/500/1000/2000 ohms. 70 V. line power taps: 40/20/10/5/2.5 watts.

ID-60 (60 Watts) The premium compression driver in the world famous University line. Ideally suited to applications requiring the greatest power handling capacity, maximum efficiency, widest frequency response and rugged construction that will withstand a lifetime of hard use. Use of rugged outer case assures utmost durability even when abused or in hazardous environment. Water tight voice coil terminals are located in the base of the housing. Without question, the ID-60 is the finest wide range, high power driver ever offered.

MODEL ID 60T (60 watts) Similar to the ID-60, but with high-impact plastic outer-case, the ID-60T includes a husky built-in line matching transformer, with its terminals immediately available at the base of the driver housing. Ideal for rental work requiring repeated set-up and dismantling of equipment, and for semi-permanent systems where changes in the number or location of speakers are likely to affect line impedance requirements. Transformer impedances: 16/80/165/250/500/1000/2000 ohms. 70 volt line power taps: 60/30/20/10/5/2.5 watts.

ID-75 (75 Watts) The University Model ID-75 is the newest offering in high power drivers in the P. A. industry. This 75 watt model is designed for use in either high-power electronic siren or public address applications. A large super power W shaped Alnico VB magnet, exclusive with University, virtually eliminates reluctance losses normally present in other designs. This W shaped magnet gives the lowest leakage and maximum gap flux density resulting in peak electro-mechanical efficiency. The ID-75 is, without a doubt, the finest high power driver made for electronic siren and special purpose high-power P. A. applications.

SPECIFICATIONS

DRIVER MODEL	FREQUENCY RESPONSE	POWER RATING	VOICE COIL IMPEDANCE	DIMENSIONS (Overall)	SHIP. WT.	List Price
ID-20	120-6500 cps	20 watts	16 ohms	3½" dia. 3¾" d.	2½ lbs.	26.00
ID-30	85-7500 cps	30 watts	16 ohms	4⅛" dia. 3¾" d.	3 lbs.	31.50
ID-40	80-12000 cps	40 watts	16 ohms	4½" dia. 4⅞" d.	4¼ lbs.	39.50
ID-40T	80-12000 cps	40 watts	16 ohms	5" dia. 6¼" d.	5¼ lbs.	54.00
ID-60	70-12000 cps	60 watts	16 ohms	4-11/16" dia. 5" d.	4¼ lbs.	54.50
ID-60T	70-12000 cps	60 watts	16 ohms	6¾" dia. 6¾" d.	6½ lbs.	67.00
ID-75	150-7000 cps	75 watts	16 ohms	4¼" dia. 3¾" d.	4½ lbs.	74.50



trumpets

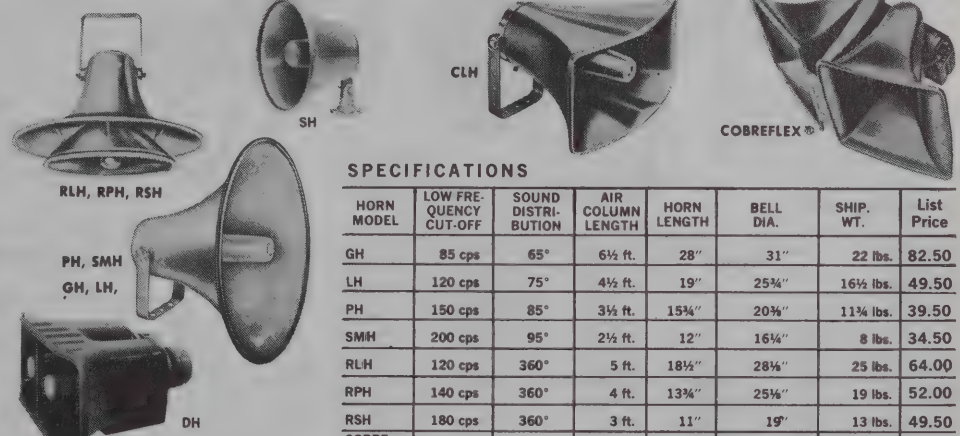
DIRECTIONAL MODELS GH, LH, PH, SMH For maximum penetration of distance and noise. Reflex construction assures maximum conversion efficiency, full weather protection. Baked finish.

RADIAL MODELS RLH, RPH, RSH For uniform 360° overhead sound distribution from a single projector. Fewer speakers needed to cover high-ceiling factories, hangars, church interiors, etc. Baked finish.

WIDE ANGLE COBREFLEX† Outstanding feature is pair of folded exponential horns having twin air columns in a single assembly. "Dual Exponential Flare" design results in very smooth radiation pattern and high efficiency. Rugged construction. Use singly or in clusters. Baked finish.

WIDE ANGLE MODEL CLH† Longest air column length and wide-angle bell designed for maximum low frequency response. Omni-directional mounting bracket permits speaker to be rotated horizontally and vertically for optimum projection . . . tune out reverberation, dead spots. Perfect for multi-speaker cluster arrays. Can be "stacked" in any configuration. Fiberglas bell.

MODEL L30-1 CLH Horn Stacking Kit for clamping bell rims together in any desired configuration. Each kit clamps two horns. Shpg. wt., 6 oz.



SPECIFICATIONS

HORN MODEL	LOW FREQUENCY CUT-OFF	SOUND DISTRIBUTION	AIR COLUMN LENGTH	HORN LENGTH	BELL DIA.	SHIP. WT.	List Price
GH	85 cps	65°	6½ ft.	28"	31"	22 lbs.	82.50
LH	120 cps	75°	4½ ft.	19"	25¾"	16½ lbs.	49.50
PH	150 cps	85°	3½ ft.	15¾"	20⅜"	11¾ lbs.	39.50
SMH	200 cps	95°	2½ ft.	12"	16¼"	8 lbs.	34.50
RLH	120 cps	360°	5 ft.	18½"	28⅛"	25 lbs.	64.00
RPH	140 cps	360°	4 ft.	13¾"	25⅛"	19 lbs.	52.00
RSH	180 cps	360°	3 ft.	11"	19"	13 lbs.	49.50
COBREFLEX†	200 cps	120°x60°	2½ ft.	10¼"	18½"x 9¼"	10¼ lbs.	44.50
CLH†	120 cps	120°x60°	4½ ft.	20"	21½"x11½"	13¼ lbs.	48.50
SH	350 cps	90°	1½ ft.	7"	8¾"	2½ lbs.	34.50
DH	180 cps	40°x60°	3¼ ft.	13⅛"	20⅜"x 9⅜"	10 lbs.	85.00

SPECIFICATION NOTE: Low frequency limit based on capability of driver unit. If horn cut-off is higher than rated low frequency limit of driver, horn will be determining factor.
†*Patented.*

accessories



MODEL PB-1 TRANSFORMER HOUSING Weatherproof. For MIL-A, CMIL-A, IB-A and CIB-A paging speakers. Use Model 5434 transformer, or other type with 2" mounting center and 1 15/16" h. x 1 5/8" w. maximum dimensions. Shpg. wt., ½ lb. List $4.50

MODEL 5433 TRANSFORMER 30 watt capacity. Use with ID-20, ID-30 or to feed a number of smaller paging speakers. Primary impedance: 45/165/200/250/500/1000/2000 ohms. Secondary impedance: 4/8/16 ohms. 70 v. line power taps: 30/25/20/10/5/2.5 watts. Dimensions: 1 15/16" x 2 5/16" x 1¾". Mtg. hole centers: 2⅜". Shpg. wt. 1 lb. List $8.50

MODEL CTR TRANSFORMER/JUNCTION HOUSING Die cast aluminum. Weatherproof. Houses models 5433, 5434, or other transformers up to 2⅜" x 2⅞" x 2⅞". Adjustable slotted adapter mounts transformers with centers 1½" to 2⅞". Junction box for speaker lines. Bar strap for mounting to "U" brackets. Screws to wall. Also holds University paging speakers. Shpg. wt., 1½ lbs. List $8.75

SPA ADAPTER Replaces standard triangular base used on all University CR and MM-2 paging speakers for mounting to ½" IPS threaded pipe. Shpg. wt., ½ lb. List $2.25

MODEL ST Transformer/Junction Box Adapter. Fits MM-2, ES-50. Weatherproofed. For bulkhead, wall, ceiling mounting. Houses transformers up to 2¼" x 2¼" x 2¾", with 2" and 2⅜" mounting centers. Use as terminal or junction box. Shpg. wt., 1 lb. List $15.25

MODEL SB Bulkhead Mounting Adapter. Fits MM-2, ES-50. 3 mounting holes 120° apart on 5 13/16" mounting circle diameter. For flush-fit mounting onto bulkhead, wall, ceiling. Shpg. wt., 1 lb. List $3.75

2YC CONNECTOR Allows use of two driver units on a single radial, directional, or wide-angle trumpet. Shpg. wt., 1 lb. List $14.75

PMA ADAPTER Fits standard ½" dia. threaded pipe to any University "U" mounting bracket —for special applications requiring pipe mounting. List $4.75

RTA ADAPTER Fits University trumpets to Western Electric and RCA drivers having 1 7/16—16 threads. Shpg. wt., ½ lb. List $3.75

WEA ADAPTER Fits University drivers to Western Electric and RCA trumpets having 1 7/16—16 threads. Shpg. wt., ½ lb. List $3.00

MODEL 5434 TRANSFORMER 15 watt capacity. Primary impedance: 45/325/500/1000/2000/4000/8000 ohms. Secondary impedance: 4/8/16 ohms. 70 v. line power taps: 15/10/5/2.5/1.25/.65 watts. Dimensions: 1⅜" x 1 15/16" x 1⅜". Mtg. hole centers: 2". Fits CTR and PB-1. Shpg. wt., ½ lb. List $6.75

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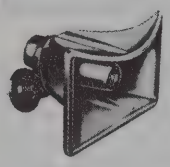
UNIVERSITY SPEAKERS / MICROPHONES
A DIVISION OF LTV-LING ALTEC, INC.

Public Address Loudspeakers

paging / talk-back



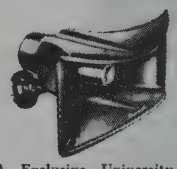
MIL-A New version of the MIL, with higher power capacity (7.5 watts continuous duty) and improved lower frequency. High conversion efficiency for perfect operation in low power systems. OLB*.



CMIL-A Similar to CIB-A, but for use in lower power operations where excessive sound would be wasted. Offers high efficiency, maximum intelligibility. OLB*.



IB-A New version of world's most widely used medium power speaker. 25 watts continuous duty power capacity. Lower frequency response improved to 250 cps. High efficiency, special rising frequency characteristic. OLB*.



CIB-A Exclusive University wide-angle horn for uniform sound pattern with optimum vertical dispersion. Ideal for wide area coverage where ambient noise level not excessive. Design minimizes feedback problems. OLB*.

*Exclusive patented swivel mounting OMNI-LOK BRACKET; also fastens to ½" pipe without additional fixture.



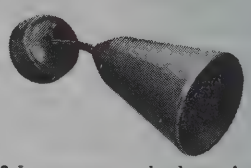
IBR-A Small radial speaker with built-in driver. Economical solution where total number of speakers must be kept to a minimum but where wide coverage is required.



MIS Compact reflex speaker designed for flange or flush mounting in cabinets, walls, etc. Ideal replacement for less efficient cone speakers. Tropicalized and weatherproof. High-impact plastic housing.



CR Big power in a small package. Built-in driver with heavy duty 2" voice coil. High intelligibility in noisy areas. Frequency response ideal for music reproduction.

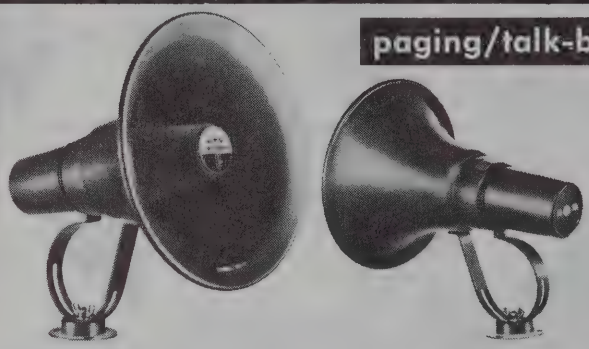


LIL-8 In appearance, a handsome, functional lamp—in performance, a truly superior paging speaker. Compact, yet offers high power handling capacity, wide frequency range and high conversion efficiency for improved results with low power systems.

paging/talk-back speakers w/transformer



2WP Bi-directional paging projector covers two opposite areas effectively, efficiently with one driver. (Takes any University driver except ID-60T.) Supplied less driver.



New series of GYROBASE paging/talk-back speakers with built-in line matching transformers. Basic speakers are same as "A" series equivalents, i.e. IB-T is same as IB-A plus transformer, etc. GYROBASE mounting provides easy "one-hand" adjustment over 360° horizontal range, 105° vertical range. "Pushpin" strapping feature simplifies impedance and wattage selection. Electro-acoustically engineered for optimum features and performance, longest life.

specifications

MODEL	FREQUENCY RESPONSE	POWER RATING	IMPEDANCE (specify when ordering)	DISPERSION	†SOUND PRESSURE LEVEL	††SENSITIVITY AS MICROPHONE	DIMENSIONS	SHIPPING WEIGHT	LIST PRICE
IB-A	250-13,000 cps	25 watts	8, ohms.‡	90°	123 db	—26 DBM	10¼" dia. 9" deep	4 lbs.	36.50
CIB-A	250-13,000 cps	25 watts	8, ohms ‡	120° x 60°	123 db	—22 DBM	7⅜" hi. 14" wide 12" deep	5½ lbs.	46.00
MIL-A	350-13,000 cps	7.5 watts	8, ohms ‡	120°	115 db	—23 DBM	7 13/16" dia. 6⅞" deep	3¼ lbs.	29.75
CMIL-A	350-13,000 cps	7.5 watts	8, ohms ‡	120° x 60°	115 db	—20 DBM	6¼" hi. 9½" wide 8½" deep	4 lbs.	33.75
MIS	500-13,000 cps	5 watts	8, ohms ‡	150°	111 db	—22 DBM	5½" o.d. 4 7/16" deep 6 holes on 4⅞" mtg. dia.	2½ lbs.	34.50
CR	250 -8000 cps	20 watts	16 ohms	90°	119 db	—22 DBM	11½" dia. 11½" deep	8¾ lbs.	59.75
IBR-A	300-10,000 cps	25 watts	8, ohms ‡	360°	108 db	—32 DBM	13" dia. 10¼" deep	5¼ lbs.	49.75
2WP	350 cps horn cut-off	Depends upon driver used	Depends upon driver used	120° each horn	Depends upon driver used	Depends upon driver used	8½" dia. each bell 20½" long	4 lbs.	34.50
IB-T	250-13,000 cps	25 watts	*	90°	123 db	—26 DBM	10¼" dia. x 11 7/16" d.	5¼ lb.	46.50
CIB-T	250-13,000 cps	25 watts	*	120°x60°	123 db	—22 DBM	7⅜" h. x 14" w. x 14½" d.	6¾ lb.	56.00
MIL-T	350-13,000 cps	7.5 watts	* *	120°	115 db	—23 DBM	7 13/16" dia. x 9 13/16" d.	4 lb.	39.75
CMIL-T	350-13,000 cps	7.5 watts	* *	120°x60°	115 db	—20 DBM	6¼" h. x 9½" w. x 10 7/16" d.	4¾ lb.	43.75
IBR-T	300-10,000 cps	25 watts	*	360°	108 db	—32 DBM	13" dia. x 12 11/16" d.	6½ lb.	59.75
LIL-8	300-10,000 cps	15 watts	8 ohms	110°	119 db	—27 DBM	15½" long 6⅞" dia.	4½ lbs.	44.75

*Voice coil impedance: 8 ohms. Terminals are labeled in impedance and in wattage consumed on 70 and 25 v. "constant voltage" lines. Transformer impedances: 45/325/500/1000/2000/4000/8000 ohms. Wattage taps: 25/12.5/6.25/3/1.5/.75 watts.

**Voice coil impedance: 8 ohms. Terminals are labeled in impedance and in wattage consumed on 7 and 25 v. "constant voltage" lines. Transformer impedances: 45/325/500/1000/2000/4000/8000 ohms. Wattage taps: 7.5/5/2.5/1.25/.65 watts.

†Sound pressure readings taken at 4 ft. on axis with "Full Range" power input. Reduce by 6 db each time distance is doubled. Reduce by 3 db each time power input is halved; increase by 3 db when power input is doubled.

††DBM re 10 dynes/cm².

‡Also available in impedances of 4 and 45 ohms at 10% additional cost.

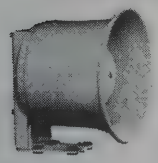
NOTE: MIS speakers are patented.

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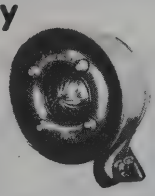
UNIVERSITY SPEAKERS / MICROPHONES
A DIVISION OF LTV-LING ALTEC, INC.

Special Purpose Loudspeakers

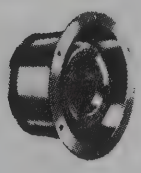
multi-duty



ES-50 Versatile, high power speaker, especially developed for electronic siren applications. Rated full 50 watts for typical siren signal above 400 cps. As general-purpose speaker, full power rating applies over entire 250-10,000 cps range of integrated program material.



MM-2 Power capacity and frequency response ideal for clear, noise-cutting reception. Screws permit removal from front to expose diaphragm for cleaning. Serrated swivel mounting bracket.



MM-2F Flush mounting version of MM-2. Performance and specications identical to MM-2. These speakers are the ruggedest in the P.A. field. Completely weather-proof. Performance unaffected even after being completely drenched (as on boats).



MM-2TC Complete speaker, using cast aluminum bell and weatherproof housing with space for a line matching transformer and/or volume control which can be mounted right into position. For bulkhead, wall or ceiling mounting, the MM-2TC-T comes with multi-impedance transformer and pad attenuator built in.



MSR All die-cast reflexed air column speaker with radial deflector for 360° horizontal dispersion. Hermetically sealed driver easily removed. Provisions for line matching transformer and volume control. Wall/ceiling bulkhead mounting. MSR-T comes with multi-impedance transformer and pad attenuator built in.

weatherproof



MLC



CLC



WLC

explosion-proof



7101B‡
7102B‡
7105‡

specifications

MODEL	FREQUENCY RESPONSE	POWER RATING	IMPEDANCE (specify when ordering)	DISPERSION	*SOUND PRESSURE LEVEL	DIMENSIONS	SHIPPING WEIGHT	LIST PRICE
MM-2	350-10,000 cps	25 watts	16 ohms	150°	117 db	6" o.d. 5" deep	5¼ lbs.	$ 56.50
ES-50	250-10,000 cps	50 watts* *	16 ohms	120°	123 db	6 13/16" o.d. 6⅞" deep	5½ lbs.	79.75
MM-2F	350-10,000 cps	25 watts	16 ohms	150°	117 db	7¼" o.d. 3"¾ deep	5¼ lbs.	57.50
MM-2TC	350-10,000 cps	25 watts	16 ohms	120°	117 db	10" high 6 7/16" w. 4 7/16" deep	MM-2TC—8½ lbs. MM-2TC-T—9¾ lbs.	87.50 99.75
MSR	250-10,000 cps	25 watts	16 ohms	360°	114 db	10¾" hi. 7¾" w. 8¼" deep	MSR—10¼ lbs. MSR-T—11¼ lbs.	85.00 99.75
MLC	150-15,000 cps	15 watts	8 ohms	120°		12¾" x 9⅛" 10⅝" deep	10 lbs.	62.50
CLC	55-14,000 cps	30 watts	8 ohms	120°		22¾" dia. 12 1/16" deep	23 lbs.	99.50
WLC	50-15,000 cps	30 watts	8 ohms	90°		33½" dia. 20" deep	68 lbs.	275.00
7101B‡	70-10,000 cps	45 watts	16 ohms	see below		7⅞" dia. 7⅜" deep	13 lbs.	116.00
7102B‡	70-10,000 cps	45 watts	16 ohms	see below		7⅞" dia. 7⅜" deep	13 lbs.	124.75
7105‡	70-12,000 cps	45 watts	16 ohms	see below		7⅞" dia. 7⅜" deep	13 lbs.	220.00

*Sound pressure readings taken at 4 ft. with "Full Range" power input. Reduce by 6 db each time distance is doubled. Reduce by 3 db each time power input is halved; increase by 3 db when power input is doubled.

* *See ES-50 description above.

Note: MM speakers are patented.

‡NOTES PERTAINING TO EXPLOSION PROOF DRIVERS: May be used with any University Reflex Trumpet. U.L. approved—7101 B, Class I Groups C & D. 7102B & 7105, same plus Class II, Groups E, F, G. 7105 sensitivity as microphone—33 DBM re 10 dynes/cm². Transformer impedances, 110/165/200/250/500/1000 ohms. 70 v. line power taps, 45/30/25/20/10/5 watts. 7105 Paging/Talkback tap, 45 ohms. Low frequency cutoff, dispersion and overall dimensions depend on horn used.

COMMERCIAL SPEAKERS FOR SPECIAL APPLICATIONS



4A4

SUPER POWER
Model 4A4
Up to 300 watts using 4 drivers.
List $199.50 (less drivers)



B-6P

SUPER POWER
Model B6P
Up to 450 watts using 6 drivers.
List $387.50 (less drivers)



B12P

SUPER POWER
Model B12P
Up to 900 watts using 12 drivers.
List $495.00 (less drivers)



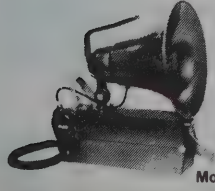
Model MM-2PPS

UNDERWATER SPEAKER

All plastic construction handles 25 watts, music or speech. List $74.25.

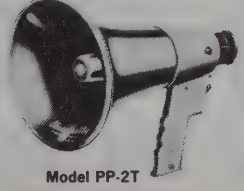
UNIVERSITY POWRPAGE

Transistorized Portable P.A. Systems



Model PP-1T

25 Watts—Range 1 mile with talk-back feature. Multi-position push-to-operate switch. 13 lbs. List $299.50.



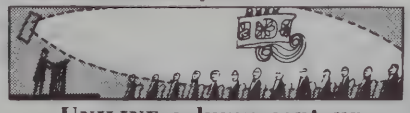
Model PP-2T

7 Watts—4 lbs.—push-to-talk switch. Compact-hand held. List $179.50.

UNILINE® Sound Columns

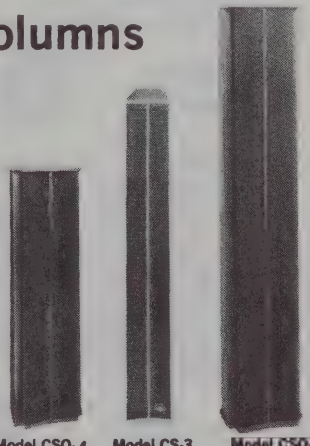


Conventional speaker contour.



UNILINE column contour.

Constant loudness contours shown for a UNILINE column versus a conventional speaker, illustrating the situation that exists at representative midrange frequencies, where most of the 'punch' of the sound is concentrated. With UNILINE, loudness is the same for a listener located anywhere in the auditorium.



Model CSO-4 Model CS-3 Model CSO-6

SPECIFICATIONS	CSO-6* Full Range Music and Speech	CSO-4* Full Range Music and Speech	CS-3 Music and Speech
speakers	6 extended range 8"	4 extended range 8"	8 special multi-design
frequency range	55-17,000 cps	70-17,000 cps	150-10,000 cps
power capacity	120 watts IPM**	80 watts IPM**	25 watts IPM**
impedance	16 ohms	8 ohms	16 ohms
vertical angle	16°	18°	22°
horizontal angle	120°	120°	120°
dimensions	60¼"x11⅞"x7¾"	41⅜"x7¾"x11⅞"	48"x7½"x8¾"
shipping wt. lbs.	61	46	33
list price	325.00	246.50	149.50

*Completely weatherproof **Integrated program material.

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TRIMM INC.

A SELECTED LISTING FROM OVER 2500 TRIMM-MANUFACTURED COMPONENTS.

HEADSETS: GENERAL PURPOSE, COMMERCIAL, MILITARY, AMATEUR, EDUCATIONAL, STEREO

Since 1922 TRIMM has manufactured a complete line of the finest electro-acoustic equipment and components. Engineered to fill the broadest applications; from the experimental crystal set to rugged field use, from industrial test equipment to home high-fidelity and stereo — these headsets are quality constructed and value priced.

ACME 24, 25, 27

A superior low-cost headset most suitable for Geiger counters, crystal sets, toys and radio systems. Black bakelite shell and cap. No. 24 has a black vinyl covered double headband and cotton tinsel conductor "Y" cord with pin tips. No. 25 headband is black enameled. No. 27 has a black enameled single headband and plastic covered stranded wire cord with pin tips.

REX 30, 32

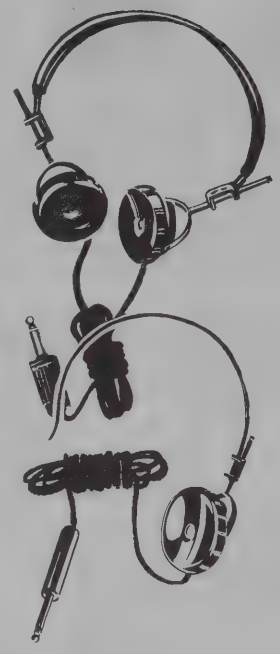
Lowest cost BIPOLAR type headset. Increased sensitivity. A 6 oz. lightweight for code training and institutional radio systems. Black bakelite shell and cap. Black vinyl covered headband. No. 32 has a single headband and plastic covered stranded wire with pin tips.

DEPENDABLE 70, 71, 72

Combines the best qualities of Acme and Rex; simple, rugged, sensitive and low cost. Ideal for electronic organs, code training and language labs. Black bakelite shell and cap, black vinyl covered headband, mercerized cotton tinsel "Y" cord and pin tips. No. 70 has double headband; No. 71 has plastic covered stranded wire cord; and No. 72 has single headband and single cord with pin tips.

• STEREO

Four stereo models are available. They range from the least expensive Acme to the top quality, extended range "L" headset. All models have a special cord that terminated with the No. 513 or 516 three-circuit plug. All stereo listings have been expanded to include four-conductor cords and two separated No. 501 plugs. These are identified by the number 15 following the model number.



ACME

24-03	$3.90	25-2K	$3.60	With 511 plug
25-03	3.45	24-4K	4.35	24-9-03 $4.75
27-03*	2.05	25-4K	3.90	24-9-2K 4.90
24-15	3.95	27-1K*	2.20	
24-2K	4.05	27-2K*	2.35	

• STEREO

24-14-03	$6.20	24-15-03	$7.20

REX

30-03	$4.50	32-03*	$3.35	With 511 plug
30-2K	4.70	32-1K*	2.50	30-9-03 $5.35
30-3K	5.00			30-9-2K 5.55
				32-9-03* 3.35

DEPENDABLE

70-03	$5.10	70-3K	$5.70	With 511 plug
70-06	5.20	70-4K	6.00	70-9-03 $5.90
70-15	5.30	72-03*	3.50	70-9-2K 6.20
70-2K	5.40	72-1K*	3.60	70-9-4K 6.80
71-2K	6.40	72-2K*	3.75	

• STEREO

70-14-03	$7.00	70-14-2K	$7.90
70-15-03	8.00	70-15-2K	8.90

Headsets are listed by their model number and by their impedance or D.C. resistance; 3.2 ohms (03); 8 ohms (08); 600 ohms (06); 1500 ohms (15); 2000 ohms D.C. (2K); 2000 ohms (2M); 3000 ohms D.C. (3K); 4000 ohms D.C. (4K); 5000 ohms (5M); 12000 ohms (12M); 17000 ohms (17M); and 24000 ohms (24M). Single earphones (*). List prices included are for single purchases at retail. Consult your distributor for quantity discounts.



Highest quality headset of conventional construction. Individually tuned acoustic cavities assures faithful sound reproduction. Top performance under all environmental conditions. Black bakelite shell and cap. No. 50 has black rubber covered double headband and waterproof nylon tinsel conductor, "Y" cord and No. 501 plug. No. 56 has a vinyl covered double headband with over-the-head molded neoprene cord and No. 501 plug.

STANDARD "L"

50-08	$23.00	56-2M	$27.65
56-08	27.65	50-5M	23.00
50-06	23.00	56-5M	27.65
56-06	27.65	50-12M	24.00
50-2M	23.00	56-12M	28.65

STEREO "L"

50-14-08	27.00	50-14-16	31.65
56-14-08	31.65	50-14-6M	28.00
50-14-16	27.00	56-14-6M	32.65
50-15-08	28.00	56-15-16	32.65
56-15-08	32.65	50-15-6M	29.00
50-15-16	28.00	56-15-6M	33.65

REPLACEMENT PARTS

For a nominal charge all TRIMM manufactured products can be restored to top working condition at the factory. Nearly any part that is required for manufacture is also available as a replacement part. In addition, worn or broken headset cords for almost any make can be made to order — in quantities.

FEATHERWEIGHT 5 OZ.! WORLD FAMOUS-PROVEN IN USE

100, 104, 106, 107

Highly recommended for amateur radio use, language training and electronic testing. Nos. 100 and 106 have a fully adjustable nickel plated single headband. Black bakelite shell and cap. Waterproof mercerized cotton tinsel conductor "Y" cord with pin tips. Nos. 104 and 107 have black fabric covered double headband at no increase in price.



$11.00 List With Pin Tips		$12.80 List With 501 Plug	
100-03	100-2K	100-9-03	100-9-4K
104-03	104-2K	104-9-03	104-9-4K
100-06	100-4K	100-9-06	106-9
104-06	104-4K	104-9-06	107-9
100-15	106	100-9-2K	
104-15	107	104-9-2K	
• STEREO			
104-14-03	$13.60	104-14-2K	$13.60
104-15-03	14.60	104-15-2K	14.60



ARMY — NAVY 28, 29

Built for severe use. Satin chrome brass shell, black bakelite cap. Black rubber covered double headband with thumbscrew lock for yoke adjustment. Waterproof nylon tinsel conductor "Y" cord, pin tips or plug.

With Pin Tips		With 501 Plug	
28 (W) 600 ohm	$20.00	28-9 (W) 600 ohm	$21.65
29 (K) 20M ohm	20.00	29-9 (K) 20M ohm	21.65



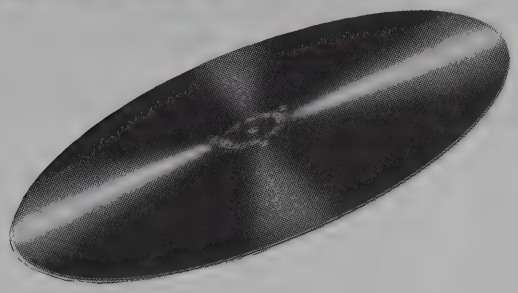
COMMERCIAL 151, 152, 155, 159

Very rugged TRIMM headset — yet very lightweight. Developed for marine and aircraft radio use. All types have black bakelite shell and cap, waterproof mercerized cotton tinsel conductor cord. The most popular, No. 156 (600 ohm) and No. 157 (17M ohm), have a black rubber covered double headband with a "Y" cord and 501 plug. Other models in standard impedances. No. 151 has nickel plated double headband, over-the-head cord with pin tips. No. 152 has black fabric covered double headband, over-the-head cord and pin tips. No. 158 (600 ohm) and No. 159 (17M ohm) have black rubber covered double headband, "Y" cord with pin tips.

$12.10 List With Pin Tips			$13.90 List With 501 Plug			
151-03	152-06	157-2K	151-9-03	152-9-06	156	$15.00
152-03	157-2K		152-9-03	151-9-2K	157	$15.00
151-06	152-2K		151-9-06	152-9-2K	158	$13.50
					159	$13.50

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audiodiscs®



For truly fine recording and reproduction

For more than 25 years, Audiodiscs have consistently maintained their position of eminent leadership in every field of instantaneous disc recording.

A superior lacquer coating, applied to the mirror-smooth aluminum base by a patented process, gives these outstanding advantages: maximum uniformity of coating, permanent resistance to humidity, longer stylus life, freedom from audible background scratch, long playback life, brilliant frequency response, and freedom from deterioration with age.

DESCRIPTION		Size Inches	List Price	Carton Contains
RED LABEL AUDIODISCS Standard throughout the recording profession, these discs exceed the most exacting requirements for top quality and dependability. The finest discs obtainable. Aluminum base, double-sided. Embossed labels.		7*	$1.60	25
		8	1.27	25
		10	1.84	25
		12	3.20	25
		16	5.71	25
SINGLE FACE RED LABEL For professional use where only one side is to be recorded. Both sides coated; the recordable side identified with embossed label. Exactly the same fine qualities as Standard Red Label, but bringing real economy to single-face applications.		10	1.71	25
		12	2.78	25
		16	4.74	25
YELLOW LABEL AUDIODISCS The popular choice for all general purpose recording which requires high, uniform quality. Aluminum base, double-sided. Designed primarily for applications where the super quality Red Label AUDIODISCS are not required. Paper labels.		7*	1.48	25
		8	1.14	25
		10	1.58	25
		12	2.53	25
		16	4.59	25
REFERENCE LABEL AUDIODISCS Provide maximum economy for test cuts, filing and reference recordings, auditions and equipment adjustments, which do not demand complete surface perfection. Aluminum base. Paper labels.		10	1.35	25
		12	1.96	25
		16	3.37	25
BLUE LABEL AUDIODISCS These discs offer the very best in recording quality at a low price for schools, homes, amateur and demonstration work. Made of the same materials as professional type AUDIODISCS — but on a thinner aluminum base. Paper labels.		6½	.68	50
		8	.93	50
		10	1.33	50
MASTER AUDIODISCS Where copies of recordings (pressings) are to be made by the electroplating process, these discs are the outstanding choice. Their excellence and consistent quality are well known to all record processors. Fine results with either silvering or gold sputtering. Aluminum base. Center pin and one drive pin hole. Also available with center hole only.	Double Sided	10	3.08	25
		12	4.15	25
		13¼	5.48	25
		16	7.37	25
	Single Face	10	2.53	25
		12	3.10	25
		13¼	3.96	25
		14	4.19	25
		16	5.77	25

***Standard 45 rpm disc with 1½" diameter center hole. Also available with conventional center hole. To specify, indicate "Small Center Hole" on orders.**

All Prices Subject to Change Without Notice.

audiopoints

microscopically matched recording and playback styli

The complete line of Audiopoints covers the full range of recording and playback needs — for professional as well as general use. Audiopoints are made by skilled Craftsmen, and conveniently packaged in cards, boxes or envelopes.

RECORDING AUDIOPOINTS



SAPPHIRE No. 14 — long recognized as the finest recording stylus made. Short or long dural shank, 87° included angle.
List Price $8.25

SAPPHIRE No. 20 — especially designed for professional microgroove recording. Short or long dural shank. **List Price $8.25**

SAPPHIRE No. 202 — a high-quality professional stylus. Short or long brass shank.
List Price $6.60

STELLITE No. 34 — a favorite with many professional and non-professional users. Short or long shank. 87° included angle.
List Price $2.50

PLAYBACK AUDIOPOINTS



SAPPHIRE No. 113 — meets the requirements of the most critical professional recordists. Straight dural shank.
List Price $4.50

SAPPHIRE No. 123 — for professional use with microgroove recordings.
List Price $2.00

"RED CIRCLE" SAPPHIRE No. 103 — for professional use with instantaneous recordings or vinyl transcriptions. Straight dural shank. **List Price $2.00**

"RED CIRCLE" SAPPHIRE No. 303 — same as No. 103, except with bent dural shank. Ideal for phonograph records.
List Price $2.00

Scotch® Brand Recording Tape



No. 102 All Purpose, Extra Strength: For all general recording—especially suited for irreplaceable recordings or long term storage. On super-tough, weather balanced 1½ mil polyester backing.

No. 111 All Purpose: For all general recording. International standard of the recording industry—provides flawless sound reproduction at low cost. 1½ mil plastic backing.

No. 120 High Output: Over 100% more output, greater dynamic range and freedom from distortion on signal peaks. 1½ mil plastic backing.

No. 131 Low-Print: Reduces print-through (signal transfer from layer to layer) to a point below the noise level of most professional machines. Has excellent recording characteristics and allows long time storage. 1½ mil plastic backing.

No. 138 Low Print, Extra Strength: Same recording qualities as No. 131 on strong 1½ mil polyester backing.

No. 150 Extra Length, Extra Strength: 50% more playing time—withstands temperature and humidity extremes. High potency oxide on 1 mil polyester backing.

No. 175 Heavy Duty Tenzar®: This new, longer-wearing tape shrugs off hard use, rough handling . . . lasts 15 times longer than ordinary tapes. Made with a wear-resistant high potency oxide coating of the type proved exceedingly durable in heavy duty tapes for high speed computers. Available on red, blue, green, yellow or clear reels.

No. 190 Extra Length: 50% more tape—as much recording time as 1½ reels of standard tape. High potency oxide offers complete purity of sound. 1 mil plastic backing.

No. 200 Double Length, Double Strength: As much playing time as two reels of standard tape—enough to record an entire opera, concert or conference. High potency oxide on tensilized polyester backing.

Nos. 201, 202, and 203 "Dynarange" Series: Dynarange tapes are products engineered primarily for professional use, (and are now available to consumers for home recording use). Their unique qualities make them especially useful for the mastering and sub-mastering of pre-recorded tapes and records. Available in 1½ mil plastic (No. 201) and polyester backings (No. 202), as well as 1 mil polyester (No. 203).

No. 282 Sandwich: With exclusive micro-thin protective plastic shield over oxide coating. Eliminates oxide rub-off, wears up to 30 times longer, drastically reduces machine maintenance and provides superb sound fidelity. Strong, weatherproof 1½ mil polyester backing.

No. 290 Triple Length: The tape that gives maximum playing time for each reel size. Especially suitable for continuous recording of lengthy conferences, meetings, conventions. ½ mil tensilized polyester backing.

No. 8000 Quick-Load Cartridge: These compact cartridges slip into place in seconds and are ready to play. Completely self-contained. No threading. No loose ends. For use in home, education and industry. Available in 320′ or 560′ of high potency No. 150 tape in transparent or opaque cases.

"Living Letters" Tapes (in Plastic Containers): Three tape lengths available for a variety of uses, providing up to maximum recording time on a 3″ reel. Plastic container provides excellent re-useable mailer or dust-free storage unit.

ACCESSORIES

Empty Self Threading Reel in a Plastic Collar: A tape reel that threads itself. Holds tape firmly, but gently, when you start recorder. Threads up automatically—accommodates all tape thicknesses or leader tape. Reel comes complete with a snap-tight plastic collar that seals reel edges against dust, makes reel self-storing without a box. List Price—7″ reel $1.50.

No. 24 Colored Leader & Timing Tapes: Used to identify ends of tape and selections within a roll. Yellow and White in handy dispenser packages. List Price—¼″ x 100′—$.90.

No. 41 Splicing Tape: A self-sticking tape expressly made for neat noisless splices. On metal dispensers. List Price—½″ x 150″ $.39.

No. 51 Conductive Sensing Tape: For recorders with electronic sensing controls. Sticks tight, stays clean. On dispenser card. List Price — 7/32″ x 150″ $1.89.

No. 12 End-of-Reel Tape Clips: Prevent tape spilling. 10 clips per package — $.35.

Empty Reels and Boxes: Empty 3″, 5″ and 7″ plastic reels, plus boxes, are a must for editing and extra take-up reel needs. List Price — 3″ $.25 to 7″ $.75.

CATALOG NO.	LENGTH	REEL	LIST PRICE
102-¼-600	600′	5″	$ 2.65
102-¼-1200	1200′	7″	4.25
102-¼-2500H	2500′	HUB	8.55
102-¼-2500R	2500′	10½″	11.35
111-¼-150	150′	3″	.70
111-¼-600	600′	5″	2.25
111-¼-1200	1200′	7″	3.50
111-¼-2500H	2500′	HUB	7.85
111-¼-2500R	2500′	10½″	10.80
120-¼-600	600′	5″	2.25
120-¼-1200	1200′	7″	3.50
120-¼-2500H	2500′	HUB	7.85
120-¼-2500R	2500′	10½″	10.80
131-¼-1200	1200′	7″	4.40
131-¼-2500H	2500′	HUB	9.25
131-¼-2500R	2500′	10½″	12.20
138-¼-1200	1200′	7″	5.10
138-¼-2500H	2500′	HUB	11.10
138-¼-2500R	2500′	10½″	13.90
150-¼-900	900′	5″	3.60
150-¼-1800	1800′	7″	6.20
150-¼-3600H	3600′	HUB	11.40
150-¼-3600R	3600′	10½″	14.35
175-¼-600	600′	5″	2.40
175-¼-1200	1200′	7″	3.75
190-¼-900	900′	5″	3.50
190-¼-1800	1800′	7″	5.50
190-¼-3600H	3600′	HUB	9.85
190-¼-3600R	3600′	10½″	12.80
200-¼-1200	1200′	5″	5.45
200-¼-2400	2400′	7″	9.50
200-¼-4800RPS	4800′	10½″	22.00
201-¼-600	600′	5″	2.80
201-¼-1200	1200′	7″	4.40
201-¼-2500-RO	2500′	10½″	12.20
202-¼-600	600′	5″	2.85
202-¼-1200	1200′	7″	5.10
201-¼-2500-RO	2500′	10½″	13.90
203-¼-900	900′	5″	4.25
203-¼-1800	1800′	7″	7.35
203-¼-3600-RO	3600′	10½″	17.15
282-¼-600	600′	5″	3.10
282-¼-1200	1200′	7″	4.95
290-¼-1800	1800′	5″	6.95
290-¼-3600	3600′	7″	11.95
8000-¼-320 C	320′		4.00
8000-¼-560 O	560′		4.50
8000-¼-560 C	560′		4.50
111-¼-150-LL	150′	3″	.90
200-¼-300-LL	300′	3″	1.85
290-¼-600-LL	600′	3″	2.95

Magnetic Products Division 3M COMPANY

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Walsco ELECTRONICS

Walsco PHONO DRIVES



IDLER WHEEL–2-1/8" O.D.
With bushing. For GE, Motorola, Philco, Webcor.
Cat. No. 1437..... Net $1.27



IDLER WHEEL–2-1/8" O.D.
With bushing. Used on Columbia, GE, Motorola, Webcor.
Cat. No. 1438..... Net $1.38



IDLER WHEEL–2" O.D.
With bushing For use on Webcor Model 1134, 1136, 1151, 1121-1.
Cat. No. 1439..... Net $1.27



IDLER WHEEL–2-1/8" O.D.
Comes with bushing. For Webcor. Model 1135 record changer.
Cat. No. 1440..... Net $1.75



IDLER WHEEL–2-1/8" O.D.
For most Webcor tape recorders.
Cat. No 1441..... Net $2.20



IDLER WHEEL–1-1/2" O.D.
With bushing. For Philco & Webcor.
Cat. No. 1443..... Net $ .83



MOLDED IDLER WHEEL–RCA 45 RPM.
For RCA Series RP168 & RP190.
Cat. No. 1447..... Net $1.00



IDLER WHEEL–2" O.D.
For Collaro record changers in the 520 Series.
Cat. No. 1448..... Net $2.12



IDLER WHEEL–2-1/2" O.D.
For all Collaro record changers in the 54 and 530 Series
Cat. No. 1449..... Net $2.00



IDLER WHEEL–1" O.D.
For Crescent, in Models of 550 Series.
Cat. No. 1450..... Net $1.20



IDLER WHEEL–1-9/16" O.D.
For VM Models 920 and 990 and Silvertone changers.
Cat No. 1452..... Net $1.03



IDLER WHEEL–2-1/2" O.D.
With bushing. For Gen. Ind., Seeburg, and other players.
Cat. No. 1430..... Net $1.40



IDLER WHEEL–2-1/2" O.D.
For Webcor Model 110 record players. Manufacturer's Part No. 45P1530.
Cat. No. 1431..... Net $1.50



IDLER WHEEL–2" O.D.
For Admiral, Columbia, Crescent, GE, Motorola, Philco, Rca, Seeburg, Silvertone and VM.
Cat. No. 1432.....Net $. .80
Bushing I.D.–.215
Cat. No. 1487 Bushing I.D.–.182
Used on older Silvertone, etc.
Net $1.03



IDLER WHEEL–2" O.D.
With bushing. For VM and GE.
Cat. No. 1433..... Net $ .88



IDLER WHEEL–2" O.D.
With Shaft. For Admiral, Crescent, Motorola, Philco, RCA, Seeburg, Silvertone and VM.
Cat. No. 1434..... Net $1.09



IDLER WHEEL–2" O.D.
With bushing. For Milwaukee Stamping, Philco, Zenith and Westinghouse.
Cat. No. 1435..... Net $1.00



DRIVE WHEEL–3" O.D.
For Zenith Cobramatic Changers. Manufacturer's Part Nos. S-16922 and S-21754.
Cat. No. 1473..... Net $4.10



DRIVE WHEEL–1" O.D.
For Crescent changers of the 550 series.
Cat. No. 1451..... Net $1.60



3-STEP DRIVE SLEEVE
For Webcor Model 135, 136.
Cat. No. 1469..... Net $1.30



PRESSURE ROLLER–7/8" O.D.
For Webcor tape recorders.
Cat. No. 1455..... Net $1.63



PRESSURE ROLLER–7/8" O.D.
For Webcor tape recorders, 220 series and 2614, 2615.
Cat. No. 1482..... Net $1.47



PRESSURE ROLLER–3/4" O.D.
For VM Model 700, 701, 710, 711, 714 tape recorders.
Cat. No. 1458..... Net $1.32



CAPSTAN PRESSURE ROLLER–1" O.D.
For Pentron tape recorders.
Cat. No. 1488..... Net $1.62

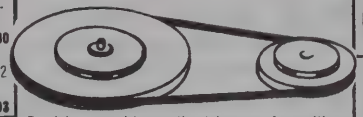


PRESSURE ROLLER–3/4" O.D.
For RCA & Wilcox-Gay tape recorders.
Cat. No. 1457..... Net $1.75



TAKE-UP DRIVER
For VM tape recorder Model 700.
Cat. No. 1484..... Net $4.30

RECORDER DRIVE BELTS
ROUND BLACK RUBBER DRIVES



Precision ground to exacting tolerances for positive, non-slipping drive action.

Cat. No.	Insd. Circum.	Thickness	Used On	Dealer Net
1410-06	6-9/32"	9/64"	Model VM-700, 701, 710, 711, 714 Tape Recorders	$ .50
1410-07	7-7/16"	9/64"	RCA SRT 301, 401, 402, 403, Wilcox-Gay 3A10. 3A11	.52
1410-08	8-5/8"	9/64"	Pentron, Crestwood & other tape recorders	.46
1410-10	10-23/32"	9/64"	Crescent and other tape recorders	.58
1410-12	3/16"	3/32"	Ampro and most Revere recorders	.58
1410-14	1-9/16"	9/64"	Most Revere Recorders	1.07
1410-15	29/32"	1/8"	Webcor Tape Recorders	1.07
1410-18	18.1"	.139"	Ampro Tape Recorders	1.42
1410-20	20.4"	.139"	Ampro Tape Recorders	1.75
1410-21	21.1"	.139"	Ampro, Gen. Ind., Webcor & other tape Recorders	1.75
1410-50	17/32"	3/16"	Webcor & Revere	.67
1410-51	16-7/32"	1/8"	Viking Tape Recorders	1.17
	5.8"	.139"	Replaces Belts on	
1410-52	4.3"	.139"	Webcor 11x1736 pkg.	.95
1410-53	6.5"	.210"	Revere Tape Recorders	.52
1474	9 8"	.139"	Crestwood Tape Recorders	.62
1409-02	5/16"	17"	Pentron Tape Recorders	2.40
1409-03	5/16"	12-1/4"	Pentron, Crescent & other Tape Recorders	2.40
1409-04	5/16"	12-13/32"	VM 700, 701, 710, 711, 714 Tape Recorders	2.49
1409-05	1/64"	17"	Webcor Recorders	2.08



(A) Cat. No. 1460..... Net $1.05 78 RPM
Ⓐ Cat. No. 1470..... Net $1.17 78 RPM
(B) Cat. No. 1461..... Net $1.05 45 RPM
Ⓑ Cat. No. 1471..... Net $1.01 45 RPM
(C) Cat. No. 1462..... Net $1.00 33-1/3 RPM
Cat. No. 1472..... Net $1.17 33-1/3 RPM
Ⓒ 1460, 1461 and 1462 are a Turret Drive group. For Crescent, GE, Motorola, RCA, VM and other changers.
The 1470 series is used on RCA, VM and other changers.



33-1/3RPM PULLEY-1/2" O.D.
RCA, R.P.-205/190 series motors replaces Mfg's Part No. 102941.
Cat. No. 1495-01.....Net $1.30



45 RPM PULLEY–1/2"O.D.
RCA, R.P./205/190 series motors. Replaces Mfg.'s Part No. 102942.
Cat. No. 1495-02.....Net $1.17



78 RPM PULLEY–1/2" O.D.
RCA, R.P.-205/190 series motors. Replaces Mfg.'s Part No. 102943.
Cat. No. 1495-03.....Net $1.30



16 RPM PULLEY–9/16" O.D.
RCA, R.P.-205/190 series motors. Replaces Mfg.'s Part No. 102944.
Cat. No. 1495-04.....Net $ .95



78 RPM PULLEY
Cat. No. 1463 78 RPM Net $1.92
Standard Pack: 3



45 RPM PULLEY
Cat. No. 1464 45 RPM Net $1.83
Standard Pack: 3



33-1/3RPM PULLEY
Cat. No. 1465 33-1/3 RPM
Standard Pack: 3 Net $1.83
Above 3 items are turret drives for GE and Webcor record changers



78 RPM PULLEY
Cat. No. 1466 78 RPM Net $1.30



45 RPM PULLEY
Cat. No. 1467 45 RPM Net $1.30



33-1/3RPM PULLEY
Cat. No. 1468 33-1/3 RPM Net $1.30
For Crescent, Motorola, VM, RCA and other changers.



IDLER WHEEL-1-11/32" O.D.
A molded rubber wheel for RCA Series RP-199 record changers.
Cat. No. 1454..... Net $2.03



IDLER WHEEL–1" O.D.
For all Zenith Cobra-Matic record changers.
Cat. No. 1459..... Net $2.62

CAPSTAN IDLER–1-3/4" O.D.
For 700 series VM tape recorders
Cat. No. 1485..... Net $1.21

IDLER WHEEL–2" O.D.
For Eicor Tape Recorders and Silvertone Record Changers.
Cat. No. 1475..... Net $1.89

IDLER WHEEL–2" O.D.
For Pentron Tape Recorders
Cat. No. 1483..... Net $1.47

IDLER PULLEY–1-5/8" O.D.
A molded rubber wheel for VM Record Changers in 1200 series and other types.
Cat. No. 1453..... Net $2.08

IDLER PULLEY–15/16" O.D.
A molded rubber wheel for VM Record Changers in the 1200 series having 4-pole motors.
Cat. No. 1456..... Net $2.34

IDLER PULLEY–1-5/8" O.D.
A molded rubber wheel for VM record changers.
Cat. No. 1486..... Net $2.17

INTER WHEEL–2" O.D.
For Garrard Model RC-80 Record Changers.
Cat. No. 1444..... Net $2.20

INTER WHEEL–2" O.D.
Has a ball-bearing hub cap. For Garrard T & TA record players.
Cat. No. 1445..... Net $2.20

BELTS & CAM TIRES

Special shapes. Made of highest quality abrasion-resistant neopreme rubber.

INDEX FINGER CUSHION
Used on Webcor 100, 121, 1124 series. Also on Webcor 110 and 114 series.
Cat. No. 1419..... Net $ .23 pr.

WALSCO TIRES & BELTS

Cat. No.	I.D.	Wall Thickness	Length	Used on	Net
1414	5/8"	1/32"	1/4"	Admiral, Ge, Vm	$ .24 per pair
1415	21/32"	1/32"	1/4"	Garrard, Ge, Philco	.24 per pair
1416	2-3/4"	1/16"	3/16"	Zenith	.22 each
1417	1-1/2"	5/32"	3/16"	Admiral, Garrard	.18 each
1418	13/16"	1/8"	3/16"	Genl. Ind., Wilcox-Gray	.15 each
1424	2-7/8"	1/4"	1/4"	Admiral, Crescent, RCA	.46 each
1476	15/16"	1/32"	1/4"	Admiral	.22 per pair

RUBBER BUMPERS
Used on VM Record Changers.
Cat. No. 1411..... Net $ .30 pr.

WALSCO RECORD ARM SLEEVE
For Garrard. Protects record arm and reduces vibration. Long-lasting neoprene rubber. (2 required).
Cat. No. 1412..... Net $ .20 pr.

WALSCO VELOCITY TRIP
For Webcor, precision-molded to manufacturer's specifications.
Cat. No. 1413..... Net $ .22 pr.

WALSCO PHONO HARDWARE KIT
Kit contains over 60 parts, including phono jacks and plugs, assorted screws, spacers and springs, in transparent plastic box.
Cat. No. 1497..... Net $1.82

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A-M Akro-Mils Parts Cabinets

DESIGN YOUR OWN PARTS WAREHOUSE. Akro-Mils' totally new concept in small item storage for the 60's enable you to design your own small parts warehouse . . . exactly to YOUR storage needs! These space saving, time saving cabinets with the built-in look reduce your storage costs and promote greater labor, inventory and production efficiency.

Completely versatile, these compact modular cabinets can be used individually on any flat surface . . . or stacked in any desired combination of cabinets. They can be hung from a wall or integrated into any standard shelving set-up. You can save the cost of shelving by stacking.

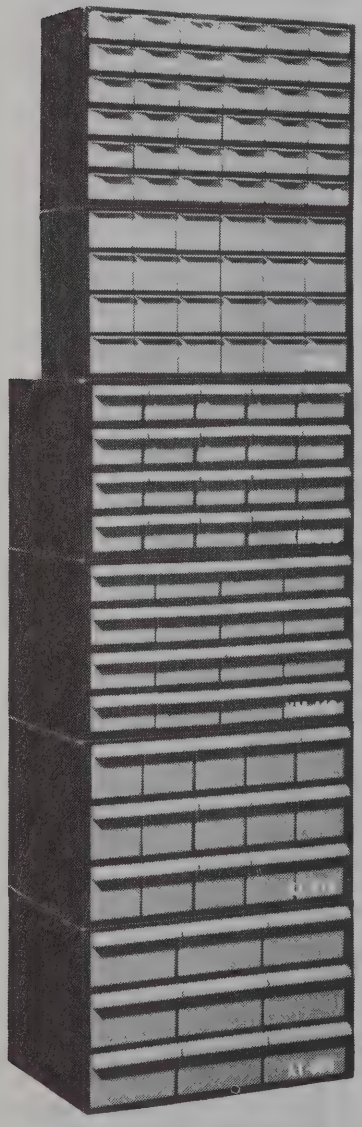
Securely welded of steel, cabinets are constructed to last a lifetime of daily use. Baked-on gray finish won't chip or rub off.

Drawers are available in two different materials. The see-thru, ordinary strength molded drawers give you instant visual inventory control. The hi-impact molded drawer is the strongest drawer made, is virtually indestructible, actually surpasses any other material in strength and durability . . . is not transparent and is finished in permanent, granite gray color.

All drawers have an ingenious system of vertical, horizontal and criss cross dividers making an infinite variety of compartments available. Rust and corrosion proof, open and close smoothly, operate quietly, dent proof, safety feature . . . no sharp edges to cause cuts or scratches, non-toxic, non conductive, resistant to most chemicals including acids, easy to clean one-piece seamless construction, 60% lighter than steel yet drawers cannot twist or spring out of shape.

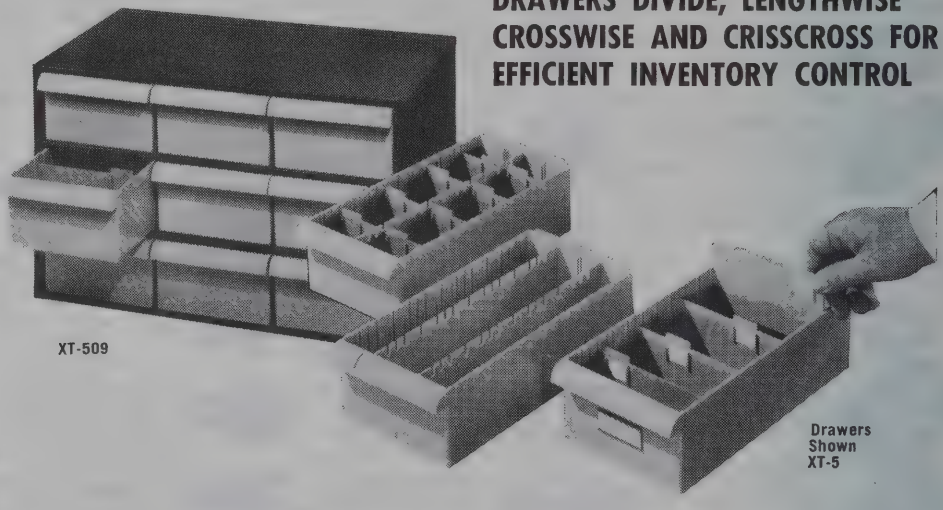
Dividers have lock-tight dovetail design (except XJD-1, JD-1, XM-3 and M-3 drawers) to prevent drawer sides from spreading, easily moved to new position if desired. Dividers can be placed lengthwise, cross-wise or criss-crossed to provide any size or shape of compartment. Dividers fit into grooves to prevent creepage of parts into adjacent compartment.

Both drawer materials come in the same six sizes and the six different cabinets fit both style drawers. Cabinets are made to contain 9, 15, 16, 20, 24 and 36 drawers, see table below.



COMPLETELY FLEXIBLE . . . Six different cabinets — six different drawer sizes. Can be stacked in any combination.

DRAWERS DIVIDE, LENGTHWISE CROSSWISE AND CRISSCROSS FOR EFFICIENT INVENTORY CONTROL



XT-509

Drawers Shown XT-5

CABINETS WITH HI-IMPACT SUPER STRONG DRAWERS	SUPER STRONG DRAWER NUMBER	CABINET SIZE All 17⅞" Wide		DRAWER SIZE—INCHES			NUMBER OF DRAWERS INCLUDED	SHIPPING WEIGHT POUNDS	NET COST COMPLETE
		Deep	High	High	Wide	Long			
XJ-36	XJD-1	6"	11⅛"	1 7/16	2¾	5⅞	36	13	**$12.48**
XG-24	XG-1	6"	9⅞"	2	2¾	5¾	24	11	**$12.48**
XM-320	XM-3	11"	10¼"	2	3	11	20	16½	**$19.98**
XM-416	XM-4	11"	10¼"	2	4	11	16	16¾	**$17.98**
XT-315	XT-3	11"	10⅝"	3 1/32	3⅛	11	15	17	**$17.98**
XT-509	XT-5	11"	10⅝"	3 1/32	5¼	11	9	15¾	**$17.98**

STRONGEST DRAWER MADE
VIRTUALLY INDESTRUCTIBLE

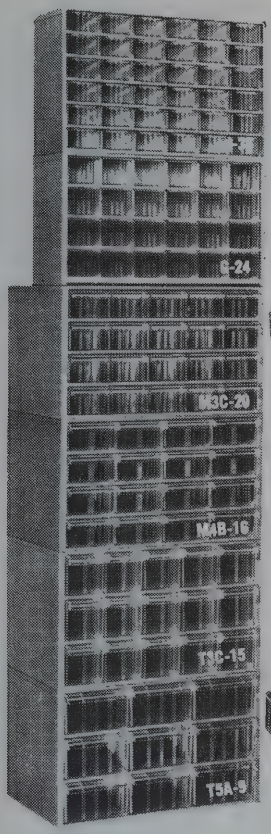
*Industrial user net prices F.O.B. shipping point. All local or state taxes additional.

EXTRAORDINARY GUARANTEE!

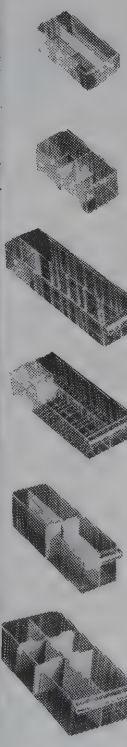
"X" SERIES HI-IMPACT Drawers are Guaranteed for 5 years against any breakage. We invite you to make the "DROP" test on these unique drawers—drop it . . . FULLY LOADED on any surface—steel, concrete or wood. If the drawer shatters, return to us with a signed note on your company letterhead and we will send you a replacement drawer . . . free.

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A-M Akro-Mils Parts Cabinets



VISUAL INVENTORY CONTROL DRAWERS



JD-1 COMPACT DRAWERS 1-7/16" h. x 2¾" w. x 5⅞" l.

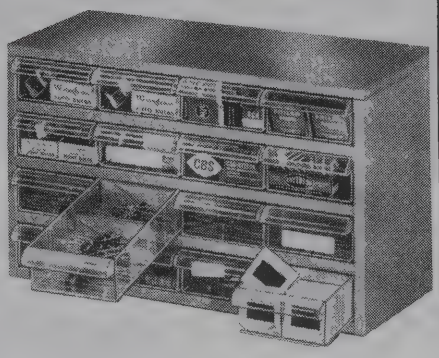
G-1 DEEP COMPACT DRAWERS 2" h. x 2¾" w x 5¾" l.

M-3 LONG DRAWERS 2" h. x 3" w. x 11" l.

M-4 LONG WIDE DRAWERS 2" h. x 4" w. x 11" l.

T-3 LONG DEEP DRAWERS 3-1/32" h. x 3⅛" w. x 11" l.

T-5 LONG WIDE DEEP DRAWERS 3-1/32" h. x 5¼" w. x 11" l.



To fill your requirements where stock must be readily accessible and easy to locate, these see-through, sturdy molded drawers will also give you instant visual inventory control.

Strong and sturdy, these drawers provide instant selection—no searching or lost motion. A glance tells you how much you have and what you need. Tedious, time-consuming records and counting are virtually eliminated.

CABINETS WITH SEE-THRU TRANSPARENT DRAWERS	VISUAL SEE-THRU DRAWER NUMBER	CABINET SIZE All 17⅞" Wide		DRAWER SIZE—INCHES			NUMBER OF DRAWERS INCLUDED	SHIPPING WEIGHT POUNDS	NET COST COMPLETE
		Deep	High	High	Wide	Long			
J-36	JD-1	6"	11⅛"	1 7/16	2¾	5⅞	36	13	**$12.48**
G-24	G-1	6"	9⅞"	2	2¾	5¾	24	11	**$12.48**
M3C-20	M-3	11"	10¼"	2	3	11	20	16½	**$19.98**
M4B-16	M-4	11"	10¼"	2	4	11	16	16¾	**$17.98**
T3C-15	T-3	11"	10⅝"	3 1/32	3⅛	11	15	17	**$17.98**
T5A-9	T-5	11"	10⅝"	3 1/32	5¼	11	9	15¾	**$17.98**

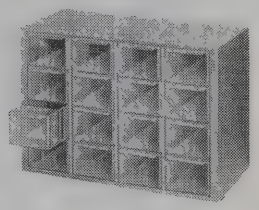
HANDY BIN STEEL CABINETS

Find things fast—store small things better

These two cabinets can be used separately or stacked depending on your individual requirments. Instant visual control of all stock is at your disposal at all times.

What a relief! No more time wasted searching for small items in your shop, office or lab. Keep small things handy . . . orderly . . . and at your fingertips in an A-M SEE THRU Drawer Cabinet.

24F Deep Compact Drawers: 2" x 2¾" x 5¾"



101 USES. Perfect for resistors, capacitors, controls . . . electric hardware . . . Unconditional guarantee . . . you must be delighted or your money back.



24HB Compact Drawers 1¼" x 2¾" x 5¾"

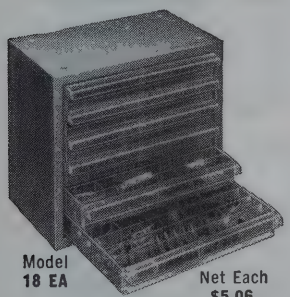
All Models Modular Add & Stack

No other cabinets made have all these desirable features.

- **"See Thru" spillproof plastic drawers. Super strength to store heaviest metal parts.**
- **"Fit Tight" plastic dividers to adjust compartment sizes to your needs.**
- **Rigid, welded steel cabinets with enamel finish that won't chip or rub off.**
- **Modular — stacks neatly, stand or hangs on the wall.**
- **Slots for drawer front index labels. Press-on labels supplied with each drawer.**

24F—9" x 13" x 6" with 16 DEEP COMPACT drawers **$5.63**

24HB—9" x 13" x 6" with 24 COMPACT drawers **$5.63**



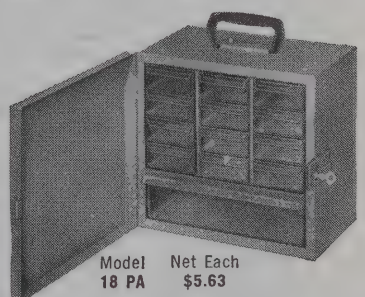
Model **18 EA** Net Each **$5.06**

6 MINIATURE PARTS DRAWERS

Six "roll-out" compartments per drawer—easiest access to tiniest of items. Comes with 9 dividers per drawer, plus labels. Cabinet 9" H. x 10" W. x 6" D. Wgt. 5¾ lbs.

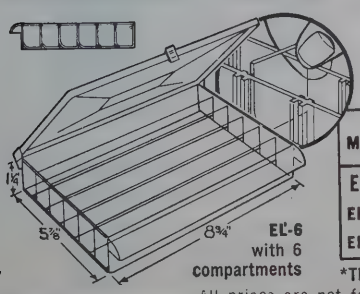
13-DRAWER PORTABLE LOCKING CABINET

12 compact plastic drawers, 1¼" x 2¾" x 5¾". 1 jumbo drawer 2½" x 8¾" x 5¾". Steel case has hinged door with lock clasp. Contents can't spill. Cabinet 9" H. x 10" W. x 6½" D. Wgt. 5¾ lbs.



Model **18 PA** Net Each **$5.63**

101 USES FOR THESE FULLY ADJUSTABLE COMPARTMENTED PLASTIC BOXES

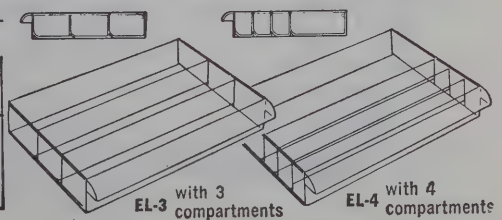


EL-6 with 6 compartments

Curved "roll-out" type compartments—finger-tip can roll small items out with ease.

Model	Compartments	Dividers	Compartment Size Inches	Wt. Doz.	Price Doz.
EL-6	6	9	8-3/4 x 1-1/4 x 15/16	7 lbs.	**$9.00**
EL-3	3	9	8-3/4 x 1-1/4 x 1-7/8	7 lbs.	**$9.00**
EL-4	4	7	*	7 lbs.	**9.00**

*THREE 8-3/4 x 1-1/4 x 15/16—ONE 8-3/4 x 1-1/4 x 2-7/8

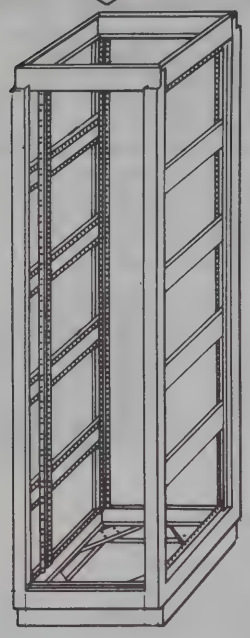


EL-3 with 3 compartments **EL-4** with 4 compartments

All prices are net for industrial users. Prices F.O.B. shipping point. Local or State taxes, if applicable, are additional.

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Series "60" Cabinet Racks



Ⓐ Upright Rack



Ⓑ Plain Door



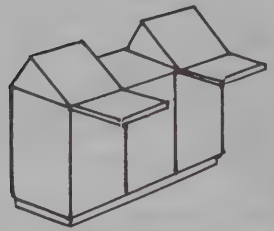
Ⓒ Louvered Door



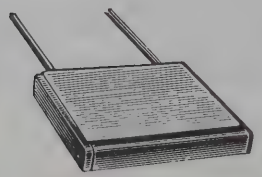
Ⓓ Plain Side



Ⓔ Louvered Side



Typical Assembly



Ⓕ Desk Top

Scientifically designed to meet all requirements for human needs as well as component physical specifications; the most practical cabinet rack developed for either a single piece of equipment or a large instrumentation system. Very economical to the user, units are shipped fully assembled and ready for immediate use.

Basic frame welded in a solid unit composed of 14-gauge cold-rolled steel channels. Sides have "U" braces with perforated channels for fastening vertical adjustable mounting rails. Rails also support other types of equipment such as brackets, shelves, slides, etc. Eliminates need of drilling holes in the rack. Sides and rear door made of 16 gauge steel. Door may be mounted to open left or right. Vertical channel, 6″ wide, welded to door to prevent vibration or whip. Two pairs of panel mounting rails are supplied; fully adjustable. Panels may be mounted in front and rear at the same time. Front rails drilled and tapped 10-32 W.E. spacing. Rear rails are drilled according to universal spacing.

All Series Sixty enclosures may be quickly combined with each other to create units of any desired width as shown in the Add-A-Rack series. In addition, such accessories as desk tops, turrets, drawers, slides, sloping panel supports and front door are easily installed.

Standard finishes are smooth baked enamel over a primer. For two-tone gray, specify by adding suffix **SG.** For two-tone blue, add suffix **SB** to order number. Standard Bud relay rack panels are available for the Series Sixty racks in light gray and light blue; when ordering, add suffix **SG** for gray; **SB** for blue.

UPRIGHT CABINET RACKS (FIG. A)

Completely assembled with sides, rear door and top. Standard units have plain sides and door; solid top. For greater ventilation, order units with louvered sides and/or rear door; both, with solid top. Width, 24 1/16″, all units. Inside depth 20 1/4″ clear on units with 22″ outside depth; 23 3/4″, all others. Top opening 18 1/2″ w. x 17″ d. on units with 22″ outside depth; 18 1/2″ w. x 20 1/2″ d., all others. **Specify Color When Ordering:** Add suffix **SG** to number for gray; suffix **SB,** for blue.

With Plain Sides and Door								Louvered Sides, Plain Door			
Bud No. 60-	Net Each, Lots of 1-9	10-14	15-19	Height	Outside Depth	Panel Space	Wt., Lbs.	Bud No. 60-	Net Each, Lots of 1-9	10-14	15-19
2300	$106.30	$ 95.67	$ 85.05	29 5/8″	22″	21″	118	2600	$112.00	$100.80	$ 89.60
2301	131.45	118.30	105.15	40 1/8″	22″	31 1/2″	156	2601	140.00	126.00	112.00
2302	146.05	131.45	116.85	50 5/8″	22″	42″	173	2602	156.50	140.85	125.20
2303	166.25	149.60	133.00	61 1/8″	22″	52 1/2″	197	2603	179.00	161.10	143.20
2304	180.25	162.20	144.20	69 7/8″	22″	61 1/4″	220	2604	194.75	175.28	155.80
2305	200.00	180.00	160.00	78 5/8″	22″	70″	235	2605	216.50	194.85	173.20
2306	218.65	196.80	174.90	87 3/8″	22″	78 3/4″	265	2606	235.15	211.64	188.12
2307	125.50	112.95	100.40	29 5/8″	25 1/2″	21″	156	2607	135.15	121.64	108.12
2308	151.20	136.10	120.95	40 1/8″	25 1/2″	31 1/2″	176	2608	159.80	143.82	127.84
2309	168.00	151.20	134.40	50 5/8″	25 1/2″	42″	185	2609	178.00	160.20	142.40
2310	186.50	167.85	149.20	61 1/8″	25 1/2″	52 1/2″	211	2610	203.70	183.33	162.96
2311	207.30	186.55	165.85	69 7/8″	25 1/2″	61 1/4″	240	2611	219.90	197.91	175.92
2312	230.30	207.25	184.25	78 5/8″	25 1/2″	70″	256	2612	244.20	219.78	195.36
2313	251.35	226.20	201.10	87 3/8″	25 1/2″	78 3/4″	267	2613	266.20	239.58	212.96
With Louvered Sides and Door								**Plain Sides, Louvered Door**			
2700	$110.20	$ 99.18	$ 88.16	29 5/8″	22″	21″	118	2800	$108.50	$ 97.65	$ 86.80
2701	137.00	123.30	109.60	40 1/8″	22″	31 1/2″	156	2801	134.30	120.87	107.44
2702	153.40	138.06	122.72	50 5/8″	22″	42″	173	2802	149.20	134.28	119.36
2703	175.30	157.77	140.24	61 1/8″	22″	52 1/2″	197	2803	169.70	152.73	135.76
2704	190.80	171.72	152.64	69 7/8″	22″	61 1/4″	220	2804	184.10	165.69	147.28
2705	212.00	190.80	169.60	78 5/8″	22″	70″	235	2805	204.30	183.87	163.44
2706	230.20	207.18	184.16	87 3/8″	22″	78 3/4″	265	2806	223.40	201.06	178.72
2707	129.90	116.91	103.92	29 5/8″	25 1/2″	21″	156	2807	127.70	114.93	102.16
2708	156.90	141.21	125.52	40 1/8″	25 1/2″	31 1/2″	176	2808	145.00	130.50	116.00
2709	174.70	157.23	139.76	50 5/8″	25 1/2″	42″	185	2809	171.10	153.99	136.88
2710	194.30	174.87	155.44	61 1/8″	25 1/2″	52 1/2″	211	2810	190.00	171.00	152.00
2711	215.90	194.31	172.72	69 7/8″	25 1/2″	61 1/4″	240	2811	211.10	189.99	168.88
2712	239.80	215.82	191.84	78 5/8″	25 1/2″	70″	256	2812	234.60	211.14	187.68
2713	261.30	235.17	209.04	87 3/8″	25 1/2″	78 3/4″	267	2813	256.10	230.49	204.88

ACCESSORY PERFORATED TOP

Bud No.	Width	Depth	Fits Upright Rack	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
60-2370	21 15/16″	17″	With overall depth of 22″	6	$5.65	$5.10	$4.50
60-2371	21 15/16″	20 1/2″	With overall depth of 25 1/2″	7	6.00	5.40	4.80

ACCESSORY DOORS

Doors are interchangeable; may be used for front or rear of rack; mount to open either left or right.

Plain Type (Fig. B)								Louvered Type (Fig. C)			
Bud No.	Net Each, Lots of 1-9	10-14	15-19	Ht.	Width	Fits Rack With Panel Space of	Wt., Lbs.	Bud No.	Net Each, Lots of 1-9	10-14	15-19
60-2340	$16.05	$14.45	$12.85	21 7/16″	18 15/16″	21″	8	60-2540	$18.35	$16.52	$14.68
60-2341	19.80	17.80	15.85	31 15/16″	18 15/16″	31 1/2″	11 1/2	60-2541	22.70	20.43	18.16
60-2342	21.90	19.70	17.50	42 7/16″	18 15/16″	42″	15 1/2	60-2542	25.20	22.68	20.16
60-2343	24.30	21.85	19.45	52 15/16″	18 15/16″	52 1/2″	19	60-2543	27.95	25.16	22.36
60-2344	27.05	24.35	21.65	61 11/16″	18 15/16″	61 1/4″	22 1/4	60-2544	31.05	27.95	24.84
60-2345	30.05	27.05	24.05	70 7/16″	18 15/16″	70″	25 1/2	60-2545	34.50	31.05	27.60
60-2346	32.80	29.50	26.25	79 3/16″	18 15/16″	78 3/4″	29	60-2546	37.70	33.93	30.16

ACCESSORY SIDES

Plain Type (Fig. D)								Louvered Type (Fig. E)			
Bud No.	Net Each Pair, Lots 1-9	10-14	15-19	Ht.	Width	Fits Rack With Panel Space of	Wt., Lbs.	Bud No.	Net Each Pair, Lots 1-14	15-24	25-34
60-2560	$24.10	$21.70	$19.30	26 55/64″	22″	21″	12 1/2	60-2580	$28.10	$25.30	$22.50
60-2561	31.50	28.35	25.20	37 23/64″	22″	31 1/2″	17 1/2	60-2581	37.20	33.50	29.75
60-2562	36.65	33.00	29.30	47 55/64″	22″	42″	21	60-2582	44.20	39.80	35.35
60-2563	42.70	38.45	34.15	58 23/64″	22″	52 1/2″	26 1/4	60-2583	51.95	46.75	41.55
60-2564	46.70	42.05	37.35	67 7/64″	22″	61 1/4″	30	60-2584	57.40	51.65	45.90
60-2565	51.45	46.30	41.15	75 55/64″	22″	70″	34	60-2585	63.60	57.25	50.90
60-2566	59.00	53.10	47.20	84 39/64″	22″	78 3/4″	38	60-2586	70.75	63.70	56.60
60-2567	30.15	27.15	24.10	26 55/64″	25 1/2″	21″	14 1/2	60-2587	34.70	31.25	27.75
60-2568	39.40	35.45	31.50	37 23/64″	25 1/2″	31 1/2″	20	60-2588	45.30	40.75	36.25
60-2569	45.85	41.25	36.70	47 55/64″	25 1/2″	42″	24	60-2589	52.75	47.50	42.20
60-2570	53.35	48.00	42.70	58 23/64″	25 1/2″	52 1/2″	29 1/2	60-2590	61.35	55.20	49.10
60-2571	58.35	52.50	46.70	67 7/64″	25 1/2″	61 1/4″	34 1/2	60-2591	67.10	60.40	53.70
60-2572	64.30	57.90	51.45	75 55/64″	25 1/2″	70″	39	60-2592	73.95	66.55	59.15
60-2573	67.76	61.00	54.20	84 39/64″	25 1/2″	78 3/4″	43 1/2	60-2593	77.90	70.10	62.30

SERIES SIXTY DESK TOP (FIG. F)

May be used in connection with any Series Sixty enclosure. Furnished completely assembled with wood-grained Formica surface. Fastens to panel mounting rails by two pre-drilled channels. Will support in excess of 200 lbs. Surface 24 1/16″ wide, 19 1/2″ deep, 3 1/16″ high. Available in two colors. **Specify Color:** Add suffix **SG** for gray; **SB** for blue.

Bud No.	Fits Series Sixty	Support Channel	Wt., Lbs.	Ea., 1-14	Ea., 15-24	Ea., 25-34
60-2360	With 22″ depth	21 9/32″ long	22	$36.05	$32.45	$28.85
60-2362	With 25 1/2″ depth	24 3/4″ long	23	36.75	33.08	29.40

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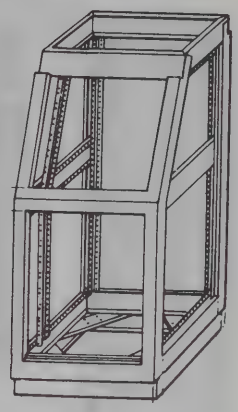
Series "60" Cabinet Racks

INCLINED PANEL CABINET RACKS (FIG. G)

Completely assembled with sides, rear door and solid top. Available in four combinations of plain or louvered sides and rear door. Size, 50⅜" h. x 24 1/16" w. x 22" d., outside; 20¼" d., clear inside. Weight, 165 lbs. **Specify Color When Ordering:** Add suffix **SG** to number for gray; suffix **SB**, for blue.

With Plain Sides and Door				Incline Panel Hgt.	Vert. Panel Hgt.	Top Opening W. x D.
Bud No. 60-	Net Each, Lots of 1-9	10-14	15-19			
2330	$165.25	$148.70	$132.20	10½"	29¾"	18½" x 11¾"
2331	175.15	157.65	140.10	15¾"	24½"	18½" x 10"
2332	175.15	157.65	140.10	17½"	22¾"	18½" x 9⅜"
With Louvered Sides and Door						
2730	$170.90	$153.81	$136.72	10½"	29¾"	18½" x 11¾"
2731	181.00	162.90	144.80	15¾"	24½"	18½" x 10"
2732	181.00	162.90	144.80	17½"	22¾"	18½" x 9⅜"

Louvered Sides and Plain Door			
Bud No. 60-	Net Each, Lots of 1-9	10-14	15-19
2630	$147.20	$132.48	$117.76
2631	184.20	165.78	147.36
2632	184.20	165.78	147.36
Plain Sides, Louvered Door			
2830	$168.50	$151.65	$134.80
2831	178.40	160.56	142.72
2832	178.40	160.56	142.72



G Inclined Panel Rack

ACCESSORY FRONT DOORS

Plain Type (Fig. J)								Louvered Type (Fig. K)			
Bud No.	Net Each, Lots of 1-9	10-14	15-19	Height	Width	Fits Rack Top Open. Size, In.	Wt., Lbs.	Bud No.	Net Each, Lots of 1-9	10-14	15-19
60-2350	$19.85	$17.85	$15.90	30⅜"	18 15/16"	18½x11¾	11	60-2550	$22.80	$20.52	$18.24
60-2351	18.55	16.70	14.85	25 15/16"	18 15/16"	18½x10	9½	60-2551	21.30	19.17	17.04
60-2352	18.00	16.20	14.40	23 1/16"	18 15/16"	18½x9⅜	9	60-2552	20.70	18.63	16.56

ACCESSORY REAR DOORS

60-2342	$21.90	$19.70	$17.50	42 7/16"	18 15/16"	All sizes	15½	60-2542	$25.20	$22.68	$20.16

ACCESSORY SIDES

Specify "L" for left side or "R" for right side, determined when facing front of rack.

60-2574*	$38.45	$34.60	$30.75	47 55/64"	22"	18½x11¾	11	60-2594†	$44.20	$39.80	$35.35
60-2575*	39.55	35.60	31.65	47 55/64"	22"	18½x10	9½	60-2595†	45.50	40.95	36.40
60-2576*	39.55	35.60	31.65	47 55/64"	22"	18½x9⅜	9	60-2596†	45.50	40.95	36.40

*Fig. H. †Fig. I.



H Side Panels I

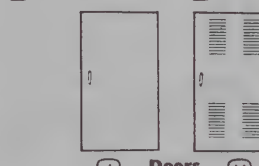
ACCESSORY PERFORATED TOPS

Bud No.	Width	Depth	Fits Rack Top Size, In.	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
60-2372	21 15/16"	11 13/16"	18½ x 11¾	4	$4.40	$3.95	$3.50
60-2373	21 15/16"	10"	18½ x 10	3	4.25	3.85	3.40
60-2374	21 15/16"	9 13/16"	18½ x 9⅜	3	4.20	3.80	3.35

ADD-A-RACK SERIES

Each assembly consists of frame, top, bottom, rear door and cowlings; used as an add-on unit to join any of the Series Sixty enclosures into a bank of two or more. One standard rack plus several Add-A-Racks make any desired number of racks combined for optimum width. Colors same as above Racks.

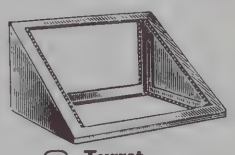
Plain Sides					Louvered Sides					
Bud No. 60-	For Add-on to Rack No. 60-	Net Each, Lots of 1-9	10-14	15-19	Bud No. 60-	For Add-on to Rack No. 60-	Net Each, Lots of 1-9	10-14	15-19	Wt., Lbs.
2500	2300, 2600	$ 86.10	$ 77.50	$ 68.90	2900	2700, 2800	$ 88.40	$ 79.56	$ 70.72	92
2501	2301, 2601	104.75	94.30	83.80	2901	2701, 2801	107.65	96.89	86.12	113
2502	2302, 2602	114.70	103.25	91.75	2902	2702, 2802	118.00	106.20	94.40	115
2503	2303, 2603	125.30	112.75	100.25	2903	2703, 2803	128.95	116.06	103.16	145
2504	2304, 2604	140.00	126.00	112.00	2904	2704, 2804	144.00	129.60	115.20	148
2505	2305, 2605	156.00	140.40	124.80	2905	2705, 2805	160.45	144.41	128.36	152
2506	2306, 2606	167.35	150.60	133.90	2906	2706, 2806	172.25	155.03	137.80	158
2507	2307, 2607	100.00	90.00	80.00	2907	2707, 2807	102.30	92.07	81.84	120
2508	2308, 2608	117.25	105.55	93.80	2908	2708, 2808	120.15	108.14	96.12	132
2509	2309, 2609	128.00	115.20	102.40	2909	2709, 2809	131.30	118.17	105.04	138
2510	2310, 2610	139.60	125.65	111.70	2910	2710, 2810	143.25	128.93	114.60	142
2511	2311, 2611	156.10	140.50	124.90	2911	2711, 2811	160.10	144.09	128.08	164
2512	2312, 2612	174.00	156.60	139.20	2912	2712, 2812	178.45	160.61	142.76	168
2513	2313, 2613	192.50	173.25	154.00	2913	2713, 2813	197.40	177.66	157.92	172
2530	2330, 2630	132.90	119.60	106.30	2930	2730, 2830	136.20	122.58	108.96	119
2531	2331, 2631	142.10	127.90	113.70	2931	2731, 2831	145.40	130.86	116.32	119
2532	2332, 2632	142.10	127.90	113.70	2932	2732, 2832	145.40	130.86	116.32	125



J Doors K

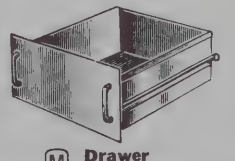
SERIES SIXTY TURRETS (FIG. L)

Made of 16 gauge steel; designed so that any one of three sides may be attached to a Series Sixty upright rack or any horizontal surface. Accommodate standard 19" panels. All mounting rails have universal spacing. Sides easily removed when a series of interconnecting turrets are desired. **Specify Color When Ordering:** Add suffix **SG** for dark gray; **SB** for dark blue. For panels, order standard Bud panels with suffix **SG** for light gray; **SB** for light blue.



L Turret

Bud No.	Width	Depth	Height	Panel Space Sloping	Bottom	Rear	Wt., Lbs.	Net Each, Lots of 1-14	15-24	25-34
60-2364	22 1/16"	17⅞"	12 5/16"	17½"	14"	8¾"	17	$39.05	$35.15	$31.25
60-2365	22 1/16"	14⅜"	10 3/16"	12¼"	10½"	7"	14	32.55	29.30	26.05
60-2366	22 1/16"	20 13/16"	14⅜"	21"	17½"	10½"	20	41.00	36.90	32.80



M Drawer

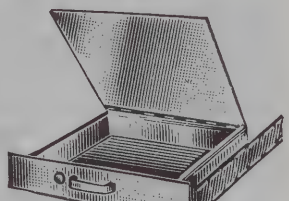


N Sliding Desk Top

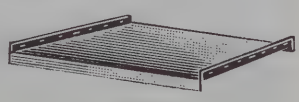
SERIES SIXTY DRAWER, DESK TOP, AND SHELF ACCESSORIES

No. 60-2368 Drawer: Fits into any Series Sixty cabinet rack. Slides easily on nylon rollers. Will support heavy loads. Extends to full depth; stops prevent drawer from falling out. Slides easily attach to panel supporting rails. Silver anodized handles. Shipped completely assembled. **No. 60-2361 Sliding Desk Top:** Fits all Series Sixty racks. Has smooth Formica* surface for writing, servicing or inspection. Fits flush with front of unit. Usable area when fully extended, 11" x 16⅞". Occupies only 1¾" of panel height. Will support 75 lbs. Ball-bearing slide mechanism mounts directly in Series Sixty racks; brackets included to fit other Bud cabinets and consoles. **No. 60-2363 Desk Top Drawer:** Fits Series Sixty racks. Has Formica surface. Fits flush with front of unit. Hinged desk top on drawer holds small tools or parts. Special front-panel latch both locks and releases drawer or top as desired. Mounts to cabinet U-braces; slides travel on nylon rollers. Hardware supplied. **No. 60-2380 and 60-2381 Shelves:** Ideal for support of chassis, power supplies or other equipment; also may be used as base plate for bottom support. Of one-piece 16 gauge steel with flanged front and rear for extra strength and rigidity. Easily bolt to cabinet U-braces. Will support 200 lbs. Hardware supplied.

Bud No.	Fig.	Size, Inches	Wt., Lbs.	Net Each, Lots of 1-14	15-24	25-34	50-99
60-2368†	M	16⅝ x 6¾ x 19¼ inside	28	$32.05	$28.85	$25.65	.....
60-2361‡	N	16⅞ x 15⅛ x 1¾ with std. 19" panel	8	16.65	14.99	13.32	.....
60-2363†	O	16⅝ x 3¼ x 15 inside; 19 x 3½ front panel	19	55.00	49.50	44.00	.....
60-2380†	P	17 31/32 w. x 19 9/32" d.	7½	6.80	6.80	6.12§	$5.44
60-2381†	P	17 31/32 w. x 22¾ d.	8¾	7.10	7.10	6.39§	5.70



O Desk Top Drawer

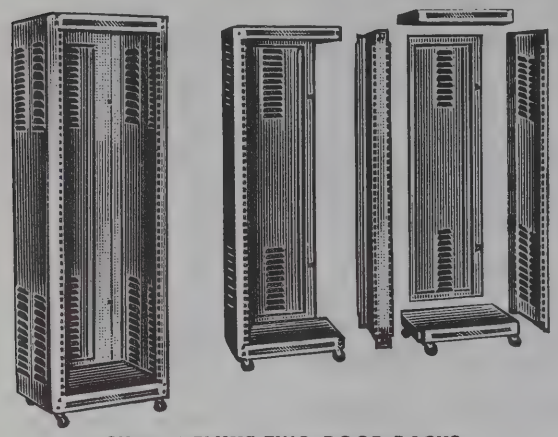


P Shelf

*Synthane Corp. trademark. †Add suffix **SB** for smooth blue; **SG**, smooth gray. ‡Add suffix **B** for black wrinkle; **G**, gray wrinkle; **HG**, gray hammertone; **SB**, smooth blue; **SG**, smooth gray. §Lots of 25-49.

Cabinet Racks, Accessories

DELUXE RELAY RACKS WITH ADD-A-RACK



High quality relay racks made of 16-gauge steel with 7/16" panel supports. Panel mounting supports are recessed so that no panel edges will be exposed. Both back and sides are fully louvered for best ventilation. Snap catches are positioned on the door. Rounded corners and red-lined chrome trim give streamlined appearance. Base constructed with four special supports so that casters may be applied directly to base for mobility. All standard panels will fit these racks: 22" wide for 19" panels; 27" wide for 24" panels.

Super Deluxe Series Relay Racks are equipped with adjustable panel mounting supports permitting forward and backward adjustment of panels for more efficient use of space. Adjustable points are at 1" intervals for 9" to 15" clearance behind panels. Super Deluxe Racks are fitted with both front and rear doors, the rear to cover any equipment behind the panel while making it easily accessible. The front door, not louvered, conceals controls on the front panel.

Add-A-Rack Series—Where relay racks are to be joined in series. Provides additional strength and improved appearance. Includes door, top, bottom and coupling unit, all that is needed to make a double relay rack out of a single Deluxe series.

All Racks Listed are shipped knocked-down with all necessary hardware and assembly instructions. Casters optional. When ordering specify finish. Add suffix **"HG"** for gray hammertone; suffix **"G"** for gray wrinkle; and suffix **"B"** for black wrinkle.

SUPER DELUXE TWO-DOOR RACKS

WITH 19" WIDE PANEL SPACE

Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of 1-9	10-14	15-19
CR-2174	42 1/16"	36 3/4"	102	$ 64.13	$ 57.72	$51.30
CR-2171	47 5/16"	42"	104	72.65	65.39	58.12
CR-2172	66 9/16"	61 1/4"	138	93.77	84.39	75.02
CR-2175	75 5/16"	70"	150	96.00	86.40	76.80
CR-2173	82 5/16"	77"	163	112.56	101.30	90.05

WITH 24" WIDE PANEL SPACE

CR-2494	42 1/16"	36 3/4"	119	$ 83.00	$ 74.70	$66.40
CR-2491	47 5/16"	42"	122	93.00	83.70	74.40
CR-2492	66 9/16"	61 1/4"	160	121.00	108.90	96.80
CR-2495	75 5/16"	70"	175	123.00	110.70	98.40
CR-2493	82 5/16"	77"	190	145.00	130.50	116.00

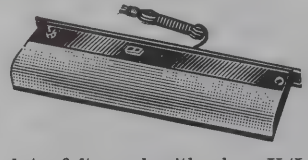
ADD-A-RACK ASSEMBLIES

Includes door, top, bottom and coupling unit for add-on use with racks indicated.

Bud No.	For Use With Rack No.	Wt., Lbs.	Net Each, Lots of 1-9	10-14	15-19
AR-1275*	RR-1271	61	$ 34.90	$31.41	$27.92
AR-1276*	RR-1272	81	43.75	39.37	35.00
AR-1277*	RR-1273	94	51.25	46.12	41.00
AR-1778	CR-1774	70	44.34	39.91	35.47
AR-1775	CR-1771	74	49.01	44.11	39.21
AR-1776	CR-1772	100	60.96	54.86	48.77
AR-1779	CR-1780	107	62.00	55.80	49.60
AR-1777	CR-1773	113	74.90	67.41	59.92
AR-4274	CR-2474	82	55.00	49.50	44.00
AR-4271	CR-2471	87	62.00	55.80	49.60
AR-4272	CR-2472	117	77.75	69.98	62.21
AR-4275	CR-2475	125	79.25	71.33	63.41
AR-4273	CR-2473	132	93.25	83.93	74.61
AR-2278*	CR-2074	102	60.15	54.13	48.12
AR-2275*	CR-2071	86	68.06	61.25	54.65
AR-2276*	CR-2072	110	85.17	76.65	68.14
AR-2279	CR-2075	120	87.00	78.30	69.60
AR-2277*	CR-2073	130	103.75	93.38	83.00
AR-3278	CR-2484	100	78.00	70.20	62.40
AR-3275	CR-2481	119	87.00	78.30	69.60
AR-3276	CR-2482	129	109.00	98.10	87.20
AR-3279	CR-2485	140	111.00	99.90	88.80
AR-3277	CR-2483	152	131.00	117.90	104.80

*Gray hammertone standard; for black or gray wrinkle add 10% to price.

●NEW "PAN-L-LITE" FLUORESCENT LAMP



Provides bright, glare-free lighting for racks, cabinets, desks; ideal for accurate reading of dials, recorders, etc. Quickly attaches to racks or panels—comes mounted on standard 19" x 1 3/4" panel. Has bronzetone aluminum frame, translucent light diffuser, pushbutton starter switch, convenience outlet, and heavy-duty 6-ft. cord with plug. U/L Listed. Uses 15-watt tube (not supplied). Gray hammertone finish.

Bud No.	Size, Inches	Weight, Lbs.	Net Each, Lots of 1-9	10-14	15-19
PL-5●	18 x 5 x 1 1/4	2	$9.30	$8.37	$7.44

TRUCK CASTERS

Use with all Bud relay racks and other floor mounted units. Ball bearing wheels are hard tread composition. **RC-7756** is for heavy duty applications. **RC-7758** is for extra heavy duty use (Series 60 Racks).

Bud No.	Height	Weight (Set of 4)	Net Each, Lots of 1-49	50-99	100-149
RC-7756	2 5/8"	1 3/4 lbs.	$0.90	$0.81	$0.72
RC-7757	2"	1 lb.	.40	.36	.32
RC-7758	3 1/4"	6 lbs.	2.17	1.95	1.74

● New product.

DELUXE RELAY RACKS

17 1/8" Overall Depth

WITH 19" WIDE PANEL SPACE

Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of 1-9	10-14	15-19
CR-1774	42 1/16"	36 3/4"	82	$45.17	$40.65	$36.14
CR-1771	47 5/16"	42"	92	51.10	45.99	40.88
CR-1772	66 9/16"	61 1/4"	115	63.96	57.56	51.17
CR-1780	75 5/16"	70"	125	65.00	59.50	52.00
CR-1773	82 5/16"	77"	135	76.57	68.91	61.26

WITH 24" WIDE PANEL SPACE

CR-2474	42 1/16"	36 3/4"	96	$57.50	$51.75	$46.00
CR-2471	47 5/16"	42"	108	65.00	58.50	52.00
CR-2472	66 9/16"	61 1/4"	135	81.50	73.35	65.20
CR-2475	75 5/16"	70"	146	83.00	74.70	66.40
CR-2473	82 5/16"	77"	158	97.60	87.84	78.08

EXTRA DEEP DELUXE RACKS

Same as above, except 22 1/8" deep instead of 17 1/8" deep. Gray hammertone finish standard; for black or gray wrinkle add 10% to price.

WITH 19" WIDE PANEL SPACE

CR-2074	42 1/16"	36 3/4"	98	$ 63.10	$56.79	$50.48
CR-2071	47 5/16"	42"	102	71.40	64.26	57.12
CR-2072	66 9/16"	61 1/4"	137	89.35	80.42	71.48
CR-2075	75 5/16"	70"	148	90.80	81.72	72.66
CR-2073	82 5/16"	77"	159	106.13	95.52	84.90

WITH 24" WIDE PANEL SPACE

CR-2484	42 1/16"	36 3/4"	115	$ 81.00	$ 72.90	$64.80
CR-2481	47 5/16"	42"	119	91.00	81.90	72.80
CR-2482	66 9/16"	61 1/4"	160	114.00	102.60	91.20
CR-2485	75 5/16"	70"	173	116.00	104.40	92.80
CR-2483	82 5/16"	77"	186	136.00	122.40	108.80

SPACE SAVER RELAY RACKS

Same as Deluxe Series, except only 10" deep (9" inside, clear) to save space but retain panel height and width. Suited for use with Bud panel mounting chassis as well as standard 19" relay rack panels; lend themselves to Add-A-Rack assembly. Gray hammertone finish standard; for black or gray wrinkle add 10% to price.

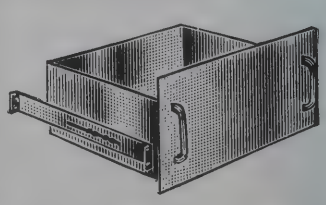
Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of 1-9	10-14	15-19
RR-1271	47 5/16"	42"	70	$36.60	$32.95	$29.28
RR-1272	66 9/16"	61 1/4"	91	45.85	41.26	36.68
RR-1273	75 5/16"	70"	100	53.75	48.37	43.00

DOOR HANDLES, CATCH SETS

No. 9347: Fits flush with cabinet door; exposed parts chrome plated. **Nos. 9196 and 9223:** Lever-type handles are chrome plated with steel spindle and cam; fit Super Deluxe racks.

Bud No.	Description	Net Each, Lots of 1-49	50-99	100-149
9196	Non-locking handle	$2.66	$2.39	$2.13
9223	9196 with lock and key	5.00	4.50	4.00
9347	Flush-mount catch set	.98	.88	.78

DRAWER WITH ADJUSTABLE SLIDES



Fits any cabinet or cabinet rack with 19" panel space. Slide bracket adjustable 16 5/8" to 22 1/8" to fit any cabinet with depth 17" to 23". Fastens by bracket to panel mounting rail in front and rear of cabinet. Nylon rollers for smooth movement. Hardware supplied. Specify color when ordering: Add suffix **HG** for gray hammertone; **B** for black wrinkle; or **G** for gray wrinkle.

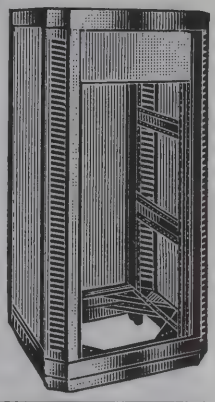
Bud No.	Inside Size, Inches	Wt., Lbs.	Net Each, Lots of 1-14	15-24	25-34
D-1721	16 3/8 x 6 3/8 x 16 1/4	19 1/2	$40.80	$36.72	$32.64

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Racks, Cabinets, Accessories

•NEW ZEPHYR 8 CABINET RACKS

Combine striking appearance with increased utility, extra ventilation, and unusually sturdy construction. Units are completely assembled with all-welded 14 gauge steel frames. Sides and reinforced rear door are of 16 gauge steel. Sides of frame are reinforced by channel braces to which panel mounting rails are attached; front and rear mounting rails are adjustable. Sides may by removed from outside of rack for easy access to interior. The octagonal shape and louvres placed in the four narrow sides permit exceptional ventilating capability. If corner placement is desired or combinations of racks are placed together, this shape allows for a "center ventilated system." Also, the outer shape surrounding the inner structural frame provides extra space for longitudinal or vertical placement of plenums, cable-track, buss ducts, etc. Casters may be attached to the base or removable sub-base. Front doors, available as optional accessories, are equipped with a flush-type latch. Available in two-tone gray finish only.



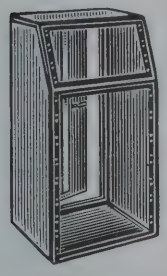
Bud No.	Overall Size, Inches W. x D. x H.	Vertical Panel Space, Inches	Weight, Lbs.
MD-1990	27 23/32 x 24 x 47 3/4	19 x 42	160
MD-1991	27 23/32 x 24 x 58 1/4	19 x 52 1/2	190
MD-1992	27 23/32 x 24 x 67	19 x 61 1/4	215
MD-1993	27 23/32 x 24 x 75 3/4	19 x 70	240
MD-1994	27 23/32 x 24 x 82 3/4	19 x 77	260

Bud No.	Net Each, Lots of 1-4	5-9	10-14
MD-1990	$185.00	$166.50	$148.00
MD-1991	206.00	185.40	164.80
MD-1992	229.00	206.10	183.20
MD-1993	255.00	229.50	204.00
MD-1994	278.00	250.00	222.00

ACCESSORY FRONT DOORS

Bud No.	Fits Bud No.	Weight, Lbs.	Net Each, Lots of 1-4	5-9	10-14
MD-1995	MD-1990	19	$23.40	$21.05	$18.70
MD-1996	MD-1991	25	26.00	23.40	20.80
MD-1997	MD-1992	30	28.90	26.00	23.10
MD-1998	MD-1993	35	32.20	29.00	25.75
MD-1999	MD-1994	39	35.00	31.60	28.10

IMPERIAL INCLINED PANEL CONSOLE



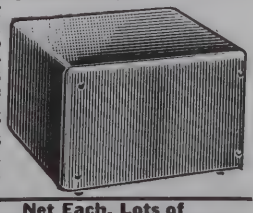
Smart looking all-aluminum Imperial console built for strength while keeping weight factor in mind. Complete assembly includes framework, top, bottom, two sides, and reinforced door with concealed hinges and flush mounted latch. Extrusions and joints are ball-cornered aluminum castings. Inclined panel set at 22½° angle for comfortable viewing. Cast brass, heavy duty hinges specifically designed to enable components, blowers, etc., to be mounted on rear door. Framework for top, inclined panel area and front are extrusions, drilled and tapped to accept standard rack panels. Casters may be attached to bottom. Standard Bud aluminum panels may be used to enclose the front and inclined panel spaces. Slides, top, door are gray hammertone. Frame and bottom are smooth black.

Bud No.	Overall Size, Inches W. x D. x H.	Vertical Panel Size, Inches	Weight, Lbs.
BI-1828	20 15/16 x 18 5/8 x 40 11/16	19 1/16 x 28 1/16	41
BI-2228	20 15/16 x 22 1/8 x 40 11/16	19 1/16 x 28 1/16	47
BI-2419	20 15/16 x 19 17/32 x 43 21/32	19 1/16 x 24 9/16	43
BI-2421	20 15/16 x 21 9/32 x 43 21/32	19 1/16 x 24 9/16	46

Bud No.	Net Each, Lots of 1-9	10-14	15-19
BI-1828	$155.00	$139.50	$124.00
BI-2228	170.00	153.00	136.00
BI-2419	190.00	171.00	152.00
BI-2421	200.00	180.00	160.00

CONTOUR UTILITY CABINETS

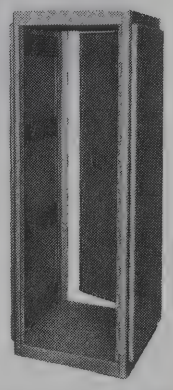
Attractively designed utility housing with rounded contour corners. Flanged panels also have rounded corners to preserve the symmetry of design. Constructed of 20 gauge steel. Both front and rear panels are removable; the front panel is solid while the rear panel is louvered for proper ventilation. Four rubber feet, attached to base, prevent scratching surface the unit is placed on. Body is smooth, dark gray enamel; panel is smooth light gray enamel.



Bud No.	Overall Size, Inches H.	W.	D.	Net Each, Lots of 1-24	25-49	50 & Over
CU-463	4 1/2	6 1/2	3 3/4	$ 5.50	$4.95	$4.40
CU-465	4 1/2	6 1/2	5 3/4	6.35	5.72	5.08
CU-585	5 1/2	8 1/2	5 3/4	8.35	7.52	6.68
CU-587	5 1/2	8 1/2	7 3/4	9.10	8.19	7.28
CU-7125	7 1/2	12 1/2	5 3/4	9.70	8.73	7.76
CU-7127	7 1/2	12 1/2	7 3/4	10.35	9.32	8.28

PRESTIGE BALL CORNER RACKS

Attractive, practical housing for permanent or mobile instrumentation. Standard Prestige relay rack consists of framework, top, bottom, two ball cornered sides, and a ball corner door. Sides attach to frame by means of a tongue-and-slot arrangement at bottom and two screws at top. Sides easily removable for access. Drilled and tapped panel mounting rails on all four vertical members of frame. Doors mount from either left or right side. Slotted base takes ball-cornered side panels on any of the four sides. Door and side clearance permits covering of equipment without damage to knobs or controls. Provision made for recessed casters. Extra doors available for placing on any of the sides. Knockout holes provided for attaching two or more units together. Bottom will support 500 lbs., panel rails 200 lbs. suspended vertically between rails. Units take Bud SD-1717 sliding drawer assembly or CD-2210 console drawer. Shipped knocked-down, with necessary assembly hardware. **Gray hammertone finish only. Now furnished with adjustable panel mounting rails.**



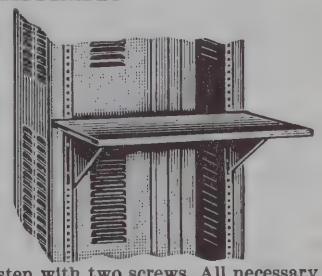
Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of 1-9	10-14	15-19
CR-2280	66 9/16"	61 1/4"	179	$108.35	$ 97.51	$ 86.68
CR-2281	71 13/16"	66 1/2"	186	115.55	103.99	92.44
CR-2282	82 5/16"	77"	213	129.75	116.77	103.80
DR-2290	Door for CR-2280		28	13.50	12.15	10.80
DR-2291	Door for CR-2281		33	14.40	12.96	11.52
DR-2292	Door for CR-2282		39	16.20	14.58	12.96

PRESTIGE ADD-A-RACKS

Where relay racks are to be joined in series the ADD-A-Rack assembly is lower in cost yet provides additional strength and improved appearance. Consists of top, bottom, rear door and framework. Made of 16 gauge steel. Extra ball corner doors will fit adjustable panel mounting rails which are recessed so that panel will be flush with face of rack. Add-A-Racks may be added at any time as needed. Gray hammertone finish.

Bud No.	Used to Add-A-Rack to	Net Each, Lots of 1-9	10-14	15-19
AR-2284	CR-2280	$ 85.29	$76.76	$68.23
AR-2286	CR-2281	92.15	82.94	73.72
AR-2287	CR-2282	103.47	93.12	82.78

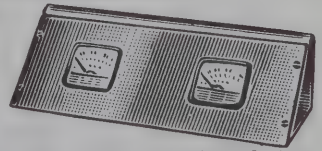
SHELF ASSEMBLY



Immediately adds extra utility to a standard rack at very little cost. Useful as a desk, work space, etc. Gray or black wrinkle finish or gray hammertone finish will match all standard Bud rack finishes. Can't fall off or tilt; will support any reasonable weight. Shelf portion supported by two brackets, punched to fit standard panel mounting strips. No panel support needed but can be attached over panel if desired. Slides welded to bottom of shelf; mounting brackets slip into slides and fasten with two screws. All necessary hardware furnished. Formed of 16 gauge steel; ½" flange on all four sides; overall height, 7 1/8". Brackets are 7" high. Specify black wrinkle (suffix **"B"**), gray wrinkle (suffix **"G"**), or light gray hammertone (suffix **"HG"**) finish.

Bud No.	Size, Inches D. x W.	Weight, Lbs.	Net Each, Lots of 1-14	15-24	25-34
SA-1719	16 x 22	14	$10.40	$9.36	$8.32
SA-1720	20 x 22	15	10.55	9.50	8.44

DUAL-VIEW PANEL SUPPORT



Designed for installation on a rack where an oblique view of instrument panel is desired. Engineered so that the entire assembly occupies no more space than size of supported panel. Panel support cover can be removed for easy servicing or installation of instruments. Made of heavy gauge steel with attractive contoured edges. Comes knocked-down with necessary assembly hardware, but without panels. Bud panels to fit these supports are PS-1253 (steel), and PA-1104 (aluminum) for Model IP-1120; PS-1255 (steel), and PA-1106 (aluminum) for IP-1121. Furnished in black wrinkle (add suffix **"B"**), gray hammertone (add suffix **"HG"**), gray wrinkle (add suffix **"G"**), smooth gray (suffix **"SG"**), or smooth blue (suffix **"SB"**).

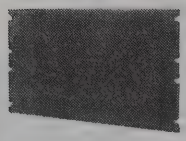
Bud No. IP-1120—Requires 19" x 7" panel space. Wt., 3½ lbs.
Net Each, Lots of 1-14.....**$4.15**
Lots of 15-24, Each....**$3.74** Lots of 25-34, Each.... **3.32**

Bud No. IP-1121—Requires 19" x 10½" panel space. Wt., 6¾ lbs.
Net Each, Lots of 1-14.....**$5.80**
Lots of 15-24, Each....**$5.22** Lots of 25-34, Each.... **4.64**

• New product.

Relay Racks and Panels

STANDARD RELAY RACK PANELS



Choice of steel or aluminum relay rack panels, 1/8" or 3/16" thick, in both 19" and 24" widths. Specify color when ordering, use letter suffix: **B** for black wrinkle; **G** for gray wrinkle; **HG** for gray hammertone; **SB** for smooth blue; **SG** for smooth gray. Aluminum panels 5005 H-36 alloy.

STANDARD 19" WIDE PANELS

Ht., In.	1/8" STEEL Bud No. PS-	Net Each, Lots of 1-49	50-99	100-149	1/8" ALUMINUM Bud No. PA-	Net Each, Lots of 1-49	50-99	100-149
1¾	1250	$0.84	$0.76	$0.67	1101	$1.09	$0.98	$0.87
3½	1251	1.00	.90	.80	1102	1.42	1.28	1.14
5¼	1252	1.25	1.13	1.00	1103	1.92	1.73	1.54
7	1253	1.42	1.28	1.14	1104	2.42	2.18	1.94
8¾	1254	1.75	1.58	1.40	1105	2.84	2.56	2.27
10½	1255	2.09	1.88	1.67	1106	3.59	3.23	2.87
12¼	1256	2.42	2.18	1.94	1107	4.09	3.68	3.27
14	1257	2.84	2.56	2.27	1108	4.76	4.28	3.81
15¾	1258	3.09	2.78	2.47	1109	5.34	4.81	4.27
17½	1259	3.51	3.16	2.81	1110	5.85	5.27	4.68
19¼	1260	3.84	3.46	3.07	1111	6.43	5.79	5.14
21	1261	4.26	3.83	3.41	1112	7.01	6.31	5.61

STANDARD 24" WIDE PANELS

1¾	3420	$1.25	$1.13	$1.00	2401	$1.70	$1.53	$1.36
3½	3421	1.45	1.31	1.17	2402	2.20	1.98	1.76
5¼	3422	1.80	1.62	1.44	2403	3.00	2.70	2.40
7	3423	2.05	1.85	1.65	2404	3.75	3.38	3.01
8¾	3424	2.55	2.30	2.05	2405	4.40	3.96	3.52
10½	3425	3.05	2.75	2.45	2406	5.60	5.04	4.48
12¼	3426	3.60	3.24	2.88	2407	6.35	5.72	5.09
14	3427	4.15	3.74	3.33	2408	7.40	6.66	5.92
15¾	3428	4.70	4.23	3.76	2409	8.30	7.47	6.64
17½	3429	5.20	4.68	4.16	2410	9.10	8.19	7.28
19¼	3430	5.75	5.18	4.60	2411	10.00	9.00	8.00
21	3431	6.35	5.72	5.09	2412	11.00	9.90	8.80

STANDARD 3/16" THICK ALUMINUM PANELS

Ht., In.	Standard 19" Wide Panels Bud No. PA-	Net Each, Lots of 1-49	50-99	100-149	Standard 24" Wide Panels Bud No. PA-	Net Each, Lots of 1-49	50-99	100-149
1¾	3101	$1.74	$ 1.57	$1.39	2431	$ 3.10	$ 2.79	$ 2.48
3½	3102	2.27	2.04	1.82	2432	4.00	3.60	3.20
5¼	3103	3.07	2.76	2.46	2433	5.50	4.95	4.40
7	3104	3.87	3.48	3.10	2434	6.80	6.12	5.44
8¾	3105	4.54	4.09	3.63	2435	8.00	7.20	6.40
10½	3106	5.74	5.17	4.59	2436	10.15	9.04	8.12
12¼	3107	6.54	5.89	5.23	2437	11.50	10.35	9.20
14	3108	7.62	6.86	6.10	2438	13.50	12.15	10.80
15¾	3109	8.54	7.69	6.83	2439	15.05	13.55	12.05
17½	3110	9.36	8.42	7.49	2440	16.50	14.85	13.20
19¼	3111	10.29	9.26	8.23	2441	18.20	16.38	14.56
21	3112	11.22	10.10	8.98	2442	20.00	18.00	16.00

SURFACE SHIELD PANELS

Bright aluminum alloy 5005 H-36 panels have blemish-free mill finish. Covered on both sides with sturdy, pressure-sensitive, white paper; protects against damage and useful for marking for drilling, positioning, etc. Standard notched sizes.

STANDARD 19" WIDE PANELS

Ht., In.	1/8" ALUMINUM Bud SFA-	Net Each, Lots of 1-49	50-99	100-149	3/16" ALUMINUM Bud SFA-	Net Each, Lots of 1-49	50-99	100-149
1¾	1831	$0.97	$0.87	$0.78	3161	$ 1.79	$ 1.61	$1.43
3½	1832	1.34	1.21	1.07	3162	2.36	2.12	1.89
5¼	1833	1.80	1.62	1.44	3163	3.17	2.85	2.54
7	1834	2.21	1.99	1.77	3164	3.91	3.52	3.13
8¾	1835	2.66	2.39	2.13	3165	4.68	4.21	3.74
10½	1836	3.34	3.01	2.67	3166	5.90	5.31	4.72
12¼	1837	3.85	3.47	3.08	3167	6.80	6.12	5.44
14	1838	4.45	4.01	3.56	3168	7.85	7.06	6.28
15¾	1839	4.97	4.47	3.98	3169	8.76	7.88	7.01
17½	1840	5.47	4.92	4.38	3170	9.67	8.70	7.74
19¼	1841	5.99	5.39	4.79	3171	10.57	9.51	8.46
21	1842	6.50	5.85	5.20	3172	11.48	10.33	9.18

STANDARD 24" WIDE PANELS

1¾	2451	$ 1.90	$ 1.71	$1.52	3401	$ 3.55	$ 3.20	$ 2.85
3½	2452	2.50	2.25	2.00	3402	4.70	4.23	3.76
5¼	2453	3.30	2.97	2.64	3403	6.30	5.67	5.04
7	2454	4.20	3.78	3.36	3404	7.75	6.98	6.21
8¾	2455	4.90	4.41	3.92	3405	9.30	8.37	7.44
10½	2456	6.20	5.53	4.96	3406	11.70	10.53	9.36
12¼	2457	7.00	6.30	5.60	3407	13.50	12.15	10.80
14	2458	8.20	7.38	6.56	3408	15.60	14.04	12.48
15¾	2459	9.20	8.28	7.36	3409	17.40	15.66	13.92
17½	2460	10.00	9.00	8.00	3410	19.20	17.28	15.36
19¼	2461	11.00	9.90	8.80	3411	21.00	18.90	16.80
21	2462	12.00	10.80	9.60	3412	22.80	20.52	18.24

RACK SHELVES

Heavy gauge steel shelves with 1" flange for rigidity and strength. Mount on chassis supporting angles in rack to hold power supplies, modulators, etc. Width 19". Black enamel finish.

Bud No.	Depth, Inches	Weight, Lbs.	Net Each, Lots of 1-24	25-49	50-99
CB-1976	15"	6½	$3.47	$3.12	$2.78
CB-1977	12"	5½	2.64	2.38	2.11

DELUXE TELEPHONE-TYPE RELAY RACKS



Sturdy open rack with extra strength and greater capacity. Upright U-member is unitize-welded with ventilation provided at top. Two panel-mounting rails, at front and rear, tapped 10-32 with W.E. spacing. Made of 12 ga. steel throughout. Chassis-type base drilled for RC-7756 casters. Triangular brackets hold uprights to base; holes provided on both sides for bolting racks together in "Add-A-Rack" manner. Add suffix **HG** for gray hammertone finish; **B** for black wrinkle; or **G** for gray wrinkle. Nos. RR-1367–RR-1369 have 20⅞" base width and take 19" wide panels. Nos. RR-2467–RR-2469 have 25⅞" base width and take 24" wide panels.

Bud No.	Height, Overall	Panel Space	Net Each, Lots of 1-9	10-14	15-19
RR-1367	64⅝"	61¼"	$35.50	$31.95	$28.40
RR-1368	73⅜"	70"	36.25	32.63	29.01
RR-1369	80⅛"	77"	43.00	38.70	34.40
RR-2467	64⅝"	61¼"	45.00	40.50	36.00
RR-2468	73⅜"	70"	46.00	41.40	36.80
RR-2469	80⅜"	77"	54.50	49.05	43.60

TELEPHONE-TYPE RELAY RACKS

Standard Models: 3" channels and crossbars of 7/14" steel. Base has chassis type bottom with side angles. Base drilled for RC-7756 casters. Black wrinkle (suffix **"B"**) or gray hammertone (suffix **"HG"**).

Heavy Duty Models RR-1265 and RR-1465: Two 3½" x 5" x ¼", 20⅜" long angles form base. Steel channels are 3" x 1⅜", 72¼" long. Cross bars are ⅛" x 2¼" angles. Panel holes tapped 12-24 with W.E. space. Black wrinkle finish only. Usually bolted to floor.

FOR 19" WIDE PANELS

Bud No.	Height, Overall	Panel Space	Net Each, Lots of 1-9	10-14	15-19
RR-1263	35 39/64"	31⅛"	$21.71	$19.53	$17.37
RR-1363	40 55/64"	36¾"	21.96	19.76	17.57
RR-1264	70 39/64"	66½"	24.80	22.32	19.84
RR-1364	75 55/64"	71¾"	25.13	22.62	20.10
RR-1366	81 7/64"	77"	29.98	26.98	23.98
RR-1265	72¼"	66½"	54.78	49.30	43.82

FOR 24" WIDE PANELS

RR-1463	35 39/64"	31⅛"	$28.00	$25.20	$22.40
RR-2463	40 55/64"	36¾"	29.00	26.10	23.20
RR-1464	70 39/64"	66½"	32.00	28.80	25.60
RR-2464	75 55/64"	71¾"	33.00	29.70	26.40
RR-2466	81 7/64"	77"	39.00	35.10	31.20
RR-1465	72¼"	66½"	71.00	63.90	56.80

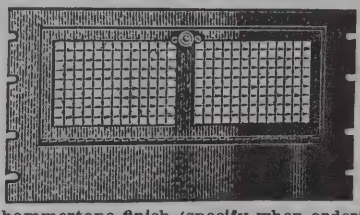


TABLE-MOUNT TELEPHONE RACK

Sturdy rack with chassis type base mounts heavy components on table where enclosures are not required. Panel mount rails recessed for flush mount of 19" panels. Shipped knocked down. Specify black wrinkle (suffix **"B"**) or gray hammertone (**"HG"**).

Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of 1-14	15-24	25-34
RR-1248	24"	21"	15	$ 9.10	$ 8.19	$7.28
RR-1249	31"	28"	18	11.19	10.07	8.95

VENTILATED DOOR RACK PANELS



Generous perforated area in door provides adequate ventilation for adjacent units. Also features a newly designed plunger-type latch for positive locking and easy opening. Distance from hinged side of opening to bottom, 3½"; from lock side of opening to top, 1". Available in black or gray wrinkle finish or gray hammertone finish (specify when ordering). ⅛" steel, 19" long.

Bud No.	Height, Overall	Door Size, Inches	Wt., Lbs.	Net Each, Lots of 1-49	50-99	100-149
PS-814	10½"	15⅜ x 6	6	$7.52	$6.77	$6.03
PS-815	12¼"	15⅜ x 7½	7	8.27	7.44	6.62

NON-VENTILATED METAL DOOR PANELS

PS-615	10½"	15⅜ x 6	7¼	$6.08	$5.47	$4.86
PS-616	12¼"	15⅜ x 7½	8¼	7.52	6.77	6.02

VENTILATING GRILLE PANELS

Substitute for solid panels for extra ventilation. Made of ⅛" steel with die-cut grille 13 13/16" wide. Standard notched 19" wide sizes. Specify black wrinkle (suffix **B**), gray wrinkle (suffix **G**), or gray hammertone (suffix **HG**).

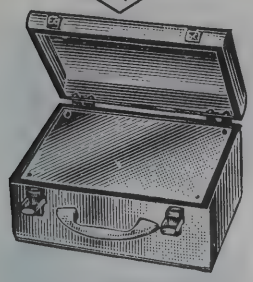
Bud No.	Height, Overall	Grille Height	Wt., Lbs.	Net Each, Lots of 1-49	50-99	100-149
PS-808	5¼"	3⅜"	2½	$3.26	$2.93	$2.61
PS-809	7"	4⅞"	3½	3.54	3.19	2.83
PS-810	8¾"	3⅜"*	5	4.26	3.83	3.41
PS-811	10½"	5⅞"*	5¾	4.51	4.06	3.61
PS-812	12¼"	7⅜"*	6¼	4.84	4.36	3.87

*Allows 3½" space for chassis mounting.

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Cases, Racks, Chassis

TRANSICASE PORTABLE INSTRUMENT CASES



Handsome, portable instrument case with unlimited applications. Contour design fabricated of .040" aluminum with flush-fitting aluminum panel. Foam-rubber lined lid protects instruments in case; mounted on two slide-off, bright nickel-plated hinges with toggle catches. Rubber feet at both base and back; metal plugs supplied to fill holes if rubber feet are not used. Bright nickel-plated handle. **Specify Color:** Add suffix **SB** for smooth blue; **SG**, for smooth gray enamel.

Bud No.	Inside Panel Size, Inches	Clear Internal Space Below Panel	Clear Internal Space Above Panel	Internal Aperture	Overall Size, Inches W. x D. x H.	Wt., Lbs.	Net Each, Lots of 1-14	15-24	25-34
TC-300	8 15/16 x 5 15/16	4 13/32"	1 15/32"	8" x 5 31/32"	10 1/16 x 7 x 6	3¾	$24.95	$22.46	$19.96
TC-301	10⅜ x 7¼	4 13/32"	1 15/32"	9 7/16" x 7 1/16"	11½ x 8¼ x 6	4½	25.50	22.95	20.40
TC-302	11⅞ x 7 15/16	5 29/32"	1 15/32"	10 15/16" x 7 31/32"	13 x 9 x 7½	6	26.00	23.40	20.80
TC-303	15⅜ x 7 15/16	5 29/32"	1 15/32"	14 7/16" x 7 31/32"	16½ x 9 x 7½	8	26.50	23.85	21.20
TC-304	19 x 7	7 11/32"	1 15/32"	18 1/16" x 7 1/32"	20⅛ x 8 x 9	10	27.90	25.11	22.32

DELUXE CABINET RACKS



Rounded corners, red-lined chrome trim. There is a recessed, hinged door on the top with a snap catch. These racks are made of heavy gauge steel and are of sturdy construction. The five large sizes have a hinged rear door, while the small sizes have a welded panel in the rear. Adequate ventilation is assured by means of louvered sides and a 2½ inch opening in the bottom of the back extends the entire width. "NO-SCRATCH" EXTENDED METAL FEET ARE EMBOSSED ON THE BOTTOM. In black wrinkle (add suffix **"B"** to number when ordering), gray wrinkle (suffix **"G"**), and hammertone gray (suffix **"HG"**). **Size:** 14¾" x 22" w. Fits 19" panels. **Aluminum panel cover supplied.**

Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of 1-14	15-24	25-34
CR-1726	8 25/32"	7"	24	$15.28	$13.75	$12.22
CR-1741	10 9/16"	8¾"	28	16.70	15.03	13.36
CR-1740	12 5/16"	10½"	31	19.12	17.21	15.30
CR-1742	14 1/16"	12¼"	32	20.12	18.11	16.10
CR-1739	15 13/16"	14"	35	21.96	19.76	17.57
CR-1743*	19 5/16"	17½"	40	26.22	23.60	20.98
CR-1727*	22 13/16"	21"	43	28.06	25.25	22.45
CR-1744*	28 1/16"	26¼"	51	30.14	27.13	24.11
CR-1728*	33 5/16"	31½"	58	31.98	28.78	25.58
CR-1745*	36 13/16"	35"	63	33.65	30.29	26.92

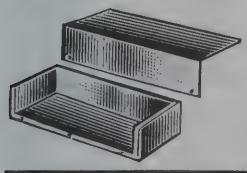
*These sizes have both top and rear doors.

HEAVY-DUTY CABINET RACKS

Similar to above units with Add-A-Cab feature (similar to Add-A-Rack) for continuously expanding systems. Panel mounting rails are integral part of the sides. Removable rear door. Louvered sides and 2½" x 17⅞" opening in the bottom of the back assure adequate ventilation. Made of 16 ga. steel. Gray hammertone finish; black or gray wrinkle at 10% additional charge. **Size:** 17⅞" d. x 22" w.

CR-1736	24½"	19¼"	50	$26.65	$23.98	$21.32
CR-1737	31½"	26¼"	57	28.75	25.87	23.00
CR-1738	40¼"	35"	70	34.15	30.73	27.32
ACR-1936	Add-A-Cab for CR-1736		42	25.40	22.86	20.32
ACR-1937	Add-A-Cab for CR-1737		52	27.40	24.66	21.92
ACR-1938	Add-A-Cab for CR-1738		57	32.55	29.29	26.04

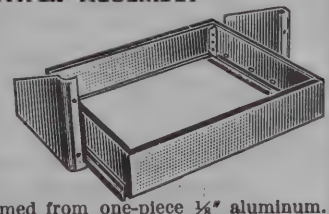
CONVERTA-BOXES



Versatile enclosure combines welded base and two-sided cover. Components or controls are easily mounted to any surface of the unit. All contents easily accessible. Cover and base are fastened by self-tapping screws. Rigid 20 ga. cadmium-plated steel.

Bud No.	Size, Inches H. x W. x D.	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
CU-341	1½ x 4 x 3	½	$1.90	$1.71	$1.52
CU-452	2 x 5 x 4	1	2.00	1.80	1.60
CU-482	2 x 8 x 4	1¼	2.09	1.88	1.67
CU-592	2½ x 9½ x 5	1¾	2.25	2.03	1.80
CU-622	2½ x 12 x 6	2¾	2.50	2.25	2.00
CU-712	2½ x 15 x 7	3½	3.34	3.01	2.67

SLIDING DRAWER ASSEMBLY



Ideal for use as a record player mounting base, typewriter base, apparatus and instrument base, writing desk, etc. Installs quickly and simply in any standard rack. Can't fall out or tilt. Provides a completely safe mounting base for anything put on it. Ball bearing suspension for easy sliding. Chassis formed from one-piece 14 gauge aluminum; electro-welded. Support brackets formed from one-piece ⅛" aluminum. Slide rail fastens securely to chassis, slides in and out easily on channeled ball bearings. Stop screw on slide rail prevents drawer from falling out of channel. Support brackets and channel finished in natural aluminum; chassis, slide and plate finished in light gray hammertone. Will support up to 50 lbs. **Chassis Size:** 16¾" x 14" x 3", with ½" flange top and bottom. *Fastens to top or bottom.

Bud No.	Description	Wt., Lbs.	Net Each, Lots of 1-14	15-24	25-34
SD-1717	Sliding drawer	5	$11.43	$10.29	$9.14
TP-1718	Drawer plate*	1½	2.56	2.30	2.05

OPEN-END CHASSIS



Primarily intended to be used with the various sizes and styles of Bud metal cabinets, these chassis are ideal for any type of small built-up unit such as a record amplifier, code oscillator, etc. U-shaped construction is used with ends folded over ¾" for additional strength. This unit is natural finish aluminum alloy 5005 H-14.

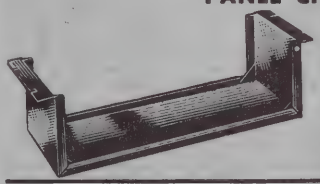
Bud No.	Size, Inches D. x W. x H.	Fits Cabinet Number	Net Each, Lots of 1-24	25-49	50-99
CB-38	7 x 6 x 2	C-1584	$1.00	$0.90	$0.80
CB-30	5 x 7 x 1½	.....	.97	.87	.78
CB-41	7 x 7 x 1½	C-973	1.24	1.12	.99
CB-39	7 x 8 x 2	C-1585	1.17	1.05	.94
CB-996	5½ x 9 x 1½	C-993	1.09	.98	.87
CB-976	7½ x 9 x 1½	C-999, CD-1481	1.40	1.26	1.12
CB-40	7 x 10 x 2	C-1586	1.37	1.23	1.10
CB-997	7 x 11 x 1½	C-994, CD-1482	1.30	1.17	1.04
CB-998	7 x 13 x 1½	C-995, CD-1483	1.59	1.43	1.27

MINIATURE ALUMINUM CHASSIS

Small versions of above with ¼" flange on bottom for bottom plate or fastening. Ideal for limited space uses. Natural finish.

CB-1623	2 5/16 x 2¾ x 1¼	.....	$0.38	$0.34	$0.30
CB-1624	1¾ x 3⅛ x 1	CU-883	.42	.38	.34
CB-1625	3¼ x 4½ x 2	C-1788	.48	.43	.38
CB-1626	2¾ x 4⅛ x 1	CU-728	.45	.41	.36
CB-1627	3¾ x 4⅛ x 1½	CU-729	.45	.41	.36
CB-1628	3 x 6⅛ x 1¼	C-1788	.53	.48	.42
CB-1629	5¾ x 4⅞ x 1½	CU-1098	.57	.51	.46
CB-1617	4 x 3⅛ x 1	C-1606, C-1610	.41	.37	.33
CB-1618	4 x 4⅛ x 1	C-1607, C-1611	.50	.45	.40
CB-1619	4 x 5⅛ x 1	C-1608, C-1612	.53	.48	.42
CB-1620	4 x 6⅛ x 1	C-1609, C-1613	.55	.50	.44

PANEL CHASSIS



Panel mounting chassis for vertical installation where depth is limited or front service is desired. Made of .062" aluminum alloy 5005 H-14 in natural finish. Front flange has standard notching. Fits standard 19" panel space.

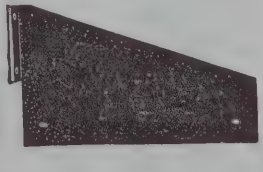
Bud No.	Height, Inches	Weight, Lbs.	Net Each, Lots of 1-24	25-49	50-99
CB-1370	1¾	¾	$2.30	$2.07	$1.84
CB-1371	3½	1¼	2.59	2.33	2.07
CB-1372	5½	1½	2.84	2.56	2.27
CB-1373	7	2	3.26	2.93	2.61
CB-1374	8¾	2¼	3.76	3.38	3.01
CB-1375	10½	2¾	4.43	3.99	3.54
CB-1376	12¼	3	4.84	4.36	3.87
CB-1377	14	3¼	5.34	4.81	4.27

CHASSIS MOUNTING BRACKETS

Mounts chassis to panels, essential when panel supports entire chassis weight. Heavy gauge steel 6½" high, cut away at bottom to mount flush to panel. Black enamel finish.

Bud No.	Depth, In.	Net Per Pair, Lots of 1-49	50-99	100-149
MB-458	8	$1.09	$0.98	$0.87
MB-448	10	1.35	1.22	1.08
MB-459	11	1.50	1.35	1.20
MB-449	12	1.75	1.58	1.40
MB-460	13	1.69	1.52	1.35
MB-450*	10	1.97	1.77	1.58
MB-451*	13	2.09	1.88	1.67

*8½" high for chassis height of 4".



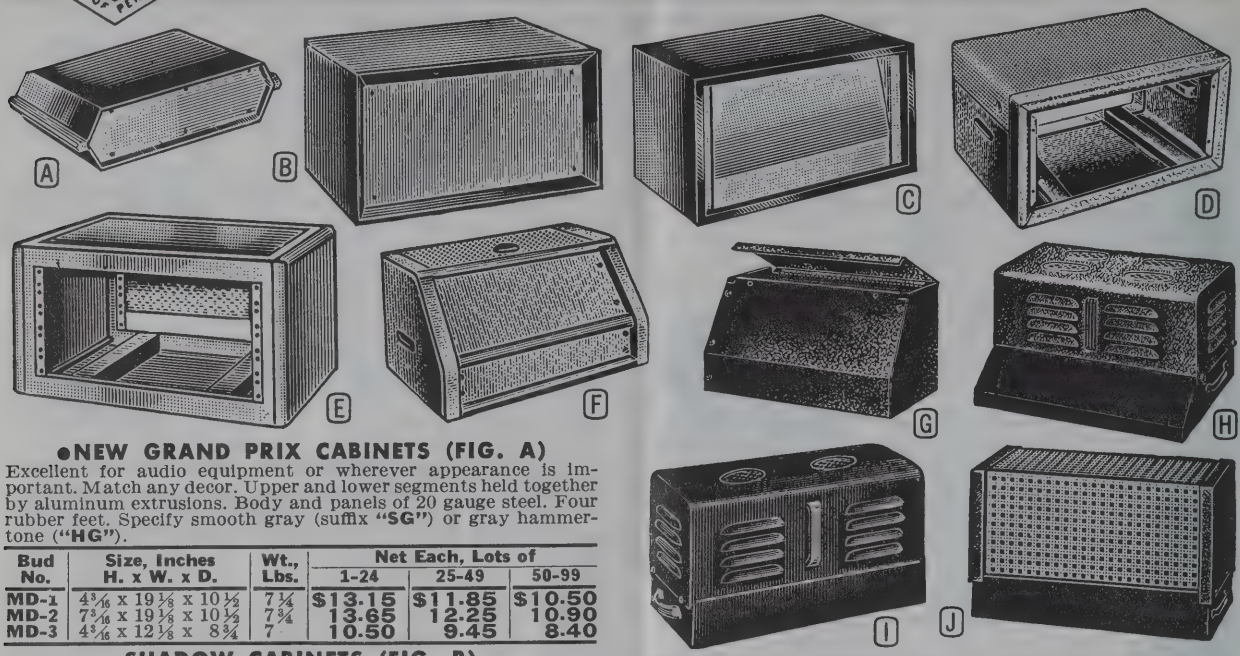
TRIANGULAR MOUNTING BRACKETS

Ideal for rigid support of shelves to take heavy loads. Heavy gauge steel with ¾" flange. Black enamel finish only.

Bud No.	Height, In.	Depth, In.	Wt., Lbs.	Net Per Pair, Lots of 1-9	10-14	15-19
MB-1266	5	5	1	$1.00	$0.90	$0.80
MB-1267	7	7	1	1.17	1.05	.94
MB-1268	9	9	1½	1.42	1.28	1.14

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Cabinets, Foundations



●NEW GRAND PRIX CABINETS (FIG. A)

Excellent for audio equipment or wherever appearance is important. Match any decor. Upper and lower segments held together by aluminum extrusions. Body and panels of 20 gauge steel. Four rubber feet. Specify smooth gray (suffix **"SG"**) or gray hammertone (**"HG"**).

Bud No.	Size, Inches H. x W. x D.	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
MD-1	4 3/16 x 19 1/8 x 10 1/2	7 1/4	$13.15	$11.85	$10.50
MD-2	7 3/16 x 19 1/8 x 10 1/2	7 3/4	13.65	12.25	10.90
MD-3	4 3/16 x 12 1/8 x 8 3/4	7	10.50	9.45	8.40

SHADOW CABINETS (FIG. B)

Versatile housing with removable front, bottom and rear panels. Front panel recessed 1". Front edge of body is beveled. Body of 18 gauge and panels of 16 gauge steel. Four rubber feet. Available in light gray hammertone finish only.

Bud No.	Overall Size, In. W. x H. x D.	Uses Bud Chassis No.	Net Each, Lots of 1-24	25-49	50-99
SB-2140	14 1/4 x 8 x 10	AC-424, CB-704	$6.50	$5.85	$5.20
SB-2141	13 1/4 x 7 1/2 x 9	AC-407, CB-1193	5.00	4.50	4.00
SB-2142	17 x 9 1/2 x 11	AC-411, CB-666	8.85	7.97	7.08
SB-2143	15 1/2 x 6 x 9	AC-409, CB-1194	4.85	4.37	3.88

●NEW FUTURA CABINETS (FIGS. B AND C)

Handsome housing of 20 and 18 gauge steel. Four rubber feet. Nos. MD-1960 thru -1962 (similar to Fig. B) have vertical front panel; others (Fig. C) have inclined front panel rising 2" vertically, then inclining 15°. Specify blue (suffix **"SB"**) or gray (**"SG"**).

MD-1960	13	x 7	x 8	CB-40	$ 7.50	$6.75	$6.00
MD-1961	14	x 8	x 9	CB-997	8.00	7.20	6.40
MD-1962	16	x 8	x 9	CB-998	8.30	7.50	6.65
MD-1963	13	x 7	x 8	CB-40	8.75	7.90	7.00
MD-1964	14	x 8	x 9	CB-997	9.35	8.40	7.50
MD-1965	16	x 8	x 9	CB-998	10.00	9.00	8.00

STANDARD PRESTIGE CABINETS (FIG. D)

Has two supporting rails, laterally movable to fit any chassis width, and shielded handle slots. Finger holes in cover for easy lifting. Of 16 gauge steel. Takes 19" panels. With embossed feet. **Size:** 21 5/8" w. x 14 3/4" d. overall. Gray hammertone finish.

Bud No.	Height, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of 1-14	15-24	25-34
C-1440	9 9/16"	7"	26	$28.22	$25.40	$22.58
C-1441	11 5/16"	8 3/4"	27	30.06	27.05	24.05
C-1442	13 1/16"	10 1/2"	29	32.82	29.54	26.26
C-1550*	9 9/16"	7"	26	30.56	27.50	24.45
C-1551*	11 5/16"	8 3/4"	27	32.73	29.46	26.18
C-1552*	13 1/16"	10 1/2"	29	35.57	32.01	28.46

*With perforated cover; others solid.

PRESTIGE VERSA-CABINETS (FIG. E)

Sturdy framework with ball cornered sides, perforated back, solid bottom plate and two supporting channels. Front, back, top and bottom are removable for easy access; also accept 19" panels for full closure; top panel may be perforated. An opening, 1 3/4" x 19", across the bottom of the back is supplied for controls, knobs, leads, etc.; may be covered with PS-1250 or PA-1101 panels if desired. Sides may be removed to join one or more cabinets together, using holes in frame; units may also be stacked. Handles may be attached to side. Four rubber feet. Top may be closed, using PS-1256HG or PA-1107HG solid panels, PS-616HG or PS-815HG door panels, or PC-1710 perforated panel. **Size:** 23 3/16" w. x 15 25/32" d. overall. Gray hammertone finish. Weight, 28 to 35 lbs.

VERSA-CABINETS

Bud No.	Height, Overall	Panel Space	Rear Panel	Net Each, Lots of 1-14	15-24	25-34
PC-1700	8 3/4"	5 1/4"	3 1/2"	$27.25	$24.52	$21.80
PC-1701	10 1/2"	7"	5 1/4"	28.92	26.03	23.14
PC-1702	12 1/4"	8 3/4"	7"	30.75	27.67	24.60
PC-1703	14"	10 1/2"	8 3/4"	33.50	30.15	26.80
PC-1704	15 3/4"	12 1/4"	10 1/2"	35.25	31.72	28.20

PERFORATED STEEL TOP PLATE

Bud No.	Size, In.	Wt., Lbs.	Net Each, Lots of 1-49	50-99	100-149
PC-1710	12 1/4 x 19	2 1/2	$2.70	$2.43	$2.16

● New product.

PRESTIGE SLOPING PANEL CABINETS (FIG. F)

Ventilated top opens completely. Removable panel trim bar permits installation or removal of panels with chassis attached. Top panel is swept back for easy viewing. Takes standard 19" panels. Shielded lifting handles. Rear opening 2 1/2" x 18" for controls, etc.; panel recess 1 1/4"; bottom panel 3 1/2" high. **Size:** 22" w. x 9" top depth. Gray hammertone finish only. Weight, 26, 28 and 31 lbs.

Bud No.	Size, In. H. x D.	Slope Height	Net Each, Lots of 1-14	15-24	25-34
C-1555	11 7/8 x 14 3/8	7"	$36.00	$32.40	$28.80
C-1556	13 1/4 x 15 1/8	8 3/4"	38.65	34.78	30.92
C-1557	14 3/4 x 16 1/8	10 1/2"	41.45	37.30	33.16

SLOPING PANEL CABINETS (FIG. G)

Hinged top for easy access; front panel also removable. Specify black wrinkle (suffix **"B"**) or gray hammertone (suffix **"HG"**).

Bud No.	Size, Inches H. x W. x D.	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
C-1584	6 1/2 x 7 1/16 x 7 5/16	2 1/2	$3.30	$2.97	$2.64
C-1587	8 x 8 1/16 x 8	2 3/4	4.51	4.06	3.61
C-1585	6 1/2 x 9 1/16 x 7 5/16	3	3.75	3.38	3.00
C-1588	8 x 10 1/16 x 8	3 1/4	5.01	4.51	4.01
C-1586	6 1/2 x 11 1/16 x 7 5/16	3 1/2	4.34	3.91	3.47
C-1894	8 x 14 1/16 x 8	4	5.34	4.81	4.27
C-1892	8 x 13 1/16 x 8 1/2	5 1/4	5.95	5.36	4.76
C-1896	9 x 18 1/16 x 8 1/8	7	7.68	6.91	6.14
C-1893	10 x 18 1/16 x 10 1/2	8 1/2	7.85	7.07	6.28

SLOPING PANEL FOUNDATIONS (FIG. H)

Removable top cover mounted on 3 1/2" sloping front chassis. Cover gray wrinkle, chrome trim; black wrinkle chassis. Overall ht., 9 1/2".

Bud No.	Chassis W. x D.	Top Depth	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
CA-1980	10" x 8"	5"	5	$ 8.68	$ 7.81	$6.94
CA-1981	12" x 10"	7"	6	9.35	8.42	7.48
CA-1982	17" x 10"	7"	8	10.69	9.62	8.55
CA-1983	17" x 13"	10"	10	11.19	10.07	8.95

STREAMLINED FOUNDATIONS (FIG. I)

Attractive unit houses amplifiers and similar apparatus. Standard chassis with removable top cover with chrome trim. Sides and ends louvered. Handles attached to chassis. Overall height, 9"; chassis 2 5/16" high. Specify black wrinkle (suffix **"B"**), or gray wrinkle (suffix **"G"**).

Bud No.	Size, In. W. x D.	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
CA-1750	10 1/16 x 5	4 3/4	$6.76	$6.08	$5.41
CA-1751	12 1/16 x 7	5	8.02	7.22	6.42
CA-1752	17 1/16 x 7	8	8.52	7.67	6.82
CA-1753	17 1/16 x 10	9	9.27	8.34	7.42

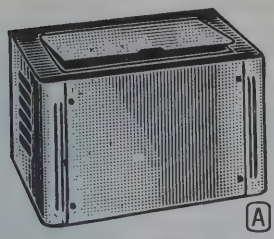
STANDARD FOUNDATIONS (FIG. J)

Standard chassis with perforated cover for maximum ventilation. Handles are attached to chassis. Chassis 2 1/2" h., except CA-1128, 3" h. Overall height, 8 5/16", except CA-1128, 8 13/16". Black wrinkle finish only.

Bud No.	Size, Inches W. x D.	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
CA-699	9 3/8 x 5 1/8	3	$5.61	$5.05	$4.49
CA-1125	13 3/8 x 5 1/8	4 3/4	6.43	5.79	5.14
CA-1126	17 1/8 x 7 1/8	6	7.26	6.53	5.81
CA-1128	12 1/8 x 10 1/8	7	7.52	6.77	6.02

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BUD Cabinets and Cases


A


B


C

STREAMLINED CABINETS (FIG. A)

Ideal for housing devices not requiring excessive depth. Recessed, hinged cover with convenient finger lift for access. Panels fit flush with embossed, rounded corner fronts. Recommended for use with Bud Open End Chassis. Back opening 3½" h. provides for cables or rear controls; louvered sides provide ample ventilation. **Size:** 8¼" d. x 8" h., overall. Specify black wrinkle (suffix **"B"**), gray wrinkle (suffix **"G"**) or gray hammertone (suffix **"HG"**) finish.

Bud No.	Width, Overall	Panel Space	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
CD-1480	10½"	8" x 8"	5¾	$ 5.90	$ 5.31	$ 4.72
CD-1481	12½"	8" x 10"	6	6.01	5.41	4.81
CD-1482	14½"	8" x 12"	6½	6.31	5.68	5.05
CD-1483	16½"	8" x 14"	7	6.77	6.09	5.42
CD-1484	18½"	8" x 16"	7¾	7.36	6.62	5.89
CD-1485*	20⅝"	12" x 18"	15	14.95	13.45	11.96

*Depth is 12"; has ½" vertical chrome strip at corners.

INSTRUMENT AND RECEIVER CABINETS (FIG. B)

Economy version of the Streamlined Cabinet series. Recessed, hinged cover provides access to contents. Front panel is attached with self-tapping screws. Louvers provide ample ventilation. Bud Open End Chassis are suited for use with these units. Black wrinkle finish only.

Bud No.	Size, Inches H. x W. x D.	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
C-973	7 x 8 x 8	5	$4.18	$3.76	$3.34
C-993	7 x 10 x 8	5½	4.84	4.36	3.87
C-994	7 x 12 x 8	5¾	5.01	4.51	4.01
C-995	7 x 14 x 8	6	5.26	4.73	4.21
C-1190	8 x 16 x 8	7	7.60	6.84	6.08
C-975	9 x 15 x 11	8	9.19	8.27	7.35
C-999	12 x 18 x 12	15	9.92	8.93	7.94

CARRYING CASES (FIG. C)

A versatile cabinet that accepts a variety of equipment. Removable front and back panels; handle may be attached to top. Available in sturdy steel or lightweight aluminum to suit your requirements.

STEEL CASES

Specify black wrinkle (suffix **"B"**) or gray hammertone (suffix **"HG"**) finish when ordering.

Bud No.	Size, Inches D. x W. x H.	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
CC-1095	5 x 6 x 9	3¼	$3.01	$2.71	$2.41
CC-1091	5 x 9 x 6	3¼	3.01	2.71	2.41
CC-1096	6 x 7 x 12	4	4.18	3.76	3.34
CC-1092	6 x 12 x 7	4	4.18	3.76	3.34
CC-1097	7 x 7¾ x 15	5	4.68	4.21	3.74
CC-1100	8 x 10 x 10	5	4.84	4.36	3.87
CC-1093	7 x 15 x 9	5	5.85	5.27	4.68

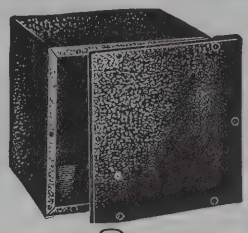
NATURAL FINISH ALUMINUM CASES*

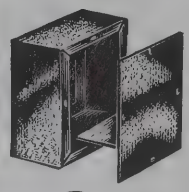
Bud No.	Size, Inches D. x W. x H.	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
ACC-2095	5 x 6 x 9	1⅛	$3.09	$2.78	$2.47
ACC-2091	5 x 9 x 6	1⅛	3.09	2.78	2.47
ACC-2096	6 x 7 x 12	1⅓	4.50	4.05	3.60
ACC-2092	6 x 12 x 7	1⅓	4.50	4.05	3.60

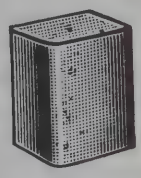
GRAY HAMMERTONE ALUMINUM CASES*

Bud No.	Size, Inches D. x W. x H.	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
ACC-2095HG	5 x 6 x 9	1⅛	$3.51	$3.16	$2.81
ACC-2091HG	5 x 9 x 6	1⅛	3.51	3.16	2.81
ACC-2096HG	6 x 7 x 12	1⅓	5.09	4.58	4.07
ACC-2092HG	6 x 12 x 7	1⅓	5.09	4.58	4.07

*Aluminum alloy 5005 H-14.


D


E


F

METAL UTILITY CABINETS (FIG. D)

Highly useful housing for all types of electronic equipment such as mixers, monitors, frequency meters, etc. Both front and back panels are removable for easy accessibility.

STEEL CABINETS

Specify black wrinkle (suffix **"B"**) or gray hammertone (suffix **"HG"**) finish.

Bud No.	Size, Inches D. x W. x H.	Wt., Lbs.	Net Each, Lots of 1-49	50-99	100-149
CU-883	2 x 4 x 4	¾	$1.09	$0.98	$0.87
CU-728	3 x 5 x 4	⅞	1.22	1.10	.98
CU-729	4 x 5 x 6	1¼	1.38	1.24	1.10
CU-1098	6 x 6 x 6	2½	2.09	1.88	1.67
CU-1099	5 x 6 x 9	3	2.34	2.11	1.87
CU-879	7 x 8 x 10	5	3.34	3.01	2.67
CU-1124	6 x 7 x 12	4	3.29	2.96	2.63
CU-880	8 x 10 x 10	5½	4.01	3.61	3.21
CU-881	8 x 11 x 12	6	4.34	3.91	3.47
CU-882	7 x 9 x 15	7½	4.51	4.06	3.61

NATURAL FINISH ALUMINUM CABINETS*

AU-1083	2 x 4 x 4	¼	$1.29	$1.16	$1.03
AU-1028	3 x 5 x 4	¼	1.37	1.23	1.10
AU-1029	4 x 5 x 6	½	1.50	1.35	1.20
AU-1039	6 x 6 x 6	¾	2.17	1.95	1.74
AU-1040	5 x 6 x 9	1	2.51	2.26	2.01

GRAY HAMMERTONE ALUMINUM CABINETS*

AU-1083HG	2 x 4 x 4	¼	$1.50	$1.35	$1.20
AU-1028HG	3 x 5 x 4	¼	1.67	1.50	1.34
AU-1029HG	4 x 5 x 6	½	1.84	1.66	1.47
AU-1039HG	6 x 6 x 6	¾	2.42	2.18	1.94
AU-1040HG	5 x 6 x 9	1	2.84	2.56	2.27

*Aluminum alloy 5005 H-14.

MINIATURE UTILITY CABINETS (FIG. E)

Ideal housing for construction of electronic devices using miniature tubes and transistorized circuitry. Front panel has a built-on chassis. Both front and rear panels are removable; fastened by self-tapping screws. Black wrinkle enamel finish.

Bud No.	Size, In. H. x W. x D.	Chassis W. x D., In.	Net Each, Lots of 1-49	50-99	100-149
C-1793	4 x 4 x 2	3⅛ x 1⅞*	$1.34	$1.21	$1.07
C-1794	4 x 5 x 3	4⅛ x 2⅞*	1.48	1.33	1.18
C-1795	5 x 4 x 3	3⅛ x 2⅞†	1.62	1.46	1.30
C-1796	6 x 5 x 4	4⅛ x 3⅞‡	1.70	1.53	1.36
C-1797	5 x 6 x 4	5⅛ x 3⅞†	1.92	1.73	1.54
C-1798	6 x 6 x 6	4⅛ x 5⅞‡	2.17	1.95	1.74

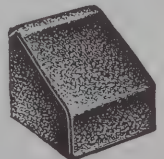
*1" high. †1¼" high. ‡1¾" high.

STREAMLINED MULTI-PURPOSE CABINETS (FIG. F)

Attractive cabinet with curved corners; uses chassis No. CB-1625. Back is entirely open for ventilation. Finished in light gray wrinkle only.

Bud No.	Size, Inches H. x W. x D.	Wt., Lbs.	Net Each, Lots of 1-49	50-99	100-149
C-1787	4½ x 5½ x 3½	1	$1.70	$1.53	$1.36
C-1788	6½ x 5½ x 3½	1½	1.75	1.58	1.40

UNIVERSAL SLOPING PANEL CABINETS



Fully enclosed and shielded housing with one-piece detachable back and sides fastened to body with four self-tapping screws. Components may be mounted on back, bottom, sides or front. Will accommodate Bud Miniature Aluminum Chassis. **Size:** 4" d. x 4¼" h. Gray hammertone finish only.

ALUMINUM MODELS

Aluminum alloy 5005 H-14.

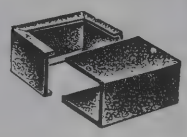
Bud No.	Uses Chassis	Width	Wt., Lbs.	Net Each, Lots of 1-49	50-99	100-149
AC-1610	CB-1617	4"	½	$1.68	$1.51	$1.34
AC-1611	CB-1618	5"	½	1.75	1.57	1.40
AC-1612	CB-1619	6"	¾	1.90	1.71	1.52
AC-1613	CB-1620	7"	¾	2.10	1.89	1.68

STEEL MODELS

C-1606	CB-1617	4"	¾	$1.45	$1.30	$1.16
C-1607	CB-1618	5"	¾	1.55	1.39	1.24
C-1608	CB-1619	6"	1⅛	1.65	1.48	1.32
C-1609	CB-1620	7"	1⅛	1.90	1.71	1.52

Boxes, Baffles, Cases

MINIBOXES, HANDY BOXES



Design of this box permits installation of more components than would be possible in the conventionally designed boxes the same size. Two-piece construction. **Either snap-lock or screw type.** The flange type construction assures adequate shielding. Made from heavy .040 ga. aluminum. Available in natural aluminum finish and gray hammertone finish.

GRAY HAMMERTONE MINIBOXES

Bud No.	Size, Inches L. x H. x W.	Wt. Lbs.	Net Each, Lots of 1-49	50-99	100-149
CU-2100A	2¾ x 2⅛ x 1⅝	¼	$0.74	$0.67	$0.59
CU-2101A	3¼ x 2⅛ x 1⅝	¼	.76	.68	.61
CU-2102A	4 x 2⅛ x 1⅝	¼	.80	.72	.64
CU-2103A	4 x 2¼ x 2¼	¼	.90	.81	.72
CU-2104A	5 x 2¼ x 2¼	¼	.95	.86	.76
CU-2105A	5 x 4 x 3	½	1.20	1.08	.96
CU-2106A	5¼ x 3 x 2⅛	¼	1.02	.92	.82
CU-2107A	6 x 5 x 4	¾	1.50	1.35	1.20
CU-2108A*	7 x 5 x 3	¾	1.65	1.49	1.32
CU-2109A*	8 x 6 x 3½	1	2.10	1.89	1.68
CU-2110A*	10 x 6 x 3½	1¼	2.35	2.12	1.88
CU-2111A*	12 x 7 x 4	1¾	3.20	2.88	2.56
CU-2112A*	17 x 5 x 4	2¼	3.20	2.88	2.56
CU-2113A*	10 x 2 x 1⅝	½	1.20	1.08	.99
CU-2114A*	12 x 2½ x 2¼	¾	1.55	1.40	1.24
CU-2115A	4 x 2 x 2¾	¼	.92	.83	.74
CU-2116A	4¼ x 2¼ x 1½	¼	.92	.83	.74
CU-2117A	3¼ x 2⅛ x 1⅛	¼	.78	.70	.62

*.050″ aluminum.

NATURAL FINISH MINIBOXES

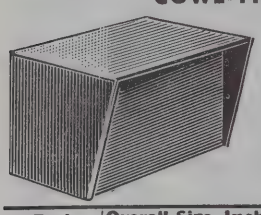
CU-3000A	2¾ x 2⅛ x 1⅝	¼	$0.59	$0.53	$0.47
CU-3001A	3¼ x 2⅛ x 1⅝	¼	.61	.55	.49
CU-3002A	4 x 2⅛ x 1⅝	¼	.64	.58	.51
CU-3003A	4 x 2¼ x 2¼	¼	.72	.65	.58
CU-3004A	5 x 2¼ x 2¼	¼	.76	.68	.61
CU-3005A	5 x 4 x 3	½	.96	.86	.77
CU-3006A	5¼ x 3 x 2⅛	¼	.82	.74	.66
CU-3007A	6 x 5 x 4	¾	1.20	1.08	.96
CU-3008A	7 x 5 x 3	¾	1.32	1.19	1.06
CU-3009A	8 x 6 x 3½	1	1.68	1.51	1.34
CU-3010A	10 x 6 x 3½	1¼	1.88	1.69	1.50
CU-3011A	12 x 7 x 4	1¾	2.56	2.30	2.05
CU-3012A	17 x 5 x 4	2¼	2.56	2.30	2.05
CU-3013A	10 x 2 x 1⅝	½	.96	.86	.77
CU-3014A	12 x 2½ x 2¼	¾	1.24	1.12	.99
CU-3015A	4 x 2 x 2¾	¼	.74	.67	.59
CU-3016A	4¼ x 2¼ x 1½	¼	.74	.67	.59
CU-3017A	3¼ x 2⅛ x 1⅛	¼	.62	.56	.50

HANDY BOXES

Similar to Miniboxes in design and construction, except made of 22 gauge steel. Black wrinkle finish only. Screw type only.

HB-1621	4¼ x 2¼ x 1½	½	$1.15	$1.04	$0.92
HB-1622	4 x 2 x 2¾	½	1.17	1.05	.94

COWL-TYPE MINIBOXES

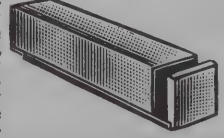


The cowl-type Minibox has a projecting cover to reduce glare on the panel from overhead lighting. It also provides protection for controls and dials. Cover has two box braces to which bottom is attached with sheet metal screws. When assembled, this type of construction results in a sturdy, rigid housing. Constructed of .040″ aluminum and available in natural or light hammertone gray finish.

Bud No.	Overall Size, Inches H.	W.	D.	Net Each, Lots of 1-49	50-99	100 & Over
SC-2130*	6	10	7	$5.95	$5.36	$4.76
SC-2131*	7	12	8	6.50	5.85	5.20
SC-2132*	3	8	5	3.45	3.11	2.76
SC-2133*	5	5	5	3.60	3.24	2.88
SC-3030†	6	10	7	4.30	3.87	3.44
SC-3031†	7	12	8	4.70	4.23	3.76
SC-3032†	3	8	5	2.45	2.21	1.96
SC-3033†	5	5	5	2.60	2.34	2.08

*Painted light gray hammertone. †Natural aluminum finish.

MINISLIDES



Ideal for housing components or assemblies where easy access to internally mounted parts is important. Can be mounted in a number of positions in a rack or cabinet. Accessibility achieved by removing sliding cover. Design of Mini-slide Box provides adequate shielding and protection from dust. Sturdily made of .050 aluminum. 4 self-tapping fastening screws included. Choice of gray hammertone (**GH**) or natural aluminum (**NA**).

Bud No.	Finish	Size, Inches W. x D. x H.	Wt., Lbs.	Net Each, Lots of 1-49	50-99	100-149
MS-2150	(GH)	3⅛ x 13 x 2⅝	1	$3.75	$3.38	$3.00
MS-2151	(GH)	5⅛ x 13 x 2⅝	1½	4.30	3.87	3.44
MS-2152	(GH)	3⅛ x 17 x 2⅝	1¼	4.15	3.74	3.32
MS-3050	(NA)	3⅛ x 13 x 2⅝	1	2.85	2.57	2.28
MS-3051	(NA)	5⅛ x 13 x 2⅝	1½	3.50	3.15	2.80
MS-3052	(NA)	3⅛ x 17 x 2⅝	1¼	3.35	3.02	2.68

UNIVERSAL METER CASES



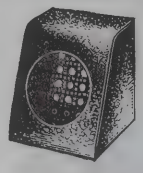
Center hole punched for 2″ meters, plus easily removed knock-out ring to provide fit for 3″ meters. Single piece detachable back and sides fastened to case with self-tapping screws for easy installation and servicing. Two ⅜″ knock-out holes in top provide for installation of feed-through insulators, switches, volume controls, etc. Gray hammertone finish only. **Size:** 4¼″ h. x 4″ w. x 4″ d.

Bud No.	Construction	Weight, Lbs.	Net Each, Lots of 1-49	50-99	100-149
CM-1935	Steel	1	$1.22	$1.10	$0.98
CMA-1936	Aluminum	¾	1.47	1.32	1.18

WIDE UNIVERSAL METER CASE

Same as above, except extra wide to permit installation of small components along with a meter or accommodate a 4″ meter. Made of 5005 H-14 aluminum. **Size:** 4¼″ h. x 6″ w. x 4″ d.

CMA-1930	Aluminum	¾	$2.40	$2.16	$1.92



MINIATURE SPEAKER CASES

Safe, convenient steel housing for 2″ and 3″ speakers. Black wrinkle finish only.

Bud No.	For Size Speaker	Net Each, Lots of 1-24	25-49	50-99
CS-1685	2″	$1.58	$1.42	$1.26
CS-1686	3″	1.58	1.42	1.26

WALL TYPE SPEAKER CASES



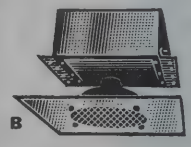
Steel speaker cases for use on either wall or table. Will not warp or split. Not affected by weather or temperature conditions. All types have keyway holes for wall mounting, as well as embossed feet for table mounting. For speaker sizes from 4″ to 12″. Available in brown wrinkle enamel finish only.

Bud No.	For Speaker	Size, Inches H. x W. x D.	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
CS-1948	4″	7½ x 6½ x 4¼	1¾	$2.67	$2.40	$2.14
CS-1939	5″	7½ x 6½ x 4¼	1¾	2.75	2.48	2.20
CS-1940	6″	9½ x 8 x 5⅝	3	3.26	2.93	2.61
CS-1941	8″	11½ x 9½ x 7	4	4.01	3.61	3.21
CS-1942	10″	13½ x 11½ x 8¼	5	5.01	4.51	4.01
CS-1943	12″	15½ x 13½ x 9¾	6	6.10	5.49	4.88

SILVER SONANCE BAFFLES



A



B

Universal Enclosures Bud Adjustable Mount-Bracket (**shown in Fig. A and listed below**) permits adjustment to any angle in a horizontal position. Hole in bracket passes ½″ conduit, permitting any of the speaker housings to be suspended from the ceiling. Bi-lateral feature permits sound to come from both front and back. Made of heavy gauge steel. Sound-deadening compound eliminates metallic resonance. All screws and nuts furnished for mounting speaker. No holes to drill. Light gray hammertone finish, except CS-2270, 71, 72 and 73, primer finish only.

BAFFLES (FIG. A)

Bud No.	For Spkr. Dia., In.	Size, Inches H. x W. x D.	Net Each, Lots of 1-24	25-49	50-99
CS-2240	4, 5	7¼ x 6¾ x 3 15/32	$ 4.92	$ 4.43	$3.94
CS-2241	5, 5½, 6	8¼ x 7½ x 4	5.33	4.80	4.26
CS-2242	6, 8	10 31/64 x 9½ x 5 1/16	8.58	7.72	6.86
CS-2243	10, 12	15 1/32 x 13½ x 7 13/64	11.67	10.50	9.34
CS-2270	4, 5	7¼ x 6¾ x 3 15/32	4.58	4.12	3.66
CS-2271	5, 5½, 6	8¼ x 7½ x 4	4.84	4.36	3.87
CS-2272	6, 8	10 31/64 x 9½ x 5 1/16	8.16	7.34	6.53
CS-2273	10, 12	15 1/32 x 13½ x 7 13/64	11.15	10.04	8.92

MOUNTING BRACKETS

Bud No.	For Baffle	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
AB-2250	CS-2240	¾	$1.14	$1.03	$0.91
AB-2251	CS-2241	1	1.14	1.03	.91
AB-2252	CS-2242	1¼	1.41	1.27	1.13
AB-2253	CS-2243	2¾	1.65	1.49	1.32

RECESSED CEILING, WALL ENCLOSURES (FIG. B)

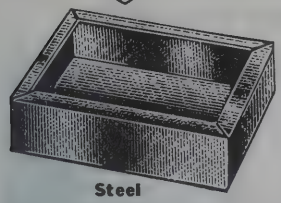
Suitable for an 8″ speaker. Adjustable brackets make the housing ideal for old and new installations. Treated with sound deadening compound. Grille plate is a 14″ square for use with acoustical tile ceiling. Depth, 4 1/16″. Housing dimensions, 10″ x 10″ x 4″.

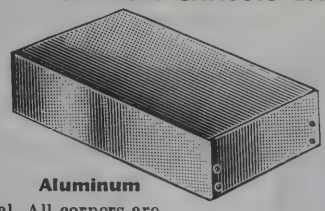
Bud No.	Description	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
CS-2244	Gray housing with grille	8¼	$10.00	$9.00	$8.00
CS-2274	Primer housing with grille	8¼	9.69	8.72	7.75
CS-2245	Gray grille plate only	4	2.20	1.98	1.76
CS-2275	Primer grille plate only	4	2.00	1.80	1.60

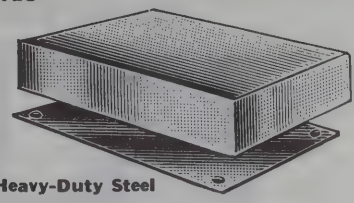
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Chassis and Accessories

STEEL AND ALUMINUM CHASSIS BASES, PLATES


Steel


Aluminum


Heavy-Duty Steel

Each chassis is made from a single sheet of metal. All corners are reinforced and spot welded. Aluminum bases are welded on Government approved welders as used for aircraft parts; natural finish aluminum alloy 5005 H-14. All four sides are folded at the bottom for added rigidity and strength.

STEEL CHASSIS BASES

Made of 20 gauge steel except as otherwise specified.

Size, Inches D. x W. x H.	Zinc Plated Finish Bud CB-	Net Each, Lots of 1-24	25-49	50-99	Black Wrinkle Finish Bud CB-	Net Each, Lots of 1-24	25-49	50-99
5½ x 5½ x 1	101*	$1.47	$1.32	$1.18	.....	.....	.....	.....
5 x 7 x 2	629*	1.30	1.17	1.04	628*	$1.07	$0.96	$0.86
4½ x 8 x 1½	102*	1.60	1.44	1.28	.....	.....	.....	.....
5 x 9 x 1½	103*	1.40	1.26	1.12	.....	.....	.....	.....
5 x 9½ x 2½	645*	1.67	1.50	1.34	644*	1.37	1.23	1.10
5 x 9½ x 1½	776*	1.69	1.52	1.35	788*	1.20	1.08	.96
5 x 10 x 3	605*	1.84	1.66	1.47	604*	1.27	1.14	1.02
5 x 13 x 3	105	2.30	2.07	1.84	.....	.....	.....	.....
6 x 8 x 2	104	1.57	1.41	1.26	.....	.....	.....	.....
6 x 14 x 3	756	2.05	1.85	1.64	755	1.75	1.58	1.40
7 x 7 x 2	1191	1.50	1.35	1.20	789	1.20	1.08	.96
7 x 9 x 2	1192	1.59	1.43	1.27	790	1.40	1.26	1.12
7 x 11 x 2	1193	1.67	1.50	1.34	791	1.45	1.31	1.16
7 x 12 x 3	793	2.05	1.85	1.64	792	1.57	1.41	1.26
7 x 13 x 2	1194	1.92	1.73	1.54	646	1.54	1.39	1.23
5 x 13½ x 2½	1198	2.17	1.95	1.74	647	1.77	1.59	1.42
7 x 15 x 3	1189	2.40	2.16	1.92	649	2.00	1.80	1.60
8½ x 15 x 3	666	2.71	2.44	2.17	665	2.24	2.02	1.79
4 x 17 x 3	1066	2.14	1.93	1.71	1068	1.80	1.62	1.44
7 x 17 x 2½	1199	2.37	2.13	1.90	648	1.99	1.79	1.59
7 x 17 x 3	758	2.59	2.33	2.07	757	2.15	1.94	1.72
8 x 10 x 2½	702	2.02	1.82	1.62	701	1.72	1.55	1.38
8 x 12 x 2½	704	2.24	2.02	1.79	703	1.75	1.58	1.40
8 x 12 x 3	760	2.34	2.11	1.87	759	1.85	1.67	1.48
8 x 17 x 2	774	2.34	2.11	1.87	650	1.70	1.53	1.36
8 x 17 x 3	775	2.62	2.39	2.10	651†	2.05	1.85	1.64
10 x 12 x 3	1195	2.25	2.03	1.80	652	1.89	1.70	1.51
12 x 12 x 3	106	3.34	3.01	2.67	.....	.....	.....	.....
10 x 14 x 3	779	2.44	2.20	1.95	653	2.04	1.84	1.63
10 x 17 x 2	769	2.39	2.15	1.91	654†	2.00	1.80	1.60
10 x 17 x 3	637	2.84	2.57	2.27	636†	2.00	1.80	1.60
10 x 17 x 3	1196‡	3.05	2.75	2.44	655†‡	2.54	2.29	2.03
10 x 23 x 3	1197‡	3.42	3.08	2.74	656‡	2.86	2.57	2.29
11 x 17 x 2	770‡	2.81	2.53	2.25	657†‡	2.35	2.12	1.88
11 x 17 x 3	771‡	3.49	3.14	2.79	658†‡	2.77	2.49	2.22
12 x 17 x 2	661‡	3.09	2.78	2.47	663†‡	2.44	2.20	1.95
12 x 17 x 3	662‡	3.67	3.30	2.94	664†‡	2.91	2.62	2.33
13 x 17 x 2	772‡	3.72	3.35	2.98	659†‡	2.91	2.62	2.33
13 x 17 x 3	773‡	4.07	3.66	3.26	660†‡	3.41	3.07	2.73
10 x 17 x 4	641‡	3.51	3.16	2.81	640†‡	2.92	2.63	2.34
13 x 17 x 4	643‡	4.68	4.21	3.74	642†‡	3.92	3.53	3.14
10 x 17 x 5	624‡	5.34	4.81	4.27	623‡	4.51	4.06	3.61
13 x 17 x 5	626‡	5.93	5.34	4.74	625‡	4.93	4.44	3.94

*22 gauge. †Punched to accommodate chassis mounting brackets. ‡18 gauge.

STEEL CHASSIS BOTTOM PLATES

Protect wiring and keep out dust from chassis bottom. Four embossed feet. Two finishes to match chassis finish.

Fits Chassis Size, In. W. x L.	Zinc Plated Finish Bud BP-	Net Each, Lots of 1-49	50-99	100-149	Black Wrinkle Finish Bud BP-	Net Each, Lots of 1-49	50-99	100-149
5 x 7	706	$0.69	$0.62	$0.55	705	$0.57	$0.51	$0.46
5 x 9½	667	.75	.68	.60	680	.62	.56	.50
5 x 10	538	.73	.66	.58	536	.67	.60	.54
7 x 7	668	.97	.87	.78	681	.92	.83	.74
7 x 9	669	.99	.89	.79	682	.94	.85	.75
7 x 11	670	1.07	.96	.86	683	.95	.86	.76
7 x 12	539	1.12	1.01	.90	537	.99	.89	.79
7 x 13	671	1.20	1.08	.96	684	1.02	.92	.82
5 x 13½	672	1.00	.90	.80	685	.84	.76	.67
4 x 17	1067	1.07	.96	.86	1069	.84	.76	.67
7 x 17	673	1.37	1.23	1.10	686	.90	.81	.72
8 x 10	708	1.05	.94	.84	707	.92	.83	.74
8 x 12	710	1.34	1.21	1.07	709	1.06	.95	.85
8 x 17	674	1.54	1.39	1.23	687	.95	.86	.76
10 x 12	675	1.57	1.41	1.26	688	.95	.86	.76
10 x 14	514	1.33	1.20	1.06	517	1.25	1.13	1.00
10 x 17	676	1.60	1.44	1.28	689	1.20	1.08	.96
11 x 17	677	1.60	1.44	1.28	690	1.20	1.08	.96
12 x 17	678	1.87	1.68	1.50	691	1.27	1.14	1.02
13 x 17	679	2.24	2.02	1.79	692	1.47	1.32	1.18

HEAVY DUTY CHASSIS

Complete with 20 ga. bottom plate for uses requiring extra strength to hold heavy weights. Made of 16 ga. steel; 17" wide.

Size, In. D. x H.	Zinc Plated Finish Bud CB-	Net Each, Lots of 1-24	25-49	50-99	Black Wrinkle Finish Bud CB-	Net Each, Lots of 1-24	25-49	50-99
8 x 3	1765	$4.76	$4.28	$3.81	1758	$4.26	$3.83	$3.41
11 x 3	1767	4.84	4.36	3.87	1760	4.34	3.91	3.47
13 x 2	1768	5.34	4.81	4.27	1761	4.84	4.36	3.87
13 x 3	1769	5.43	4.89	4.34	1762	4.93	4.44	3.94
13 x 4	1770	5.85	5.27	4.68	1763	5.26	4.73	4.21

ALUMINUM CHASSIS BASES

Bud No.	Size, Inches D. x W. x H.	Ga.	Wt., Lbs.	Net Each, Lots of 1-24	25-49	50-99
AC-430	4 x 6 x 3	18	½	$1.34	$1.21	$1.07
AC-431	4 x 6 x 2	18	½	1.10	.99	.88
AC-432	4 x 17 x 3	16	1¼	2.33	2.10	1.86
AC-402	5 x 7 x 2	18	½	1.17	1.05	.94
AC-429	5 x 7 x 3	18	¾	1.42	1.28	1.14
AC-403	5 x 9½ x 2	18	½	1.24	1.12	.99
AC-401	5 x 9½ x 2½	18	¾	1.47	1.32	1.18
AC-421	5 x 9½ x 3	18	¾	1.60	1.44	1.28
AC-404	5 x 10 x 3	18	¾	1.63	1.47	1.30
AC-422	5 x 13 x 3	18	¾	1.84	1.66	1.47
AC-433	6 x 17 x 3	16	1¼	2.67	2.40	2.14
AC-405	7 x 7 x 2	18	½	1.35	1.22	1.08
AC-406	7 x 9 x 2	18	½	1.46	1.31	1.17
AC-407	7 x 11 x 2	18	¾	1.58	1.42	1.26
AC-408	7 x 12 x 3	18	1	2.00	1.80	1.60
AC-409	7 x 13 x 2	18	¾	1.67	1.50	1.34
AC-411	7 x 15 x 3	16	1½	2.67	2.40	2.14
AC-423	7 x 17 x 3	16	1¾	2.75	2.48	2.20
AC-424	8 x 12 x 3	16	1½	2.42	2.18	1.94
AC-425	8 x 17 x 2	16	1½	2.51	2.26	2.01
AC-412†	8 x 17 x 3	16	1¾	2.84	2.56	2.27
AC-413	10 x 12 x 3	16	1½	2.67	2.40	2.14
AC-414	10 x 14 x 3	16	1¾	2.84	2.56	2.27
AC-415†	10 x 17 x 2	16	1¼	2.68	2.41	2.14
AC-416†	10 x 17 x 3	16	2	3.17	2.85	2.54
AC-426†	11 x 17 x 2	14	2¼	3.42	3.08	2.74
AC-417†	11 x 17 x 3	14	2¾	3.97	3.57	3.18
AC-418†	12 x 17 x 3	14	2¾	4.08	3.67	3.26
AC-419†	13 x 17 x 2	14	2½	3.51	3.16	2.81
AC-420†	13 x 17 x 3	14	2¾	4.26	3.83	3.41
AC-427†	10 x 17 x 4	14	3½	4.51	4.06	3.61
AC-428†	13 x 17 x 4	14	3¾	5.76	4.73	4.21

†Punched to accommodate chassis mounting brackets.

ALUMINUM CHASSIS BOTTOM PLATES

Bud No.	Fits Chassis W. x L., In.	Wt., Lbs.	Net Each, Lots of 1-49	50-99	100-149
BPA-1589	5 x 7	⅛	$0.74	$0.67	$0.59
BPA-1590	5 x 9½	¼	.75	.68	.60
BPA-1591	5 x 10	¼	.75	.68	.60
BPA-1592	7 x 7	⅛	.77	.69	.62
BPA-1593	7 x 9	⅛	.80	.72	.64
BPA-1594	7 x 11	⅛	.90	.81	.72
BPA-1595	7 x 12	¼	.97	.87	.78
BPA-1596	7 x 13	¼	1.14	1.03	.91
BPA-1597	10 x 17	¾	1.52	1.37	1.22
BPA-1598	13 x 17	¾	2.07	1.86	1.66

CHASSIS DECKS

Use in carrying cases, cabinets, etc.; deck is folded 1½" over at front and ½" on sides. Black enamel finish only.

Bud No.	Size, In. W. x D.	Fits Cabinet Number	Net Each, Lots of 1-24	25-49	50-99
CB-522	4¾ x 5½	CU-1098	68c	61c	54c
CB-523	4¾ x 4½	CU-1099	65c	59c	52c
CB-525	5¾ x 5½	CU-1124, CU-1096	78c	70c	62c

CHASSIS SUPPORTING ANGLES

Distribute weight to sides of the rack to relieve the panel. Angles are 3" x 1⅜" x 7/64" steel. Black enamel finish. **No. CE-2219** designed for attachment to rails of Console Pedestal or Prestige Relay Racks. Slotted for infinite vertical adjustment; extend to full cabinet depth; 21" x 3" x 2¾".

Bud No.	Length, Inches	Weight, Lbs.	Net Per Pair, Lots of 1-24	25-49	50-99
SA-1349	14½	4	$2.25	$2.03	$1.80
SA-1350	12	3	2.17	1.95	1.74
CE-2219	21	7½	3.00	2.70	2.40

RACK SHELVES

Sturdily constructed of heavy-gauge steel. Have 1" flange to add rigidity and strength. Rest on chassis supporting angles. Available in black enamel finish only.

Bud No.	Size, Inches W. x D.	Weight, Lbs.	Net Each, Lots of 1-24	25-49	50-99
CB-1976	19 x 15	6½	$3.47	$3.12	$2.78
CB-1977	19 x 12	5½	2.64	2.38	2.11

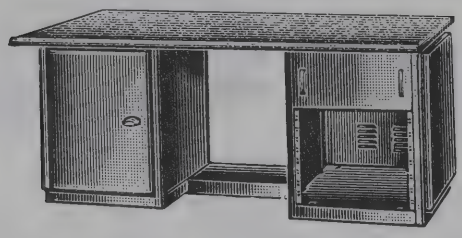
DIAL LOCK

Dual purpose design functions as both dial lock and position indicator. Completely eliminates problems of dial slippage and accidental movement. Nickel-plated brass construction.
Bud No. DL-1947 Dial Lock—Net Each..... **17c**

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Metalware, Accessories

CONSOLE ASSEMBLIES



Variety of panels, sides, doors, pedestal, table tops and drawer permit easy assembly of a variety of console units, custom made to individual requirements. Typical basic unit would consist of one pedestal, an end pedestal, three or more panels, a door, a table top and a foot rest as illustrated. Many variations of this basic design may be made, and additions or changes in design can be accomplished at any time. Because the system is sold in parts, it offers the user the highest versatility in designing or expanding units as needed.

BASIC PEDESTAL

Consists of top, bottom and four panel-mounting channels drilled and tapped to accept standard 19″ panels on each of four sides. Bottom is slotted so that sides or doors may be installed on any side. Three knock-out holes provided on each of two sides for use in assembling pedestals in series. Channels will support 200 lbs. suspended between them; bottom will support 500 lbs. Bottoms have recessed mounting brackets for hidden caster attachment. Shipped knocked-down, with necessary hardware. **Size:** 22″ w. x 22″ d. x 29 13/16″ h.

END PEDESTAL

May be used as a housing or as a support. Panel mounting rails are drilled and tapped for mounting panels on each of two sides. Accepts full size solid or louvered panels, ball-cornered doors or sides. Base has hidden caster mounting supports. When used, No. CT-2206 table top is required; eliminates the need for a second CP-2200 pedestal. **Size:** 22″ w. x 5″ d. x 29 13/16″ h. inside.

PANELS

Full-sized panels may be used to enclose the openings on any side of either of above pedestals. Available either solid or louvered. Louvered panels can be positioned with louvers pointing down or up, inside or outside the pedestal. **Size:** 24 15/16″ h. x 19″ w.

BALL-CORNERED SIDE

Can be used to enclose any side of either of above pedestals for an enhanced appearance. Attach by tongue and slot arrangement at the bottom; and, two screws at the top. Quickly removable from exterior of pedestal for service or inspection. Provide sufficient clearance for installation over knobs and dials. **Size:** 20 1/4″ w. x 1 1/16″ d. x 25 1/16″ h.

BALL-CORNERED DOOR

Unique hinge and locking arrangement designed so that door may open from right or left side. Attaches to any side of either pedestal with sufficient clearance for knobs and dials. **Size:** 20 1/4″ w. x 1 1/16″ d. x 25 1/16″ h.

TABLE TOPS

Made of 16 gauge steel and available in three lengths. Adjustable from front to back in three positions to allow overhang as desired. Attach to the pedestals by means of brackets welded to underside of top. **Size:** 30″ w. x 1 1/16″ thick.

FOOT REST

Joins two pedestals or one pedestal and one end pedestal, depending on the size top used. Adjustable in two positions, front to back. **Size:** 22″ lg. x 10″ w. x 2 5/8″ thick.

CONSOLE DRAWER

Fits into pedestal in any position from top to bottom. Slides easily on nylon rollers. Capable of supporting heavy loads. Drawer extends to full depth of pedestal. Easily removable slides fasten to mounting channels in pedestal; stops prevent drawer from falling out. **Size:** 16 3/4″ w. x 19 3/8″ d. x 6 7/16″ h., inside.

PARTS ORDERING INFORMATION

Bud No.*	Description	Wt. Lbs.	Net Each, Lots of 1-14	15-24	25-34
CP-2200	Basic pedestal	36	$36.00	$32.40	$28.80
CF-2202	End pedestal	19	18.95	17.05	15.16
CP-2215	Plain panel	9	5.26	4.73	4.21
CP-2216	Louvered panel	9	6.00	5.40	4.80
CK-2217	Ball-cornered side	13	8.95	8.06	7.16
CD-2220	Ball-cornered door	13	10.95	9.85	8.76
CT-2205	Table top, 25″ long	18	22.00	19.80	17.60
CT-2206	Table top, 52″ long	35	26.00	23.40	20.80
CT-2207	Table top, 69″ long	45	32.10	28.89	25.68
CF-2201	Foot rest	7	3.85	3.46	3.08
CD-2210	Console drawer	24	32.00	28.80	25.60

*Specify Color: Add suffix **GH** for gray hammertone; add **BH** for brown hammertone.

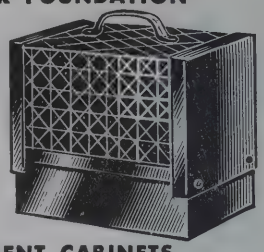
SPEAKER ENCLOSURE HANDLES

Attach to any small housing or speaker enclosure to achieve portability. Made of aluminum tubing with etched finish.

Bud No.	Length, Inches	Mtg. Ctrs., Inches	Net Each, Lots of 1-49	50-99	100-149
UH-70A	5 3/8	4 5/8	$0.36	$0.32	$0.29
UH-71A	3 3/4	3 1/4	.30	.27	.24

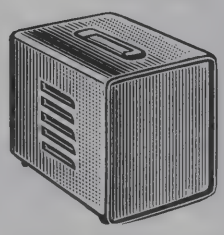
MINIATURE AMPLIFIER FOUNDATION

With the increased use of miniature tubes, smaller cabinets can be used when designing a compact amplifier. This amplifier foundation was designed expressly for this purpose. The chassis is 5″ x 7″ x 2″. Height, 6″. The cover is made of perforated metal. A streamlined handle makes this cabinet portable. Black wrinkle only. 1 1/2 lbs.



Bud No.	Net Each, Lots of 1-24	25-49	50-99
CA-1754	$4.00	$3.60	$3.20

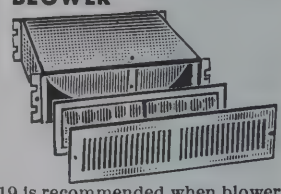
PORTACAB INSTRUMENT CABINETS



Attractive, versatile cabinets desirable as housings for instrumentation requiring highly stylized appearance. Custom, quality look achieved in standard production models. Made entirely of aluminum to minimize weight. Flexible recessed handle permits easy portability as well as vertical stacking. Well louvered for adequate ventilation. Louvers point inward, permitting side-to-side placement of cabinets without space loss. Aluminum front panel recessed 1/8″. Welded back has opening. Perimeter of panel follows contour of body. Has four detachable rubber feet. Gray hammertone finish only.

Bud No.	Size, Inches W. x D. x H.	Wt., Lbs.	Bud Chassis	Net Each, Lots of 1-24	25-49	50-99
WA-1540	6 1/8 x 8 x 8	2 1/2	AC-402	$ 9.20	$ 8.28	$ 7.36
WA-1541	8 1/8 x 12 x 9	3	AC-407	12.00	10.80	9.60
WA-1542	10 1/8 x 8 x 8	3 1/2	AC-406	10.65	9.59	8.52
WA-1543	11 1/8 x 18 x 11	6 1/2	AC-416	13.50	12.15	10.80
WA-1544	14 1/8 x 18 x 12	7 3/4	AC-420	15.50	13.95	12.40

TRANS-AIRE BLOWER



Ideal for use where excessive heat is generated by equipment in an enclosed rack, cabinet or console. Brings in fresh air or exhausts heated air, enabling use as an exhaust or intake blower, depending upon mounting position. Unit will operate in any position—vertical or horizontal. May be mounted to rails of standard cabinet or rack. Use of Bud Chassis Supporting Angles SA-1349, SA-1350 or CE-2219 is recommended when blower is mounted in rack or cabinet. Motor is rubber mounted to reduce vibration. Operating noise factor reduced to minimum. Thermal overload protection to prevent overheating. Automatic reset. Oil impregnated, fiberglas disposable filter can be changed without removing unit from cabinet. Three sizes provide air displacement from 100 c.f.m. to 750 c.f.m. at 0° static pressure. Complete with filter, chrome-plated grille and 18″ three-wire cord. All dimensional and technical data in table below. **Weight:** B-23 17 1/4 lbs., B-25 33 lbs., B-27 35 1/4 lbs.; replacement filter 1 lb.

BLOWERS

Bud No.	Panel Space	Depth	Air c.f.m. High	Low	Mot. hp	Net Each, Lots of 1-9	10-14	15 Up
B-23	3 1/2″x19″	12″	200	100	1/20	$47.10	$42.39	$37.68
B-25	5 1/4″x19″	14 1/2″	500	250	1/6	53.35	48.02	42.68
B-27	7″ x19″	14 1/2″	750	350	1/4	61.35	55.22	49.08

FILTERS FOR ABOVE BLOWERS

Bud No.	Unit	Net Each, Lots of 1-24	25-49	50-99
BF-24	Filter for use with B-23	$1.35	$1.22	$1.08
BF-26	Filter for use with B-25	1.50	1.35	1.20
BF-28	Filter for use with B-27	1.65	1.49	1.32

"TEM-STAT" TEMPERATURE CONTROLS

Prevents costly damage to electronic components in enclosed cabinets, boxes, etc. Bimetal sensing element responds quickly to gradual or sudden temperature changes and actuates whatever warning device you use: Activates a light, bell, blower or other device; or, shuts off current. Activates snap-action, heavy-duty, normally open switch contacts. High electrical ratings up to 300° F; fully adjustable temperature ranges. Screw terminals for easy attachment. U/L Listed. Small size, 2 15/16″ lg. x 1″ w. x 1 7/16″ d., suitable for limited space applications. **U/L Rating:** 8 amps, full load, 115 VAC (48 amps, locked rotor), 100,000 cps motor rating; derate 50% for 230 VAC. Full load 13.8 amps 120 VAC (82.8 amps, locked rotor), 6,000 cps motor rating; derate 50% for 240 VAC. Pilot duty, 125 VA at 115/230 VAC; or, 250 mV or more. **$5.00**

Bud Model TL-15—For 80°–170° F range. Net Each..... **$5.00**

Bud Model TL-16—For 150°–240° F range. Net Each.... **$5.00**

RUBBER FEET

No. F-7264A: Has recessed head with mounting stud; rubber portion 15/16″ x 11/32″ thick. **No. F-8038:** May be applied to any surface when glue coating is moistened with benzol base solution; 3/4″ dia. x 1/8″ thick. **No. F-9653:** Press-fit type for 1/16″ hole.

Bud No.	Description	Net per 100, Lots of 1-49	50-99	100-149	200-249
F-7264A	High grade black rubber	$7.35	$6.62	$5.88	.....
F-8038	Sponge rubber pad	3.80	3.42	3.04	.....
F-9653	Top grade gray rubber	1.75	1.75	1.58*	$1.40

*Lots 100–199.

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Cabinet Hardware

BUD HANDLES



Fabricated from steel, brass or cast aluminum. Durable finish provides long wear and attractive appearance. Skin packed in pairs or bulk packed (priced singly) with all necessary mounting hardware. Designed for rugged applications, they have unlimited use in electronic, electrical and other fields.

Bud No.	Fig.	Description	Net Per Pair, Lots of 1-49	50-99	100-149	Bulk Pack*: Net Each, Lots of 50-99	100-199	200-499
H-9100	A	1" x ¼" chrome-plated solid brass; 4" x ½" mtg. cntrs.; 1" hand clearance; four ½" x 6-32 threaded screws	$3.96	$3.56	$3.17	$1.86	$1.67	$1.49
H-9101	A	Same, but 8" x ½" mtg. centers	6.15	5.54	4.92	2.90	2.61	2.33
H-9102	A	⅝" x ¼" chrome-plated solid brass; 4" mtg. centers; 1" hand clearance; two ½" x 6-32 threaded screws	3.15	2.84	2.52	1.60	1.44	1.28
H-9103	A	Same, but has 6" mounting centers	3.60	3.24	2.88	1.70	1.53	1.36
H-9110	B	⅜" steel rod angular formed, chrome-plated; 6" mtg. ctrs.; 1¼" hand clearance; two ½" x 10-32 screws	2.79	2.51	2.23	1.06	.95	.85
H-9111	B	⅜" steel rod, chrome plated, 4" mtg. ctrs.; 1" hand clearance; two ½" x 10-32 threaded screws	1.50	1.35	1.20	.58	.52	.46
H-9112	B	6" mtg. center version of H-9111	1.89	1.70	1.51	.72	.65	.58
H-9113	B	8" mtg. center version of H-9111	2.10	1.89	1.68	.82	.74	.66
H-9114	B	½" steel rod, chrome-plated; 8" mtg. centers; 1½" hand clearance; two ½" x ¼-28 thd. screws	3.51	3.16	2.81	1.32	1.19	1.06
H-9115	C	⅜" steel rod, chrome-plated; 4" mtg. ctrs.; 15/16" hand clearance; two ¼-28 thd. nuts	2.40	2.16	1.92	.96	.86	.77
H-9116	C	Same, but has 6" mtg. centers	3.00	2.70	2.40	1.14	1.03	.91
H-9120	D	Silver-anodized die-cast aluminum; 4⅜" inside, 5⅜" outside mtg. centers; 1" hand clearance; four ½" x 6-32 threaded screws	3.51	3.16	2.81	1.60	1.44	1.28
H-9121	D	Same, except chrome plated alloy	4.95	4.46	3.96	2.34	2.11	1.87
H-9123	D	Similar to H-9120 but 4½" mtg. centers; 1" hand clearance; two ½" x 10-32 thd. screws	2.61	2.35	2.09	1.14	1.03	.91
H-9122	E	Silver-anodized die-cast aluminum; hinged on ¼" steel pins with 2 hinge blocks; 6½" inside, 7¼" outside mtg. centers; 1½" hand clearance; four ⅜" x 10-32 threaded screws	5.94	5.35	4.95	2.82	2.54	2.26
H-9130	F	Silver-anodized die-cast aluminum; 3" mtg. centers; two ⅜" x 10-32 thd. screws; size 4 15/16" x 3"	5.25	4.73	4.20	2.50	2.25	2.00
H-9131	G	Silver-anodized die-cast aluminum; size, 4" x 2⅞"; 2¼" mtg. centers; two ¾" x ¼-28 thd. raised, counter-sunk screws and nuts	3.90	3.51	3.12	1.78	1.60	1.42
H-9140	H	Silver-anodized die-cast aluminum; 3½" mtg. centers; ¾" hand clearance; two ½" x 10-32 threaded screws	2.34	2.11	1.87	1.08	.97	.86
H-9150	I	Silver-anodized die-cast aluminum; 4" x ⅝" mtg. centers; 1¼" hand clearance; four ½" x 10-32 threaded screws	3.15	2.84	2.52	1.42	1.28	1.14
H-9151	J	Silver-anodized die-cast aluminum; 5 5/16" x ⅝" mtg. centers; 1⅜" hand clearance; four ½" x 10-32 threaded screws	5.10	4.59	4.08	2.34	2.11	1.87
H-9152	J	Similar to above except 3⅞" mtg. centers; 1⅛" hand clearance; two ½" x 10-32 threaded screws	4.14	3.73	3.31	1.95	1.76	1.56
H-9160	K	Chrome-plated ⅜" steel rod; 3½" mtg. centers; 1 11/16" hand clearance; two ¼"-28 hex nuts	2.70	2.43	2.16	1.02	.92	.82
H-9161	K	Same, but with 5¼" mounting centers	3.15	2.84	2.52	1.20	1.08	.96
H-9162	K	Same, but with 7" mounting centers	3.24	2.92	2.59	1.24	1.12	.99
H-9163	K	Same, but with 8¾" mounting centers	3.51	3.16	2.81	1.32	1.19	1.06
H-9164	K	Same, but with 10½" mounting centers	3.96	3.56	3.17	1.35	1.22	1.08
H-9165	K	Same, but with 12¼" mounting centers	4.35	3.92	3.48	1.50	1.35	1.20
H-9166	L	Chrome-plated ¼" brass rod; 1 29/64" mtg. centers; 1" hand clearance; two ½" x 6-32 thd. screws	1.20	1.08	.96	.54	.49	.43
H-9168	L	Same, but 3" mtg. centers; two ¼" x 6-32 thd. screws	1.35	1.22	1.08	.58	.52	.46

*Number shown is for skin packed pairs. For bulk packed handles (priced singly), add suffix **B** to number (example: H-9100**B**).



Inside SC-4312

CHASSIS SLIDES

Precision built slides for smooth operation, long life under repeated movement conditions. Use with full 17" chassis in std. 19" panel rack or cabinet. Drilled for either panel rail bracket or direct slide rail mounting. Brackets and hardware supplied. "Quick detach" models permit change of instrumentation at point of use with infinitesimal delay in exchange. **"SC" Series:** For commercial uses where top quality and performance is required, but MIL specs are not. Load ratings conservative with plus factor of at least 2:1 under normal conditions. **"SI" Series:** Adhere to MIL specifications for industrial or military requirements. Channels 7075T6 aluminum extrusions per QQ-A-277; parts of 302 stainless steel per MIL-S-5059A; bearings are 440 stainless steel per QQ-S-763. Aluminum-parts anodized per MIL-A-8625A; stainless steel parts passivated per MIL-S-5002. Lubricant is hi-low temp. grease per MIL-G-3278. Load rating extra conservative with plus factor of at least 3:1 under normal conditions.

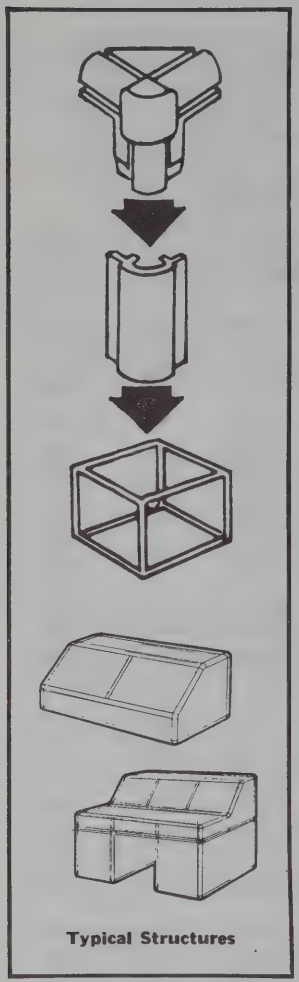
"SC" SERIES

Bud No.	Description	Load Cap. Per Pair	Net Each, Lots of 1-14	15-24	25-34
SC-4312	Full ball-bearing slide 12" long; 12" travel; height, 2"; inner members do not disconnect or tilt; aluminum extrusions of 2014T6 per QQ-A-261; precision broached for flawless operation	150 lbs.	$27.15	$24.45	$21.70
SC-4316	Same, but 16" long; 16" travel	110 lbs.	29.10	26.20	23.30
SC-4320	Same, but 20" long; 20" travel	95 lbs.	31.80	28.60	25.45
SC-4412	Same, but outer track ball bearing, inner track dry lubricated friction type; quick detach facility; locks in extended position; height 2"; 12" long; 12" travel	150 lbs.	39.30	35.35	31.45
SC-4416	Same as SC-4412, but 16" long; 16" travel	110 lbs.	42.15	37.95	33.70
SC-4420	Same as SC-4412, but 20" long; 20" travel	95 lbs.	44.10	39.70	35.30
SC-4512	Quick detach, tilting slide with lock in extended position. Permits 90° tilt of chassis above and below horizontal position in 45° increments; height, 3½"; 12" long; 12" travel	275 lbs.	56.25	50.65	45.00
SC-4516	Same, but 16" long; 16" travel	215 lbs.	60.90	54.80	48.70
SC-4520	Same, but 20" long; 20" travel	180 lbs.	64.65	58.20	51.70

"SI" SERIES

SI-4212	Ball-bearing; 12" long; 12" travel; 3½" high	275 lbs.	$41.25	$37.15	$33.00
SI-4216	Same, but 16" long; 16" travel	225 lbs.	45.00	40.50	36.00
SI-4220	Same, but 20" long; 20" travel	180 lbs.	48.75	43.90	39.00
SI-4012	Same as SI-4212 except outer track ball bearing; inner, dry-lubricated friction type; quick disconnect; extended lock position	275 lbs.	48.75	43.90	39.00
SI-4016	Same, but 16" long; 16" travel	225 lbs.	53.40	48.15	42.80
SI-4020	Same, but 20" long; 20" travel	180 lbs.	59.10	53.20	47.30
SI-4112	Similar to SI-4012, but with tilting action 90° above and below horizontal in 45° increments	275 lbs.	64.65	58.20	51.70
SI-4116	Same, but 16" long; 16" travel	225 lbs.	69.30	62.35	55.45
SI-4120	Same, but 20" long; 20" travel	180 lbs.	72.15	64.95	57.70

Imlok "Prototyper" Cabinets



Typical Structures

System of metal cabinet construction, ideal for research and prototype work, permits quick assembly of cases, cabinets and racks using the simplest of tools. Complex structures may be built to your design using a variety of corner castings and extrusions held rigidly with friction clips or screws. Panels may be cut to size from sheet aluminum or steel, fitted grooves or screw fastened. No grinding or welding needed.

EXTERNAL CORNER CONNECTORS

Bud No.	Description	Net Each, Lots of 1-14	15-24	25 Up
BI-1001	90° basic corner connector for rectangular cabinets. Use with BI-2004, BI-2014, BI-2024, BI-2034, BI-2044, BI-2054 or BI-2064 extrusions.	$0.96	$0.86	$0.77
BI-1016	67½° corner connector holds vertical wall and horizontal wall to a third rising at 67½° to the horizontal. One leg fits BI-2041 extrusion; other two fit any 90° external extrusion.	1.35	1.22	1.08
BI-1024	60° corner connector similar to BI-1016. One leg fits BI-2081; other legs fit any 90° external extrusion.	1.35	1.22	1.08
BI-1002	45° corner connector similar to BI-1016. One leg fits BI-2005, BI-2015, or BI-2025; other two legs fit any 90° external extrusion.	.96	.86	.77
BI-1020	30° corner connector similar to BI-1016. One leg fits BI-2061; other two legs fit any 90° external extrusion.	1.35	1.22	1.08
BI-1012	22½° corner connector similar to BI-1016. One leg fits BI-2021; other two legs fit any 90° external extrusion.	1.35	1.22	1.08

EXTERNAL STANDARD EXTRUSIONS

Bud No.	Description	Net Each, Lots of 1-9	10-14	15 Up
BI-2004	12 ft. long, 90° external extrusion most used; has panel retaining groove on each flange for 0.050″ panels. Ideal for small to medium sized structures with unbraced spaces up to 2 ft. long.	$ 7.44	$ 6.70	$ 5.95
BI-2004-3	3 ft. length BI-2004	2.18	1.96	1.74
BI-2004-6	6 ft. length BI-2004	4.13	3.72	3.30
BI-2004-9	9 ft. length BI-2004	5.93	5.34	4.74
BI-2064	12 ft. long, 90° extrusion with panel retaining flange to take 20 gauge panels.	8.27	7.44	6.62
BI-2064-3	3 ft. length BI-2064	2.40	2.16	1.92
BI-2064-6	6 ft. length BI-2064	4.58	4.10	3.64
BI-2064-9	9 ft. length BI-2064	6.53	5.88	5.22
BI-2041	12 ft. long, 67½° extrusion; companion to BI-1016 for unbraced spans up to 3 ft. long.	11.37	10.23	9.10
BI-2041-3	3 ft. length BI-2041	3.30	2.97	2.64
BI-2041-6	6 ft. length BI-2041	6.30	5.67	5.04
BI-2041-9	9 ft. length BI-2041	9.00	8.10	7.20
BI-2081	12 ft. long, 60° extrusion; companion to BI-1024 connector. For unbraced spans up to 3 ft. long.	11.37	10.23	9.10
BI-2081-3	3 ft. length BI-2081	3.30	2.97	2.64
BI-2081-6	6 ft. length BI-2081	6.30	5.67	5.04
BI-2081-9	9 ft. length BI-2081	9.00	8.10	7.20
BI-2005	12 ft. long, 45° extrusion used with BI-1002 connector; for spans up to 2 ft. long.	8.00	7.20	6.40
BI-2005-3	3 ft. length BI-2005	2.33	2.10	1.86
BI-2005-6	6 ft. length BI-2005	4.43	3.99	3.54
BI-2005-9	9 ft. length BI-2005	6.30	5.67	5.04
BI-2061	12 ft. long, 30° extrusion used with BI-1020 connector.	11.37	10.23	9.10
BI-2061-3	3 ft. length BI-2061	3.30	2.97	2.64
BI-2061-6	6 ft. length BI-2061	6.30	5.67	5.04
BI-2061-9	9 ft. length BI-2061	9.00	8.10	7.20
BI-2021	12 ft. long, 22½° extrusion used with BI-1012 connector.	11.37	10.23	9.10
BI-2021-3	3 ft. length BI-2021	3.30	2.97	2.64
BI-2021-6	6 ft. length BI-2021	6.30	5.67	5.04
BI-2021-9	9 ft. length BI-2021	9.00	8.10	7.20
BI-2014	12 ft. long, 90° strengthened extrusion similar to BI-2004 but stronger for use in unbraced spans up to 3 ft. long.	8.27	7.44	6.62
BI-2014-3	3 ft. length BI-2014	2.40	2.16	1.92
BI-2014-6	6 ft. length BI-2014	4.58	4.12	3.66
BI-2014-9	9 ft. length BI-2014	6.53	5.89	5.22
BI-2015	12 ft. long, 45° external strengthened extrusion used in place of BI-2005 in unbraced spans up to 3 ft. long.	9.65	8.69	7.72
BI-2015-3	3 ft. length BI-2015	2.78	2.50	2.22
BI-2015-6	6 ft. length BI-2015	5.33	4.80	4.26
BI-2015-9	9 ft. length BI-2015	7.65	6.89	6.12
BI-2054	12 ft. long, 90° strengthened extrusion with two 11/16″ extended flanges to take standard ⅛″; retaining groove at root of flanges.	12.78	11.50	10.22
BI-2054-3	3 ft. length BI-2054	3.68	3.31	2.94
BI-2054-6	6 ft. length BI-2054	7.05	6.35	5.64
BI-2054-9	9 ft. length BI-2054	10.13	9.12	8.10
BI-2024	12 ft. long, 90° strengthened extrusion with one flange extended ⅝″ to fit ⅛″ panel; other has normal panel-retaining groove.	10.25	9.23	8.20
BI-2024-3	3 ft. length BI-2024	3.00	2.70	2.40
BI-2024-6	6 ft. length BI-2024	5.70	5.13	4.56
BI-2024-9	9 ft. length BI-2024	8.10	7.29	6.48
BI-2025	12 ft. long, 45° strengthened extrusion with one ⅝″ extended flange for ⅛″ panel and one normal panel-retaining groove flange.	10.83	9.75	8.66
BI-2025-3	3 ft. length BI-2025	3.15	2.84	2.52
BI-2025-6	6 ft. length BI-2025	6.00	5.40	4.80
BI-2025-9	9 ft. length BI-2025	8.55	7.70	6.84
BI-2034	12 ft. long, 90° heavy-duty extrusion takes loadings for spans over 3 ft. long. Additional returns reinforce strength. Flanges are both ⅝″ deep.	16.79	15.11	13.43
BI-2034-3	3 ft. length BI-2034	4.88	4.39	3.90
BI-2034-6	6 ft. length BI-2034	9.30	8.37	7.44
BI-2034-9	9 ft. length BI-2034	13.28	11.95	10.62
BI-2044	12 ft. long, 90° reinforcing angle screws to return flanges of BI-2034 for extra rigid, boxed in section. Use with heavy-duty BI-1011 spacer bar and BI-2018 and BI-2028 extrusions to build almost any size structure.	6.66	5.99	5.33
BI-2044-3	3 ft. length BI-2044	2.45	2.21	1.96
BI-2044-6	6 ft. length BI-2044	3.68	3.31	2.94
BI-2044-9	9 ft. length BI-2044	5.25	4.73	4.20

SPECIAL CONNECTORS, ACCESSORIES

No. BI-1003—T-junction connector permits making "T" with 2 lengths of extrusions; also used for picture frame effect. Fits 90° external extrusions.

No. BI-1005—90° table-top or foot connector used in place of radiused corner; has well to hold glass or wood table-top. Used also as foot or as wall mount. One leg fits 90° external extrusion; other two fit BI-2009.

No. BI-1008—Stacking plate for use with BI-1005 to permit stacking.

No. BI-1009—90° spacer bar cruciform connector.

No. BI-4001—Package of 50 friction clips; for assembly without use of screws.

No. BI-4302—Concealed brass hinge fits 90° extrusions; 3 mounting holes take 6-32 or 10-32 screws.

No. BI-4601—Chrome plated ventilation ring for dress-up. Used in addition to slots and louvers. Clips (supplied) into 2⅝″ hole. Has stainless steel gauze.

Bud No.	Net Each, Lots of 1-14	15-24	25 Up
BI-1003	$0.96	$0.86	$0.77
BI-1005	1.26	1.13	1.01
BI-1008	.63	.57	.50
BI-1009	1.76	1.58	1.41
BI-4001	1.26	1.13	1.01
BI-4302	1.76	1.58	1.41
BI-4601	2.87	2.58	2.30

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Imlok "Prototyper" Cabinets

INTERNAL EXTRUSIONS

Bud No.	Description	Net Each, Lots of 1-9	10-14	15 Up
BI-2032	12 ft. long, 90° internal extrusion to fit BI-1028; has two panel retaining grooves; for unbraced spans up to 3 ft. long.	$12.81	$11.53	$10.25
BI-2032-3	3 ft. length BI-2032	3.75	3.38	3.00
BI-2032-6	6 ft. length BI-2032	7.05	6.35	5.64
BI-2032-9	9 ft. length BI-2032	10.15	9.14	8.12
BI-2051	12 ft. long, 67½° internal extrusion to fit BI-1017 connector. For use in unbraced spans up to 3 ft.	11.37	10.23	9.10
BI-2051-3	3 ft. length BI-2051	3.30	2.97	2.64
BI-2051-6	6 ft. length BI-2051	6.30	5.67	5.04
BI-2051-9	9 ft. length BI-2051	9.00	8.10	7.20
BI-2091	12 ft. long, 60° internal extrusion; fits BI-1025 connector.	11.37	10.23	9.10
BI-2091-3	3 ft. length BI-2091	3.30	2.97	2.64
BI-2091-6	6 ft. length BI-2091	6.30	5.67	5.04
BI-2091-9	9 ft. length BI-2091	9.00	8.10	7.20
BI-2006	12 ft. long, 45° internal extrusion has two ⅝" flanges, one with panel-retaining groove. For flat-topped, sloping front cabinets.	11.66	10.49	9.33
BI-2006-3	3 ft. length BI-2006	3.38	3.04	2.70
BI-2006-6	6 ft. length BI-2006	6.45	5.81	5.16
BI-2006-9	9 ft. length BI-2006	9.23	8.31	7.38
BI-2071	12 ft. long, 30° internal extrusion; fits BI-1021 connector.	11.37	10.23	9.10
BI-2071-3	3 ft. length BI-2071	3.30	2.97	2.64
BI-2071-6	6 ft. length BI-2071	6.30	5.67	5.04
BI-2071-9	9 ft. length BI-2071	9.00	8.10	7.20
BI-2031	12 ft. long, 22½° internal extrusion; fits BI-1013 connector.	11.37	10.23	9.10
BI-2031-3	3 ft. length BI-2031	3.30	2.97	2.64
BI-2031-6	6 ft. length BI-2031	6.30	5.67	5.04
BI-2031-9	9 ft. length BI-2031	9.00	8.10	7.20

SPACER BAR AND TABLE-TOP EXTRUSIONS

BI-2008	12 ft. long, spacer bar extrusion used to subdivide panels or act as cross-bracing members.	$20.33	$18.30	$16.26
BI-2008-3	3 ft. length BI-2008	5.85	5.27	4.68
BI-2008-6	6 ft. length BI-2008	11.18	10.06	8.94
BI-2008-9	9 ft. length BI-2008	16.13	14.52	12.90
BI-2009	12 ft. long, table-top extrusion for use at base of cabinet, as vertical member where double radius between cabinets is undesirable. Has flange with normal retaining groove; other is 1" deep to support table or bench top.	10.25	9.23	8.20
BI-2009-3	3 ft. length BI-2009	3.00	2.70	2.40
BI-2009-6	6 ft. length BI-2009	5.70	5.13	4.56
BI-2009-9	9 ft. length BI-2009	8.10	7.29	6.48

EXTERNAL SPACER BAR CONNECTORS

Bud No.	Description	Net Each, Lots of 1-14	15-24	25 Up
BI-1011	This connector specially designed for use with 90° external heavy duty extrusion BI-2034. One leg fits this extrusion as well as all other 90° external extrusions. The other two legs fit BI-2008.	$1.35	$1.22	$1.08
BI-1018	67½° external spacer bar connector; brace or sub-divide walls where BI-1016 is used at corners. One leg fits BI-2041; other two fit any spacer bar extrusion.	1.35	1.22	1.08
BI-1026	60° version of BI-1018. One leg fits BI-2081; other two fit any spacer bar extrusion.	1.35	1.22	1.08
BI-1007	45° version of BI-1018. One leg fits BI-2005, BI-2015 or BI-2025; other two fit any spacer bar extrusion.	1.35	1.22	1.08
BI-1022	30° version of BI-1018. One leg fits BI-2061 extrusion; other two fit any spacer bar extrusion.	1.35	1.22	1.08
BI-1014	22½° version of BI-1018. One leg fits BI-2021; other two fit any spacer bar extrusion.	1.35	1.22	1.08

INTERNAL CORNER CONNECTORS

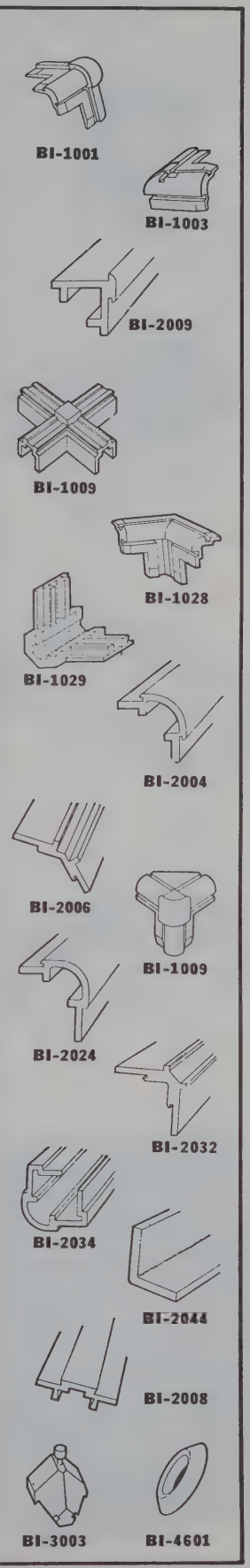
BI-1028	90° internal connector gives an included angle of 90° for L-shaped structures. One leg fits BI-2032 extrusion; other two fit any 90° external extrusion, (BI-2004, BI-2014, BI-2024, BI-2034, BI-2054).	$1.35	$1.22	$1.08
BI-1017	67½° internal connector used where two walls are to meet to include a 67½° angle. One leg fits BI-2051 extrusion; other two fit any 90° external extrusion.	1.35	1.22	1.08
BI-1025	60° version of BI-1017. One leg fits BI-2091; other two fit any 90° external extrusion.	1.35	1.22	1.08
BI-1006	45° version of BI-1017. One leg fits BI-2006; other two fit any 90° external extrusion. Helps make flat top, sloping front structure.	1.26	1.13	1.01
BI-1021	30° version of BI-1017. One leg fits BI-2071; other two fit any 90° external extrusion.	1.35	1.22	1.08
BI-1013	22½° version of BI-1017. One leg fits BI-2031; other two fit any 90° external extrusion.	1.35	1.22	1.08

INTERNAL SPACER BAR CONNECTORS

BI-1029	90° internal spacer connector permits bracing or sub-division of spans of BI-2032. One leg fits BI-2032 internal extrusion; other two fit BI-2008 spacer bar extrusion.	$1.35	$1.22	$1.08
BI-1019	67½° internal spacer bar connector is companion to BI-1017 for sub-dividing or cross-bracing. One leg fits BI-2051; other two fit any spacer bar extrusion.	1.35	1.22	1.08
BI-1027	60° version of BI-1019 above; companion for BI-1025. One leg fits BI-2091; other two fit any spacer bar extrusion.	1.35	1.22	1.08
BI-1010	45° version of BI-1019; companion for BI-1006. One leg fits BI-2006; other two fit any spacer bar extrusion.	1.35	1.22	1.08
BI-1023	30° version of BI-1019; companion to BI-1021. One leg fits BI-2071; other two fit any spacer bar extrusion.	1.35	1.22	1.08
BI-1015	22½° version of BI-1019; companion to BI-1013. One leg fits BI-2031; other two fit any spacer bar extrusion.	1.35	1.22	1.08

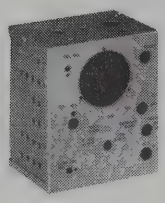
CUTTING JIGS

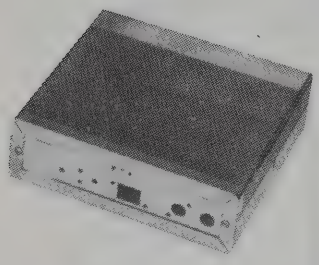
Bud No.	Description	Net Each, Lots of 1-4	5-9	10 Up
BI-3003	90° cutting jig permits easy mitering of any 90° external extrusion. Makes assembly quick, easy.	$15.80	$14.22	$12.64
BI-3002	45° cutting jig for mitering any 45° external extrusion.	15.80	14.22	12.64

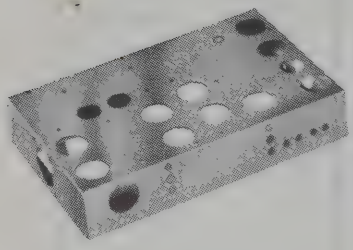


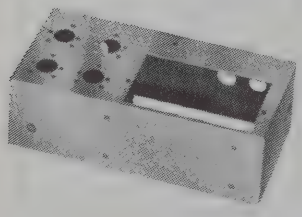
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SPECIAL FABRICATION SERVICE

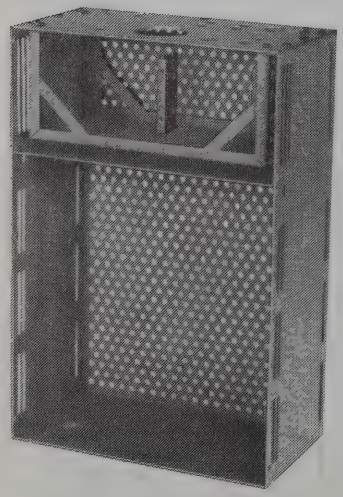


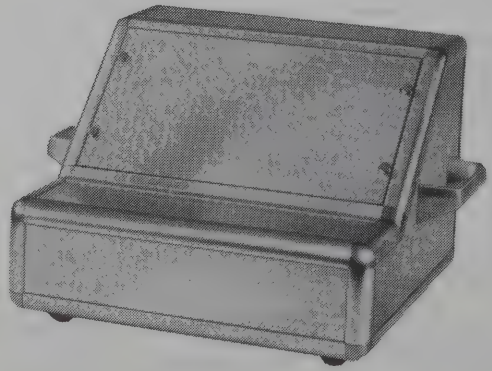


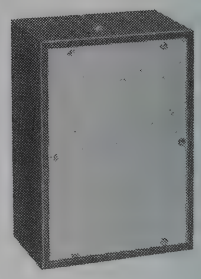


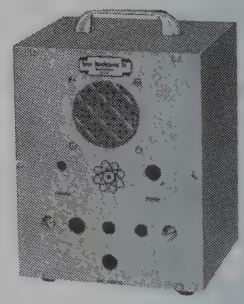


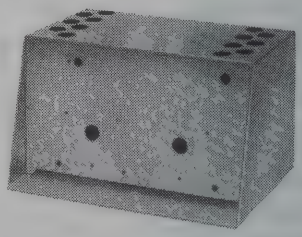














Consult your local Authorized Bud Distributor about your special enclosure problems. In reality, he is an extension of the factory's engineering department and can recommend the proper design and size for your equipment. His advice will save you time and money.

These are the services we perform:

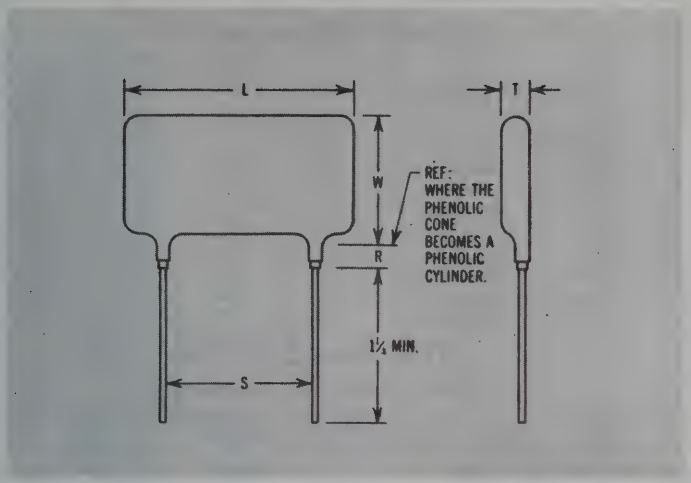
1. Modification of our standard products.
2. Specially punched panels, chassis and boxes.
3. Standard construction employing steel or aluminum.
4. Special construction employing the Imlok system of aluminum extrusions, castings and sheets.
5. Original designs based upon your circuitry requirements.

Bud can supply you with a pilot model or a production run. Our more than 35 years of experience in the electronic industry assures you that we can readily understand your problems and solve them economically. 112,000 sq. ft. of completely integrated plant facilities — from engineering, tooling and fabrication to painting, assembly and packaging insure quick delivery. Almost every type of industry, branches of the armed forces, the Space Agency and the Nuclear Energy Commission use Bud products.

Whenever a special sheet metal enclosure is required, call in your local Authorized Bud Distributor. He is anxious to cooperate with you.

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ELMENCO CAPACITORS — DIMENSIONAL DATA



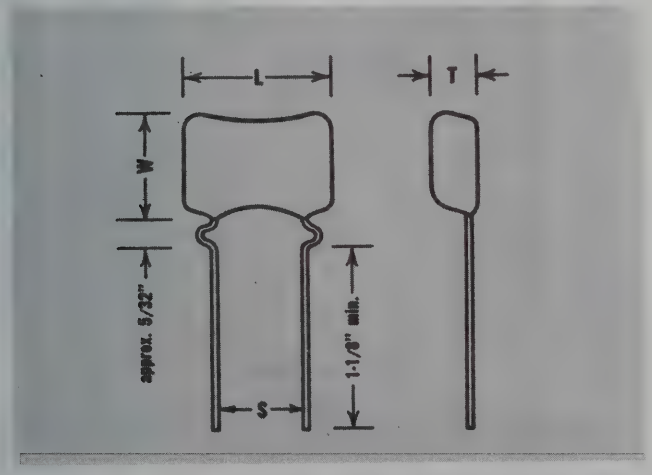
	DM-10	DM-15	DM-16	DM-19	DM-20	DM-30	DM-42	DM-43
R MAX.	1/8	1/8	1/8	5/64	5/64	11/64	11/64	11/64
S ±1/32	5/64	13/64	1/2	11/32	7/16	7/16	1 1/16	1 11/16
LEAD WIRE GAGE	#26	#22	#22	#20	#20	#18	#18	#18

All Dur-Mica capacitor leads are tinned brass except the following which are copper-clad steel, 30% minimum conductivity:

DM-10, DM-42, and DM-43.
DM-19 and DM-20 — 3000 mmf. and above.
DM-30 — 10,000 mmf. and above.

Crimped Leads

In addition to the straight lead design, DM capacitors are also available with crimped leads for printed circuit application. The crimp provides a positive stop when capacitors are mounted. This prevents interference of resin coat on the leads with dip-solder operation, provides greater mounting uniformity, and elevates the components slightly above the surface of the board. The crimp lead design is not a regularly stocked item, but it is available to special order at a small fixed handling charge.



Lead wire gage for crimped lead units is the same as for straight lead capacitors with the exception of DM-15 and DM-16. Crimped lead gage of DM-15 and DM-16 is #20. The DM-10 case size is not available with crimped leads.

Maximum Dimensions

The following is a tabulation of maximum dimensions of the various DM case sizes. They have been specified to anticipate variations in coat thickness and minor protrusions on the surface. As a result, average dimensions of a given lot may be appreciably smaller than those listed.

It is to be noted that the leads are not centered in the thickness dimension as can be seen on the end view dimensional drawing. Construction of Elmenco Dur-Mica capacitors provides for leads to project from one surface of the mica stack, causing them in turn to extend from one edge of the capacitor. Regardless of case size and overall thickness, leads will always be within 1/16 to 3/32 from one of the capacitor surfaces. (Exclude SCDM).

Not all dimensions of every capacitance value are listed below. It has been found that size varies almost linearly with capacitance value. As a result, dimensions of values between those specified below should be determined by interpolation.

CASE SIZE	Cap. mmf.	Volt. VDCW	L max.	W max.	T max.
DM-10	10	500	.360	.330	.190
	50	500	.370	.340	.190
	100	500	.370	.350	.200
	150	500	.380	.360	.210
	250	500	.390	.380	.220
	300	300	.390	.380	.220
	390	100	.390	.380	.220
DM-15 (CM05)	10	500	.450	.360	.170
	100	500	.460	.360	.180
	200	500	.460	.380	.190
	300	500	.470	.390	.210
	500	500	.490	.420	.240
	560	300	.470	.390	.210
	680	300	.470	.390	.210
	820	300	.470	.400	.230
	1000	100	.490	.420	.240
DM-16	430	500	.730	.390	.210
	600	500	.740	.400	.220
	720	500	.740	.410	.230
	720	300	.730	.380	.200
	900	300	.740	.390	.220
	1300	300	.740	.390	.230
DM-19 (CM06)	100	500	.640	.500	.190
	500	500	.650	.510	.200
	1000	500	.650	.520	.220
	2000	500	.670	.530	.240
	3000	500	.680	.550	.280
	5000	500	.710	.590	.360
	6200	300	.690	.570	.330
	8200	100	.700	.580	.350
DM-20	680	500	.750	.510	.200
	1000	500	.750	.510	.200
	2000	500	.760	.520	.220
	3900	500	.780	.560	.300
	5600	500	.790	.570	.340
	6800	300	.790	.560	.320
	7500	100	.780	.560	.300
	10000	100	.790	.570	.340
DM-30 (CM07)	4300	500	.780	.860	.270
	6800	500	.780	.870	.300
	10000	500	.800	.890	.340
	15000	500	.810	.900	.390
	20000	500	.830	.920	.450
	20000	300	.810	.890	.370
	25000	300	.820	.910	.420
	30000	300	.830	.920	.460
	36000	100	.830	.920	.450
DM-42 (CM08)	20000	500	1.420	.870	.300
	30000	500	1.440	.890	.350
	50000	500	1.480	.920	.460
	62000	300	1.470	.920	.450
	82000	100	1.480	.920	.460
DM-43	50000	500	2.060	.900	.380
	68000	500	2.070	.910	.440
	75000	300	2.060	.900	.380
	100000	300	2.070	.910	.440
	130000	100	2.090	.930	.490

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ELMENCO CAPACITORS — DUR-MICA

SPACE-SAVER

TYPE SCDM THIN COAT DUR-MICA CAPACITORS (ELMENCO TYPE ICR)

In applications requiring the high performance characteristics of dipped mica capacitors where space is at a premium, the Type SCDM reduced coat ELMENCO capacitors may often be used to advantage. A single protective resin coat is applied instead of the full series of dips incorporated in the standard unit. The amount of coat material is thereby reduced to a minimum consistent with good design, and a significant reduction of all dimensions is achieved.

All electrical and environmental requirements of MIL-C-5 are retained with the exception of case insulation (3.5.3) and moisture resistance (3.14). A maximum voltage stress of 100 VDC through the case insulation is recommended for SCDM units. Although some lots of this type capacitor will not meet stringent MIL moisture resistance specifications, all will meet the humidity requirements of Paragraph 2.3.6 of EIA Standard RS-153. Therefore, the SCDM capacitors will operate with satisfaction where they will not be exposed to extensive periods of high humidity. It is recommended that if these capacitors are destined for operation under extreme environmental conditions, they should be given additional moisture protection such as encapsulation or hermetic sealing of the assembly.

Prices for the Type SCDM are the same as for the standard production units of equivalent value.

TYPE SCDM SINGLE COAT

CASE SIZE	Cap. mmf.	Volt. VDCW	L max.	W max.	T max.
SCDM10	10	500	.310	.230	.120
	100	500	.320	.230	.130
	180	500	.330	.240	.150
	250	500	.340	.250	.160
	300	300	.340	.250	.160
	390	100	.340	.250	.160
SCDM15	10	500	.430	.280	.140
	100	500	.430	.280	.150
	270	500	.440	.300	.160
	510	500	.450	.310	.190
	560	300	.450	.310	.160
	820	300	.450	.310	.170
	1000	100	.450	.310	.170
SCDM19	100	500	.610	.450	.130
	1000	500	.620	.460	.160
	3000	500	.630	.470	.230
	5100	500	.660	.500	.320
	5600	300	.640	.480	.250
	6800	300	.640	.490	.270
	8200	100	.650	.490	.300

TYPE DM-10

500VDCW

(SCDM10 values and prices the same)

CAP. MMF.	PART NUMBER	Net Price (1-24) Tolerance ±10% "K"	±5% "J"	±2% "G"	±1% "F"
1	DM-10-010§	$0.18			
2	DM-10-020§	.18			
3	DM-10-030§	.18			
5	DM-10-050§	.18			
10	DM-10-100	.18	$0.27		
12	DM-10-120	.21	.27		
15	DM-10-150	.21	.27		
18	DM-10-180	.21	.27		
20	DM-10-200	.21	.23		
22	DM-10-220	.21	.23		
24	DM-10-240	.21	.23		
27	DM-10-270	.21	.23	$0.38	
30	DM-10-300	.21	.23	.38	
33	DM-10-330	.21	.23	.38	
36	DM-10-360	.21	.23	.38	
39	DM-10-390	.21	.23	.38	
43	DM-10-430	.21	.23	.38	
47	DM-10-470	.24	.26	.43	
50	DM-10-500	.24	.26	.43	$0.60
51	DM-10-510	.24	.26	.43	.60
56	DM-10-560	.24	.26	.43	.60
62	DM-10-620	.24	.26	.43	.60
68	DM-10-680	.24	.26	.43	.66
75	DM-10-750	.24	.26	.43	.66
82	DM-10-820	.24	.26	.43	.66
91	DM-10-910	.24	.26	.43	.66
100	DM-10-101	.24	.26	.43	.60
110	DM-10-111	.24	.26	.43	.60
120	DM-10-121	.27	.30	.50	.60
130	DM-10-131	.27	.30	.50	.60

DM-10 (Continued)

CAP. MMF.	PART NUMBER	Net Price (1-24) Tolerance ±10% "K"	±5% "J"	±2% "G"	±1% "F"
150	DM-10-151	.30	.33	.55	.66
160	DM-10-161	.33	.37	.61	.74
180	DM-10-181	.36	.40	.66	.80
200	DM-10-201	.36	.40	.66	.80
220	DM-10-221	.39	.43	.71	.86
240	DM-10-241	.42	.46	.76	.92
250	DM-10-251	.42	.46	.76	.92
270*	DM-10-271	.42	.46	.76	.92
300*	DM-10-301	.45	.50	.83	1.00
330**	DM-10-331	.45	.50	.83	1.00
360**	DM-10-361	.48	.53	.87	1.06
390**	DM-10-391	.51	.56	.92	1.12

TYPE DM-15 (CM05)

(SCDM15 values and prices the same)

CAP. MMF.	PART NUMBER	MIL-C-5 TYPE DESIGNATION	Net Price (1-24) Tolerance ±10% "K"	±5% "J"	±2% "G"	±1% "F"
1	DM-15-010†		$0.17			
2	DM-15-020†		.17			
3	DM-15-030†		.17			
5	DM-15-050†	CM-05-C-050K03†	.17			
6	DM-15-060	CM-05-C-060K03	.17			
7	DM-15-070	CM-05-C-070K03	.17			
8	DM-15-080	CM-05-C-080K03	.17			
10	DM-15-100	CM-05-C-100‡03	.15	$0.17		
12	DM-15-120	CM-05-C-120‡03	.15	.17		
15	DM-15-150	CM-05-C-150‡03	.15	.17		
18	DM-15-180	CM-05-C-180‡03	.15	.17		
20	DM-15-200	CM-05-E-200‡03	.15	.17		
22	DM-15-220	CM-05-E-220‡03	.15	.17		
24	DM-15-240	CM-05-E-240‡03	.15	.17		
27	DM-15-270	CM-05-E-270‡03	.15	.17	$0.24	
30	DM-15-300	CM-05-E-300‡03	.15	.17	.24	
33	DM-15-330	CM-05-E-330‡03	.15	.17	.24	
36	DM-15-360	CM-05-E-360‡03	.15	.17	.24	
39	DM-15-390	CM-05-E-390‡03	.15	.17	.24	
43	DM-15-430	CM-05-E-430‡03	.15	.17	.24	
47	DM-15-470	CM-05-E-470‡03	.15	.17	.24	
50	DM-15-500		.15	.17	.20	$0.29
51	DM-15-510	CM-05-E-510‡03	.15	.17	.20	.29
56	DM-15-560	CM-05-E-560‡03	.15	.17	.20	.29
62	DM-15-620	CM-05-E-620‡03	.15	.17	.20	.29
68	DM-15-680	CM-05-E-680‡03	.15	.17	.20	.29
75	DM-15-750	CM-05-E-750‡03	.15	.17	.20	.29
82	DM-15-820	CM-05-E-820‡03	.15	.17	.20	.29
91	DM-15-910	CM-05-F-910‡03	.15	.17	.20	.29
100	DM-15-101	CM-05-F-101‡03	.15	.17	.20	.29
110	DM-15-111	CM-05-F-111‡03	.18	.20	.23	.29
120	DM-15-121	CM-05-F-121‡03	.18	.20	.23	.29
130	DM-15-131	CM-05-F-131‡03	.18	.20	.23	.29
150	DM-15-151	CM-05-F-151‡03	.18	.20	.23	.29
160	DM-15-161	CM-05-F-161‡03	.21	.23	.28	.34
180	DM-15-181	CM-05-F-181‡03	.21	.23	.28	.34
200	DM-15-201	CM-05-F-201‡03	.21	.23	.28	.34
220	DM-15-221	CM-05-F-221‡03	.24	.26	.31	.38
240	DM-15-241	CM-05-F-241‡03	.24	.26	.31	.38
250	DM-15-251		.24	.26	.31	.38
270	DM-15-271	CM-05-F-271‡03	.27	.30	.35	.43
300	DM-15-301	CM-05-F-301‡03	.27	.30	.35	.43
330	DM-15-331	CM-05-F-331‡03	.30	.33	.39	.48
360	DM-15-361	CM-05-F-361‡03	.30	.33	.39	.48
390	DM-15-391	CM-05-F-391‡03	.33	.37	.43	.53
430	DM-15-431		.33	.37	.43	.53
470	DM-15-471		.36	.40	.47	.58
500	DM-15-501		.36	.40	.47	.58
510	DM-15-511		.36	.40	.47	.58
560*	DM-15-561		.39	.43	.51	.62
620*	DM-15-621		.42	.46	.55	.67
680*	DM-15-681		.45	.50	.59	.72
750*	DM-15-751		.48	.53	.62	.77
820*	DM-15-821		.51	.56	.67	.82
910**	DM-15-911		.57	.63	.74	.86
1000**	DM-15-102		.60	.66	.78	.96
1100**	DM-15-112		.69	.76	.90	1.10
1200**	DM-15-122		.78	.86	1.01	1.25

TYPE DM-16

500VDCW

Although not tabulated here, DM16 is available in capacitance values up through 1600 mmf. Most values are in stock. Write for price and delivery.

*300VDCW
**100VDCW
§Minimum tolerance ±1 mmf. Add 50% for ±0.5 mmf.
†Minimum tolerance ±0.5 mmf.
DM-10 and DM-15 "C" characteristic 1 through 18 mmf.
DM-10 and DM-15 "E" characteristic 20 through 82 mmf.
DM-10 and DM-15 "F" characteristic 91 mmf. and up.
All listed DM-16 are characteristic "F".
‡Insert appropriate letter designating capacitance tolerance.

NET (For quantities of 25 or more, please contact your local Arco-Elmenco Distributor)

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ELMENCO CAPACITORS — DUR-MICA

TYPE DM-19 (CM-06) 500VDCW

SCDM19 Values & Prices The Same

CAP. MMF.	PART NUMBER	TYPE DESIGNATION	Net Price (1-24) Tolerance ±10% "K"	±5% "J"	±2% "G"	±1% "F"
100	DM-19-101		$0.15	$0.17	$0.18	$0.23
110	DM-19-111		.18	.20	.22	.27
120	DM-19-121		.18	.20	.22	.27
130	DM-19-131		.18	.20	.22	.27
150	DM-19-151		.18	.20	.22	.27
160	DM-19-161		.18	.20	.22	.27
180	DM-19-181		.18	.20	.22	.27
200	DM-19-201		.18	.20	.22	.27
220	DM-19-221		.18	.20	.22	.27
240	DM-19-241		.21	.23	.25	.32
250	DM-19-251		.21	.23	.25	.32
270	DM-19-271		.24	.26	.29	.36
300	DM-19-301		.24	.26	.29	.36
330	DM-19-331		.24	.26	.29	.36
360	DM-19-361		.27	.30	.32	.41
390	DM-19-391		.27	.30	.32	.41
430	DM-19-431	CM-06-F-431‡03	.27	.30	.32	.41
470	DM-19-471	CM-06-F-471‡03	.30	.33	.36	.45
500	DM-19-501		.30	.33	.36	.45
510	DM-19-511	CM-06-F-511‡03	.30	.33	.36	.45
560	DM-19-561	CM-06-F-561‡03	.33	.37	.40	.50
620	DM-19-621	CM-06-F-621‡03	.33	.37	.40	.50
680	DM-19-681	CM-06-F-681‡03	.36	.40	.43	.54
750	DM-19-751	CM-06-F-751‡03	.36	.40	.43	.54
820	DM-19-821	CM-06-F-821‡03	.36	.40	.43	.54
910	DM-19-911	CM-06-F-911‡03	.39	.43	.47	.59
1000	DM-19-102	CM-06-F-102‡03	.42	.46	.51	.63
1100	DM-19-112	CM-06-F-112‡03	.42	.46	.51	.63
1200	DM-19-122	CM-06-F-122‡03	.45	.50	.54	.68
1300	DM-19-132	CM-06-F-132‡03	.48	.53	.58	.72
1500	DM-19-152	CM-06-F-152‡03	.51	.57	.62	.77
1600	DM-19-162	CM-06-F-162‡03	.54	.60	.65	.82
1800	DM-19-182	CM-06-F-182‡03	.60	.66	.72	.90
2000	DM-19-202	CM-06-F-202‡03	.66	.73	.79	.99
2200	DM-19-222	CM-06-F-222‡03	.72	.79	.87	1.08
2400	DM-19-242	CM-06-F-242‡03	.78	.86	.94	1.17
2500	DM-19-252		.81	.89	.97	1.23
2700	DM-19-272	CM-06-F-272‡03	.84	.92	1.01	1.26
3000	DM-19-302	CM-06-F-302‡03	.90	.99	1.08	1.35
3300	DM-19-332	CM-06-F-332‡03	.96	1.06	1.15	1.44
3600	DM-19-362	CM-06-F-362‡03	1.02	1.12	1.23	1.53
3900	DM-19-392	CM-06-F-392‡03	1.08	1.19	1.30	1.62
4300	DM-19-432	CM-06-F-432‡03	1.14	1.26	1.37	1.71
4700	DM-19-472	CM-06-F-472‡03	1.20	1.32	1.44	1.80
5000	DM-19-502		1.26	1.39	1.51	1.89
5100	DM-19-512		1.26	1.39	1.51	1.89
5600*	DM-19-562		1.32	1.45	1.58	1.89
6200*	DM-19-622		1.38	1.52	1.66	2.07
6800**	DM-19-682		1.38	1.52	1.66	2.07
7500**	DM-19-752		1.44	1.58	1.73	2.16
8200**	DM-19-822		1.50	1.65	1.80	2.25

TYPE DM-20 500VDCW

680	DM-20-681	$0.30	$0.33	$0.36	$0.45
750	DM-20-751	.30	.33	.36	.45
820	DM-20-821	.30	.33	.36	.45
910	DM-20-911	.33	.37	.40	.50
1000	DM-20-102	.36	.40	.43	.54
1100	DM-20-112	.36	.40	.43	.54
1200	DM-20-122	.39	.43	.47	.59
1300	DM-20-132	.42	.46	.50	.63
1500	DM-20-152	.45	.50	.54	.68
1600	DM-20-162	.48	.53	.58	.72
1800	DM-20-182	.54	.59	.65	.81
2000	DM-20-202	.57	.63	.68	.86
2200	DM-20-222	.63	.70	.76	.95
2400	DM-20-242	.66	.73	.79	.99
2500	DM-20-252	.66	.73	.79	.99
2700	DM-20-272	.72	.79	.86	1.08
3000	DM-20-302	.78	.86	.94	1.17
3300	DM-20-332	.84	.92	1.01	1.26
3600	DM-20-362	.90	.99	1.08	1.35
3900	DM-20-392	.96	1.06	1.15	1.44
4300	DM-20-432	1.02	1.12	1.22	1.53
4700	DM-20-472	1.08	1.19	1.30	1.62
5000	DM-20-502	1.14	1.25	1.37	1.71
5100	DM-20-512	1.17	1.29	1.40	1.76
5600	DM-20-562	1.20	1.32	1.44	1.80
6200*	DM-20-622	1.20	1.32	1.44	1.80
6800*	DM-20-682	1.26	1.39	1.51	1.89
7500**	DM-20-752	1.32	1.45	1.58	1.98
8200**	DM-20-822	1.44	1.58	1.73	2.16
9100**	DM-20-912	1.62	1.78	1.94	2.43
10000**	DM-20-103	1.80	1.98	2.16	2.70

Notes: Higher DM-20 values are available on special order as follows: up to 10,000 mmf. at 500VDCW, up to 12,000 mmf. at 300VDCW, up to 18,000 mmf. at 100VDCW. Characteristics of DM-19 and DM-20 are as follows: C characteristic 1 to 180 mmf. E characteristic 200 to 510 mmf. F characteristic 560 and up. For ±½% double the list price of the 5% units.

TYPE DM-30 (CM-07) 500VDCW

CAP. MMF.	PART NUMBER	TYPE DESIGNATION	Net Price (1-24) Tolerance ±10% "K"	±5% "J"	±2% "G"	±1% "F"
4300	DM-30-432		$0.96	$1.06	$1.15	$1.25
4700	DM-30-472		1.02	1.12	1.22	1.33
5000	DM-30-502		1.05	1.16	1.26	1.37
5100	DM-30-512	CM-07-F-512‡03	1.05	1.16	1.26	1.37
5600	DM-30-562	CM-07-F-562‡03	1.08	1.19	1.30	1.40
6200	DM-30-622	CM-07-F-622‡03	1.14	1.25	1.37	1.48
6800	DM-30-682	CM-07-F-682‡03	1.26	1.39	1.51	1.64
7500	DM-30-752	CM-07-F-752‡03	1.38	1.52	1.66	1.79
8200	DM-30-822	CM-07-F-822‡03	1.50	1.65	1.80	1.95
9100	DM-30-912	CM-07-F-912‡03	1.62	1.78	1.94	2.11
10000	DM-30-103	CM-07-F-103‡03	1.80	1.98	2.16	2.34
11000	DM-30-113	CM-07-F-113‡03	1.95	2.15	2.34	2.54
12000	DM-30-123	CM-07-F-123‡03	2.10	2.31	2.52	2.73
13000	DM-30-133	CM-07-F-133‡03	2.25	2.48	2.70	2.93
15000	DM-30-153	CM-07-F-153‡03	2.55	2.81	3.06	3.32
16000	DM-30-163	CM-07-F-163‡03	2.70	2.97	3.24	3.51
18000	DM-30-183	CM-07-F-183‡03	3.00	3.30	3.60	3.90
20000	DM-30-203	CM-07-F-203‡03	3.30	3.63	3.96	4.29
22000*	DM-30-223		3.42	3.76	4.10	4.45
24000*	DM-30-243		3.69	4.06	4.43	4.80
25000*	DM-30-253		3.84	4.22	4.61	4.99
27000*	DM-30-273		4.11	4.52	4.93	5.35
30000*	DM-30-303		4.50	4.95	5.40	5.85
33000**	DM-30-333		4.95	5.45	5.94	6.44
36000**	DM-30-363		5.40	5.94	6.48	7.02

TYPE DM-42 (CM-08) 500VDCW

10000	DM-42-103		$2.25	$2.48	$2.70
12000	DM-42-123		2.64	2.90	3.17
13000	DM-42-133		2.76	3.04	3.31
15000	DM-42-153		3.12	3.43	3.74
16000	DM-42-163		3.36	3.70	4.03
18000	DM-42-183		3.66	4.03	4.39
20000	DM-42-203		3.96	4.36	4.75
22000	DM-42-223	CM-08-F-223‡03	4.29	4.72	5.15
24000	DM-42-243	CM-08-F-243‡03	4.68	5.15	5.62
25000	DM-42-253		4.80	5.28	5.76
27000	DM-42-273	CM-08-F-273‡03	5.19	5.71	6.23
30000	DM-42-303	CM-08-F-303‡03	5.67	6.24	6.80
33000	DM-42-333	CM-08-F-333‡03	6.15	6.77	7.38
36000	DM-42-363	CM-08-F-363‡03	6.75	7.43	8.10
39000	DM-42-393	CM-08-F-393‡03	7.20	7.92	8.64
43000	DM-42-433	CM-08-F-433‡03	7.80	8.58	9.36
47000	DM-42-473	CM-08-F-473‡03	8.40	9.24	10.08
50000	DM-42-503		8.85	9.74	10.62
51000	DM-42-513		9.00	9.90	10.80
51000*		CM-08-F-513‡03	7.92	8.71	9.50
56000*	DM-42-563	CM-08-F-563‡03	8.58	9.44	10.30
62000*	DM-42-623	CM-08-F-623‡03	9.30	10.23	11.16
68000**	DM-42-683		9.00	9.90	10.80
75000**	DM-42-753		9.60	10.56	11.52
82000**	DM-42-823		10.20	11.22	12.24

TYPE DM-43 500VDCW

47000	DM-43-473	
50000	DM-43-503	
51000	DM-43-513	
56000	DM-43-563	
62000	DM-43-623	
68000	DM-43-683	
75000*	DM-43-753	Prices on Request
82000*	DM-43-823	
91000*	DM-43-913	
100000*	DM-43-104	
110000**	DM-43-114	
120000**	DM-43-124	
130000**	DM-43-134	

All capacities marked with * are 300WV.

All capacities marked with ** are 100WV.

All capacities listed above, in DM-30, DM-42 and DM-43 case sizes are "F" characteristic.

For ±½% tolerance, double the ±5% list price.

‡Tolerance designation in part number. Insert the proper letter signifying capacitance tolerance required (See table on page 7).

NET (For quantities of 25 or more, please contact your local Arco-Elmenco distributor)

481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351

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ELMENCO CAPACITORS — High Voltage Dur-Mica

A new line of ELMENCO Silvered Hi-Voltage Dur-Mica capacitors is now available to complement the similar values in the molded configuration. These high voltage capacitors afford the same facility of use in low power applications by providing reliable operation in a small case size. Elmenco Dur-Mica capacitors may be substituted for similarly rated molded units normally supplied in the larger CM45, CM50, CM55, and CM60 case sizes.

The Dur-Mica design provides advantage of higher temperature operation (125°C. max.); radial leads for printed circuit application; higher capacitance in a given case size; and improved reliability. The dipped units, being solidly impregnated with corona resistant material, do not have the voids which make molded types susceptible to corona. As a result, the dipped capacitors can be supplied with voltage rating as high as 5000VDCW.

All Elmenco Dur-Mica capacitors are silvered mica construction. They conform to electrical and environmental specifications set forth in MIL-C-5 specifications.

The physical configuration of these capacitors is the same as for the standard DM units. This information is found on page 8. The only difference is that for a given capacitance value case dimensions will be larger for higher voltage ratings because the mica is thicker. The maximum case dimensions for each of the case sizes indicated below is the same as the maximums indicated in the tabulation.

VDM-20 HI-VOLTAGE

TOLERANCE ±5%

CAP. MMF.	TYPE DESIGNATION	VDC 2000T 1000W NET	VDC 3000T 1500W NET	VDC 5000T 2500W NET
5	VDM-20-050K			$0.18
10	VDM-20-100J	USE	USE	.18
12	VDM-20-120J	2500V	2500V	.18
15	VDM-20-150J			.18
18	VDM-20-180J		.18	.21
20	VDM-20-200J		.18	.21
22	VDM-20-220J		.18	.21
24	VDM-20-240J		.18	.21
27	VDM-20-270J	USE	.18	.21
30	VDM-20-300J	1500V	.18	.21
33	VDM-20-330J		.18	.21
36	VDM-20-360J		.18	.21
39	VDM-20-390J		.18	.21
43	VDM-20-430J	.18	.21	.24
47	VDM-20-470J	.18	.21	.27
50	VDM-20-500J	.18	.21	.27
51	VDM-20-510J	.18	.21	.27
56	VDM-20-560J	.18	.21	.27
62	VDM-20-620J	.18	.21	.30
68	VDM-20-680J	.18	.21	.30
75	VDM-20-750J	.18	.21	.30
82	VDM-20-820J	.18	.24	.33
91	VDM-20-910J	.18	.24	.36
100	VDM-20-101J	.21	.24	.36
110	VDM-20-111J	.21	.24	.39
120	VDM-20-121J	.21	.24	.39
130	VDM-20-131J	.21	.27	.42
150	VDM-20-151J	.21	.27	.45
160	VDM-20-161J	.21	.27	.48
180	VDM-20-181J	.21	.30	.51
200	VDM-20-201J	.24	.30	.57
220	VDM-20-221J	.24	.33	.60
240	VDM-20-241J	.24	.33	.63
250	VDM-20-251J	.24	.36	.66
270	VDM-20-271J	.24	.36	.72
300	VDM-20-301J	.24	.36	.78
330	VDM-20-331J	.24	.39	.84
360	VDM-20-361J	.24	.39	.90
390	VDM-20-391J	.27	.42	
430	VDM-20-431J	.27	.45	
470	VDM-20-471J	.27	.48	
500	VDM-20-501J	.30	.51	
510	VDM-20-511J	.30	.51	
560	VDM-20-561J	.30	.54	
620	VDM-20-621J	.33	.60	
680	VDM-20-681J	.36	.66	
750	VDM-20-751J	.36	.72	
820	VDM-20-821J	.39	.78	
910	VDM-20-911J	.42	.84	
1000	VDM-20-102J	.42	.90	
1100	VDM-20-112J	.45	.96	
1200	VDM-20-122J	.48	1.02	
1300	VDM-20-132J	.51	1.08	
1500	VDM-20-152J	.54		
1600	VDM-20-162J	.57		
1800	VDM-20-182J	.60		
2000	VDM-20-202J	.66		
2200	VDM-20-222J	.72		
2400	VDM-20-242J	.78		
2700	VDM-20-272J	.87		
3000	VDM-20-302J	.96		

VDM-30 HI-VOLTAGE

TOLERANCE ±5%

CAP. MMF.	TYPE DESIGNATION	VDC 2000T 1000W NET	VDC 3000T 1500W NET	VDC 5000T 2500W NET
390	VDM-30-391J			$0.72
430	VDM-30-431J			.78
470	VDM-30-471J			.84
500	VDM-30-501J			.90
510	VDM-30-511J			.90
560	VDM-30-561J			.96
620	VDM-30-621J		USE	1.02
680	VDM-30-681J		CASE	1.08
750	VDM-30-751J		VDM-20	1.14
820	VDM-30-821J			1.20
910	VDM-30-911J	USE		1.29
1000	VDM-30-102J	CASE		1.38
1100	VDM-30-112J	VDM-20		1.50
1200	VDM-30-122J			1.65
1300	VDM-30-132J			1.80
1500	VDM-30-152J		1.20	2.10
1600	VDM-30-162J		1.32	2.25
1800	VDM-30-182J		1.44	2.58
2000	VDM-30-202J		1.56	2.94
2200	VDM-30-222J		1.68	3.30
2400	VDM-30-242J		1.89	3.66
2700	VDM-30-272J		1.98	4.20
3000	VDM-30-302J		2.16	
3300	VDM-30-332J	1.20	2.34	
3600	VDM-30-362J	1.32	2.52	
3900	VDM-30-392J	1.38	2.70	
4300	VDM-30-432J	1.50	2.88	
4700	VDM-30-472J	1.62	3.06	
5000	VDM-30-502J	1.80	3.24	
5100	VDM-30-512J	1.80	3.30	
5600	VDM-30-562J	1.86	3.60	
6200	VDM-30-622J	2.10	3.90	
6800	VDM-30-682J	2.34	4.20	
7500	VDM-30-752J	2.64		
8200	VDM-30-822J	3.00		
9100	VDM-30-912J	3.36		
10000	VDM-30-103J	3.72		

VDM-42 HI-VOLTAGE

CAP. MMF.	TYPE DESIGNATION	VDC 2000T 1000W	VDC 1500T 1500W	VDC 5000T 2500W
3000	VDM-42-302J			
3300	VDM-42-332J			
3600	VDM-42-362J			
3900	VDM-42-392J		USE	
4300	VDM-42-432J		VDM-30	
4700	VDM-42-472J		CASE	
5000	VDM-42-502J			
5100	VDM-42-512J			
5600	VDM-42-562J			
6200	VDM-42-622J			
6800	VDM-42-682J			
7500	VDM-42-752J			
8200	VDM-42-822J			
9100	VDM-42-912J			
10000	VDM-42-103J			
12000	VDM-42-123J		PRICING	
13000	VDM-42-133J		ON	
15000	VDM-42-153J		REQUEST	
16000	VDM-42-163J			
18000	VDM-42-183J			
20000	VDM-42-203J			
22000	VDM-42-223J			
24000	VDM-42-243J			
25000	VDM-42-253J			
27000	VDM-42-273J			
30000	VDM-42-303J			

VDM-43 HI-VOLTAGE

TOLERANCE ±5%

CAP. MMF.	TYPE DESIGNATION	
12000	VDM-43-123J	2500WV
13000	VDM-43-133J	↓
15000	VDM-43-153J	
20000	VDM-43-203J	15000WV
22000	VDM-43-223J	
24000	VDM-43-243J	PRICING
25000	VDM-43-253J	ON
27000	VDM-43-273J	REQUEST
30000	VDM-43-303J	
33000	VDM-43-333J	1000WV
36000	VDM-43-363J	
39000	VDM-43-393J	
43000	VDM-43-433J	
47000	VDM-43-473J	

SPECIAL HVDM-42 & HVDM-43 5000WV UNITS

CAP. MMF.	TYPE DESIGNATION	10000 VOLTS DC TEST 5000 VOLTS DC WKG.
5	HVDM-42-050K	
10	HVDM-42-100J	
12	HVDM-42-120J	
15	HVDM-42-150J	
18	HVDM-42-180J	
20	HVDM-42-200J	
22	HVDM-42-220J	
24	HVDM-42-240J	
27	HVDM-42-270J	
30	HVDM-42-300J	
33	HVDM-42-330J	
36	HVDM-42-360J	
39	HVDM-42-390J	
43	HVDM-42-430J	
47	HVDM-42-470J	
50	HVDM-42-500J	
51	HVDM-42-510J	
56	HVDM-42-560J	
62	HVDM-42-620J	
68	HVDM-42-680J	
75	HVDM-42-750J	
82	HVDM-42-820J	PRICING
91	HVDM-42-910J	ON
100	HVDM-42-101J	REQUEST
110	HVDM-42-111J	
120	HVDM-42-121J	
130	HVDM-42-131J	
150	HVDM-42-151J	
160	HVDM-42-161J	
180	HVDM-42-181J	
200	HVDM-42-201J	
220	HVDM-42-221J	
240	HVDM-42-241J	
250	HVDM-42-251J	
270	HVDM-42-271J	
300	HVDM-42-301J	
330	HVDM-42-331J	
360	HVDM-42-361J	
390	HVDM-42-391J	
430	HVDM-42-431J	
470	HVDM-42-471J	
500	HVDM-42-501J	
510	HVDM-42-511J	
560	HVDM-42-561J	
620	HVDM-42-621J	
680	HVDM-43-681J	
750	HVDM-43-751J	
820	HVDM-43-821J	
910	HVDM-43-911J	

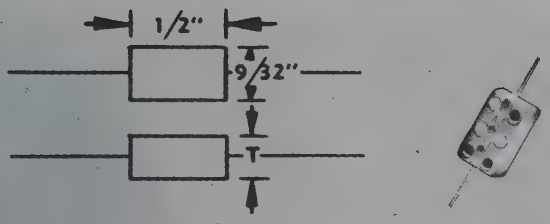
PLEASE SPECIFY WORKING VOLTAGE RATING WHEN ORDERING

Above prices are for Standard 5% Tolerance.
Closer Tolerances to ±1% available.
Pricing on request.

NET (For quantities of 25 or more, please contact your local Arco-Elmenco distributor)

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ELMENCO CAPACITORS — Molded Silvered Mica



T—from 1-300 mmf. 3/16"
T—from 310-510 mmf. 7/32"

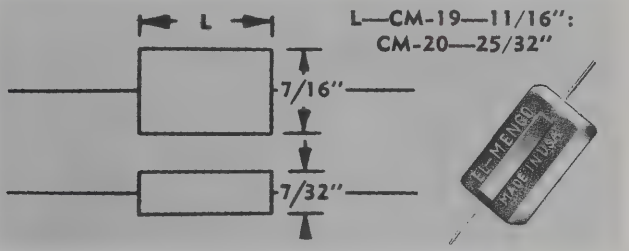
TYPE CM-15

500VDCW

CAP. MMF.	TYPE DESIGNATION	Net Price (1-24) Tolerance "J" ±5%	"E" ±2%	"F" ±1%
1	CM-15-C-010†	$0.18		
2	CM-15-C-020†	.18		
3	CM-15-C-030†	.18		
5	CM-15-C-050†	.18		
10	CM-15-C-100	.18		
12	CM-15-C-120	.18		
15	CM-15-C-150	.18		
18	CM-15-C-180	.18		
20	CM-15-C-200	.18		
22	CM-15-C-220	.18		
24	CM-15-E-240	.18		
27	CM-15-E-270	.18	$0.25	
30	CM-15-E-300	.18	.25	
33	CM-15-E-330	.18	.25	
36	CM-15-E-360	.18	.25	
39	CM-15-E-390	.18	.25	
43	CM-15-E-430	.18	.25	
47	CM-15-E-470	.18	.25	
50	CM-15-E-500	.18	.25	$0.30
51	CM-15-E-510	.18	.25	.30
56	CM-15-E-560	.18	.25	.30
62	CM-15-E-620	.18	.25	.30
68	CM-15-E-680	.18	.25	.30
75	CM-15-E-750	.18	.25	.30
82	CM-15-E-820	.18	.25	.30
91	CM-15-E-910	.18	.25	.30
100	CM-15-E-101	.18	.25	.30
110	CM-15-E-111	.21	.25	.30
120	CM-15-E-121	.21	.25	.30
130	CM-15-E-131	.21	.25	.30
150	CM-15-E-151	.21	.25	.30
160	CM-15-E-161	.24	.29	.34
180	CM-15-E-181	.24	.29	.34
200	CM-15-E-201	.24	.29	.34
220	CM-15-E-221	.27	.32	.39
240	CM-15-E-241	.27	.32	.39
250	CM-15-E-251	.27	.32	.39
270	CM-15-E-271	.30	.36	.43
300	CM-15-E-301	.30	.36	.43
330	CM-15-E-331	.33	.40	.47
360	CM-15-E-361	.36	.43	.52
390	CM-15-E-391	.39	.47	.56
430	CM-15-E-431	.39	.45	.56
470	CM-15-E-471	.42	.50	.61
500	CM-15-E-501	.42	.50	.61
510	CM-15-E-511	.42	.50	.61
560**	CM-15-E-561	.42	.50	.61
620**	CM-15-E-621	.45	.54	.65
680**	CM-15-E-681	.48	.58	.69
750**	CM-15-E-751	.51	.61	.73
820**	CM-15-E-821	.54	.65	.78

† Capacities marked with † denote that closest tolerance is ±0.5 mmf.
* Voltage rating 300 VDCW.
** Voltage rating 100 VDCW.

SPECIFICATIONS NOTES:
±½% tolerance available above 100 mmf. at double ±5% list price.
CM-15, available "F" characteristic above 30 mmf.
CM-19, 20 available "E" characteristic above 110 mmf.
CM-19, 20 available "F" characteristic above 200 mmf.
All CM-30, 35, and 42 values listed are available in "F" characteristic.



TYPE CM-19 & 20

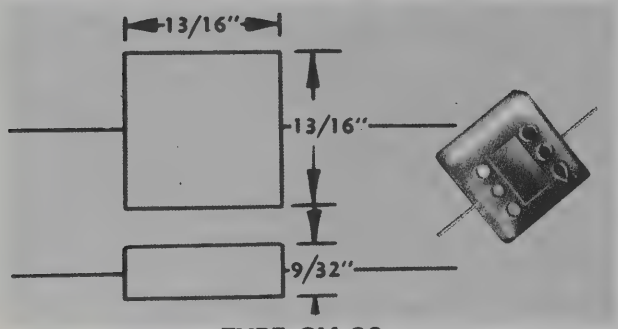
500VDCW

CAP. MMF.	TYPE DESIGNATION	Net Price (1-24) Tolerance "J" ±5%	"E" ±2%	"F" ±1%
5	CM-20-C-050†	$0.18		
10	CM-20-C-100	.18		
12	CM-20-C-120	.18		
15	CM-20-C-150	.18		
18	CM-20-C-180	.18		
20	CM-20-C-200	.18		
22	CM-20-C-220	.18		
24	CM-20-C-240	.18		
27	CM-20-C-270	.18	$0.23	
30	CM-20-C-300	.18	.23	
33	CM-20-C-330	.18	.23	
36	CM-20-C-360	.18	.23	
39	CM-20-C-390	.18	.23	
43	CM-20-C-430	.18	.23	
47	CM-20-C-470	.18	.23	
50	CM-20-C-500	.18	.23	$0.29
51	CM-20-C-510	.18	.23	.29
56	CM-20-C-560	.18	.23	.29
62	CM-20-C-620	.18	.23	.29
68	CM-20-C-680	.18	.23	.29
75	CM-20-C-750	.18	.23	.29
82	CM-20-C-820	.18	.23	.29
91	CM-20-C-910	.18	.23	.29
100	CM-20-C-101	.18	.23	.29
110	CM-20-C-111	.21	.23	.29
120	CM-20-C-121	.21	.23	.29
130	CM-20-C-131	.21	.23	.29
150	CM-20-C-151	.21	.23	.29
160	CM-20-C-161	.21	.23	.29
180	CM-20-C-181	.21	.23	.29
200	CM-20-D-201	.21	.23	.29
220	CM-20-D-221	.21	.23	.29
240	CM-20-D-241	.24	.26	.34
250	CM-20-D-251	.24	.26	.34
270	CM-20-D-271	.24	.26	.34
300	CM-20-D-301	.24	.26	.34
330	CM-20-D-331	.24	.26	.34
360	CM-20-D-361	.24	.26	.34
390	CM-20-D-391	.27	.30	.38
430	CM-20-D-431	.27	.30	.38
470	CM-20-D-471	.27	.30	.38
500	CM-20-D-501	.30	.33	.42
510	CM-20-D-511	.30	.33	.42
560	CM-20-D-561	.30	.33	.42
620	CM-20-D-621	.33	.37	.46
680	CM-20-D-681	.36	.40	.50
750	CM-20-D-751	.36	.40	.50
820	CM-20-D-821	.39	.43	.55
910	CM-20-D-911	.42	.46	.59
1000	CM-20-E-102	.42	.46	.59
1100	CM-20-E-112	.45	.50	.63
1200	CM-20-E-122	.48	.53	.67
1300	CM-20-E-132	.48	.53	.67
1500	CM-20-E-152	.51	.56	.71
1600	CM-20-E-162	.54	.59	.76
1800	CM-20-E-182	.60	.66	.84
2000	CM-20-E-202	.66	.73	.92
2200	CM-20-E-222	.72	.79	1.01
2400	CM-20-E-242	.75	.83	1.05
2500	CM-20-E-252	.78	.86	1.09
2700	CM-20-E-272	.84	.92	1.18
3000	CM-20-E-302	.90	.99	1.26
3300	CM-20-E-332	.96	1.06	1.34
3600*	CM-20-E-362	1.02	1.12	1.43
3900*	CM-20-E-392	1.08	1.19	1.51
4300*	CM-20-E-432	1.14	1.25	1.60
4700*	CM-20-E-472	1.20	1.32	1.68
5000*	CM-20-E-502	1.26	1.39	1.76
5100*	CM-20-E-512	1.26	1.39	1.76

Capacities from 5 to 2400 mmf. can be supplied in CM-19 cases. In values above 1000 mmf. the list prices for CM-19 are 10% higher than those listed above.

NET (For quantities of 25 or more, please contact your local Arco-Elmenco distributor)

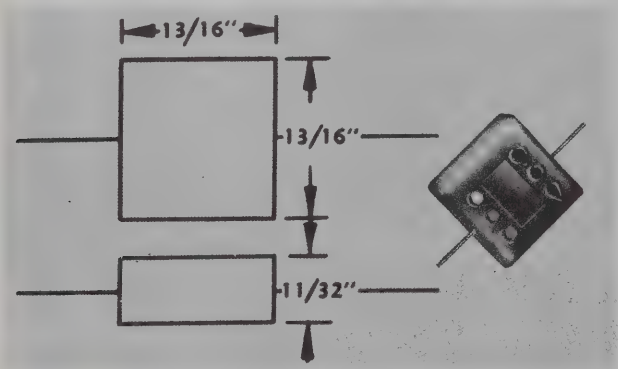
ELMENCO CAPACITORS — Molded Silvered Mica



TYPE CM-30

500VDCW

CAP. MMF.	TYPE DESIGNATION	Net Price (1-24) Tolerance "J" ±5%	"G" ±2%	"F" ±1%
510	CM-30-E-511	$0.33	$0.37	$0.40
560	CM-30-E-561	.36	.40	.43
620	CM-30-E-621	.36	.40	.43
680	CM-30-E-681	.39	.43	.47
750	CM-30-E-751	.39	.43	.47
820	CM-30-E-821	.42	.46	.50
910	CM-30-E-911	.42	.46	.50
1000	CM-30-E-102	.45	.50	.54
1100	CM-30-E-112	.45	.50	.54
1200	CM-30-E-122	.45	.50	.54
1300	CM-30-E-132	.48	.53	.58
1500	CM-30-E-152	.51	.56	.61
1600	CM-30-E-162	.51	.56	.61
1800	CM-30-E-182	.54	.59	.65
2000	CM-30-E-202	.60	.66	.72
2200	CM-30-E-222	.66	.73	.79
2400	CM-30-E-242	.72	.79	.86
2500	CM-30-E-252	.72	.79	.86
2700	CM-30-E-272	.78	.86	.94
3000	CM-30-E-302	.84	.92	1.01
3300	CM-30-E-332	.90	.99	1.08
3600	CM-30-E-362	.96	1.06	1.15
3900	CM-30-E-392	1.02	1.12	1.22
4300	CM-30-E-432	1.08	1.19	1.30
4700	CM-30-E-472	1.14	1.25	1.37
5000	CM-30-E-502	1.20	1.32	1.44
5100	CM-30-E-512	1.20	1.32	1.44
5600	CM-30-E-562	1.26	1.39	1.51
6200	CM-30-E-622	1.32	1.45	1.58

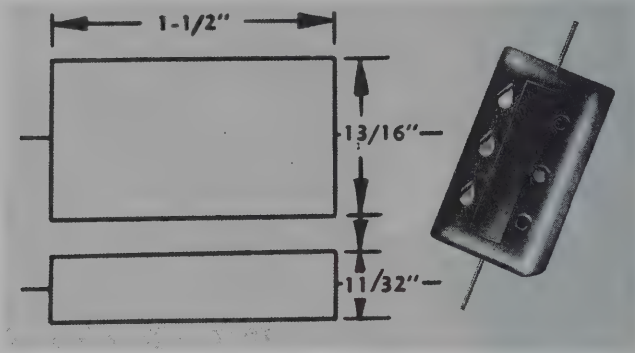


TYPE CM-35

CAP. MMF.	TYPE DESIGNATION	Net Price (1-24) Tolerance "J" ±5%	"G" ±2%	"F" ±1%
6800*	CM-35-E-682	$1.32	$1.45	$1.58
7500*	CM-35-E-752	1.44	1.58	1.73
8200*	CM-35-E-822	1.56	1.72	1.87
9100*	CM-35-E-912	1.68	1.85	2.02
10000*	CM-35-E-103	1.86	2.05	2.23
12000*	CM-35-E-123	2.16	2.38	2.59
15000*	CM-35-E-153	2.58	2.84	3.10
6800	VCM-35-E-682	1.44	1.58	1.73
7500	VCM-35-E-752	1.56	1.72	1.87
8200	VCM-35-E-822	1.68	1.85	2.02
9100	VCM-35-E-912	1.86	2.05	2.23
10000	VCM-35-E-103	2.04	2.24	2.45

All capacities marked with * are 300WV.

NOTE:—All above "SILVERED MICA" units can be supplied in "F" Characteristic at no extra cost. For ±½% Tolerance double the 5% list prices.



TYPE CM-42

500VDCW

CAP. MMF.	TYPE DESIGNATION	Net Price (1-24) Tolerance "J" ±5%	"G" ±2%	"F" ±1%
12000	CM-42-E-123	$2.82	$3.25	$3.53
13000	CM-42-E-133	3.06	3.52	3.83
15000	CM-42-E-153	3.48	4.00	4.35
16000	CM-42-E-163	3.72	4.28	4.65
18000	CM-42-E-183	4.14	4.76	5.18
20000	CM-42-E-203	4.56	5.24	5.70
22000	CM-42-E-223	4.98	5.73	6.23
24000	CM-42-E-243	5.40	6.21	6.75
25000	CM-42-E-253	5.64	6.49	7.05
27000*	CM-42-E-273	5.40	6.21	6.75
30000*	CM-42-E-303	5.64	6.49	7.05
33000*	CM-42-E-333	6.12	7.04	7.65
36000*	CM-42-E-363	6.84	7.87	8.55
39000*	CM-42-E-393	7.56	8.69	9.45

All capacities marked with * are 300VDCW.
For ±½% double the ±1% list price.

TYPES CM-25 & CM-40

Although CM-25 and CM-40 are not listed, they are still available and most items are in stock. Use CM-20 list prices for corresponding CM-25 values and CM-30 and CM-35 prices for comparable CM-40 values.

MICA CAPACITOR NOTES

Off standard capacitance values — non-standard values not listed in part number tabulations of molded and dipped mica capacitors are priced at next higher listed value and are subject to a $1.00 set-up charge per item.

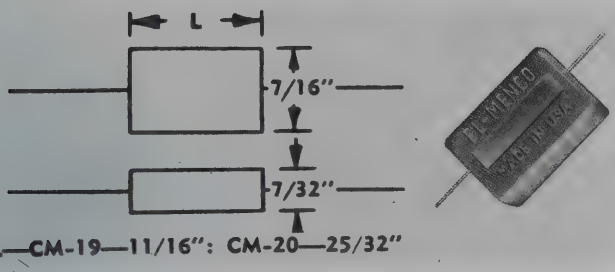
Minimum tolerance — Regardless of capacitance and percentage tolerance indicated, the minimum absolute capacitance tolerance normally supplied is ±0.5% mmf. It is ARCO standard practice to supply ±0.5 mmf. automatically on orders for ±5% or ±10% which calculate to less than ±0.5 mmf. If ±2% or ±1% tolerance is specified, customer is notified of deviation for approval. In some cases, decided individually depending upon capacitance value and current availability, we can provide ±0.25 mmf. at an added charge.

Source Inspection — Government Source Inspection is performed on MIL-C-5 capacitors, both dipped and molded, when specified. Prompt service is afforded on nearly all items from case size CM-05 to CM-40 inclusive.

NET (For quantities of 25 or more, please contact your local Arco-Elmenco distributor)

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ELMENCO CAPACITORS — Molded Foil Mica



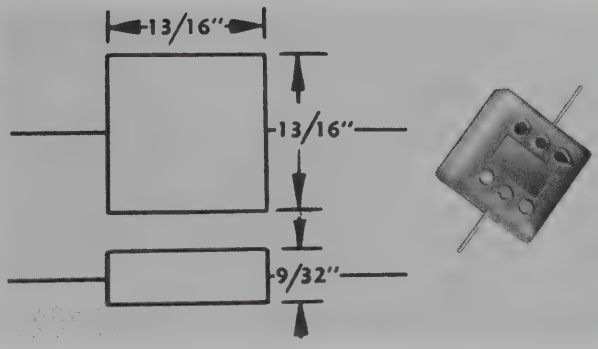
L—CM-19—11/16": CM-20—25/32"

TYPE CM-19 & 20

500VDCW

CAP. MMF.	TYPE DESIGNATION	Net Price (1-24) Tolerance "M" ±20%	"K" ±10%	"J" ±5%
5	CM-20-B-050	$0.18	$0.20	
10	CM-20-B-100	.18	.20	$0.23
12	CM-20-B-120	.18	.20	.23
15	CM-20-B-150	.18	.20	.23
18	CM-20-B-180	.18	.20	.23
20	CM-20-B-200	.18	.20	.23
22	CM-20-B-220	.18	.20	.23
24	CM-20-B-240	.18	.20	.23
27	CM-20-B-270	.18	.20	.23
30	CM-20-B-300	.18	.20	.23
33	CM-20-B-330	.12	.13	.15
36	CM-20-B-360	.12	.13	.15
39	CM-20-B-390	.12	.13	.15
43	CM-20-B-430	.12	.13	.15
47	CM-20-B-470	.12	.13	.15
50	CM-20-B-500	.12	.13	.15
51	CM-20-B-510	.12	.13	.15
56	CM-20-B-560	.12	.13	.15
62	CM-20-B-620	.12	.13	.15
68	CM-20-B-680	.12	.13	.15
75	CM-20-B-750	.12	.13	.15
82	CM-20-B-820	.12	.13	.15
91	CM-20-B-910	.12	.13	.15
100	CM-20-B-101	.12	.13	.15
110	CM-20-B-111	.12	.13	.15
120	CM-20-B-121	.12	.13	.15
130	CM-20-B-131	.15	.17	.19
150	CM-20-B-151	.15	.17	.19
160	CM-20-B-161	.15	.17	.19
180	CM-20-B-181	.15	.17	.19
200	CM-20-B-201	.15	.17	.19
220	CM-20-B-221	.15	.17	.19
240	CM-20-B-241	.18	.20	.23
250	CM-20-B-251	.18	.20	.23
270	CM-20-B-271	.18	.20	.23
300	CM-20-B-301	.18	.20	.23
330	CM-20-B-331	.18	.20	.23
360	CM-20-B-361	.18	.20	.23
390	CM-20-B-391	.18	.20	.23
430	CM-20-B-431	.18	.20	.23
470	CM-20-B-471	.18	.20	.23
500	CM-20-B-501	.18	.20	.23
510	CM-20-B-511	.18	.20	.23
560	CM-20-B-561	.21	.23	.26
620	CM-20-B-621	.21	.23	.26
680	CM-20-B-681	.21	.23	.26
750	CM-20-B-751	.21	.23	.26
820	CM-20-B-821	.24	.26	.30
910	CM-20-B-911	.27	.30	.34
1000	CM-20-B-102	.27	.30	.34
1100	CM-20-B-112	.30	.33	.38
1200	CM-20-B-122	.30	.33	.38
1300	CM-20-B-132	.30	.33	.38
1500	CM-20-B-152	.36	.40	.45
1600	CM-20-B-162	.36	.40	.45
1800	CM-20-B-182	.42	.46	.53
2000	CM-20-B-202	.45	.50	.56
2200	CM-20-B-222	.48	.53	.60
2400	CM-20-B-242	.51	.56	.64
2500	CM-20-B-252	.54	.59	.68
2700	CM-20-B-272	.57	.63	.71
3000	CM-20-B-302	.60	.66	.75
3300	CM-20-B-332	.63	.70	.79
3600*	CM-20-B-362	.60	.66	.75
3900*	CM-20-B-392	.63	.70	.79
4300*	CM-20-B-432	.66	.73	.83
4700*	CM-20-B-472	.72	.79	.90
5000*	CM-20-B-502	.75	.83	.94
5100*	CM-20-B-512	.75	.83	.94

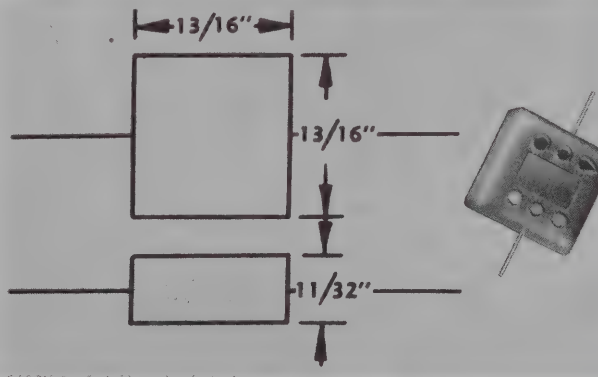
Capacities from 5 to 2400 mmf. can be supplied in CM-19 cases. In values above 1000 mmf. the list prices for CM-19 are 10% higher than those listed above.



TYPE CM-30

500VDCW

CAP. MMF.	TYPE DESIGNATION	Net Price (1-24) Tolerance "M" ±20%	"K" ±10%	"J" ±5%
510	CM-30-B-511	$0.18	$0.22	$0.23
560	CM-30-B-561	.18	.22	.23
620	CM-30-B-621	.18	.22	.23
680	CM-30-B-681	.18	.22	.23
750	CM-30-B-751	.18	.22	.23
820	CM-30-B-821	.18	.22	.23
910	CM-30-B-911	.18	.22	.23
1000	CM-30-B-102	.21	.23	.26
1100	CM-30-B-112	.21	.23	.26
1200	CM-30-B-122	.21	.23	.26
1300	CM-30-B-132	.21	.23	.26
1500	CM-30-B-152	.24	.26	.30
1600	CM-30-B-162	.24	.26	.30
1800	CM-30-B-182	.27	.30	.34
2000	CM-30-B-202	.27	.30	.34
2200	CM-30-B-222	.27	.30	.34
2400	CM-30-B-242	.30	.33	.38
2500	CM-30-B-252	.30	.33	.38
2700	CM-30-B-272	.30	.33	.38
3000	CM-30-B-302	.36	.40	.45
3300	CM-30-B-332	.36	.40	.45
3600	CM-30-B-362	.36	.40	.45
3900	CM-30-B-392	.39	.45	.51
4300	CM-30-B-432	.39	.45	.51
4700	CM-30-B-472	.39	.45	.51
5000	CM-30-B-502	.42	.49	.55
5100	CM-30-B-512	.42	.49	.55
5600	CM-30-B-562	.42	.49	.55
6200	CM-30-B-622	.54	.62	.70



TYPE CM-35

500VDCW

6800*	CM-35-B-682	$0.57	$0.63	$0.71
7500*	CM-35-B-752	.60	.66	.75
8200*	CM-35-B-822	.69	.76	.86
9100*	CM-35-B-912	.69	.76	.86
10000*	CM-35-B-103	.84	.92	1.05
12000*	CM-35-B-123	.96	1.06	1.20
15000*	CM-35-B-153	1.20	1.32	1.50
6800	VCM-35-B-682	.63	.70	.79
7500	VCM-35-B-752	.69	.76	.86
8200	VCM-35-B-822	.78	.86	.97
9100	VCM-35-B-912	.78	.86	.97
10000	VCM-35-B-103	.93	1.03	1.16

All capacities marked with * are 300WV.

NET (For quantities of 25 or more, please contact your local Arco-Elmenco Distributor)

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ELMENCO CAPACITORS — *Variable Compression Mica*

TRIMMERS

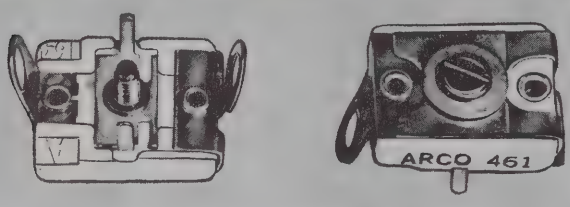
Elmenco Trimming Condensers are treated for resistance to humidity and for permanence of capacity setting.

The base is made of the lowest dielectric loss ceramic material available and the mica is clear India Ruby.

The soldering lugs may be bent in any position without affecting capacity setting due to the rigid construction of adjusting plates.

Trimmers shown here are standard sizes and capacities.

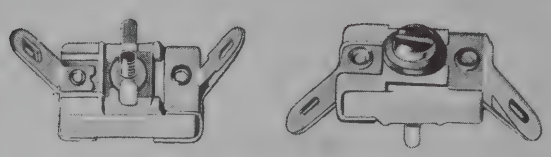
Voltage 350 VDCT — 175 VDCW.



TYPE 46 STANDARD TRIMMER ¾" x ⅝"

TYPE 46 — STANDARD TRIMMER

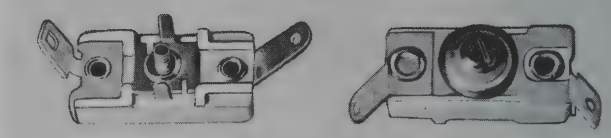
TYPE 46W		GUARANTEED RANGE			
PART NUMBER	NUMBER OF PLATES	At Tight Cap. Will Be More Than MMF.	At 3 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE	NET PRICE (1-24)
460	1¼ Pl.	15	1.5	$0.50	$0.30
461	1¾ Pl.	30	2.7	.50	.30
462	2 Pl.	80	5	.50	.30
463	3 Pl.	180	9	.55	.33
464	4 Pl.	280	25	.65	.39
465	5 Pl.	380	50	.70	.42
466	6 Pl.	480	80	.80	.48
467	7 Pl.	580	110	.90	.54
468	8 Pl.	680	140	.95	.57
469	9 Pl.	780	170	1.05	.63
4610	10 Pl.	900	190	1.20	.72
4611	11 Pl.	1000	210	1.30	.78
4612	12 Pl.	1100	240	1.40	.84
4613	13 Pl.	1200	300	1.55	.93
4614	14 Pl.	1300	340	1.70	1.02
4615	15 Pl.	1400	390	1.85	1.11



TYPE 40 MINIATURE TRIMMER ⅜" x 7/16"

TYPE 40 — MINIATURE TRIMMER

TYPE 40		GUARANTEED RANGE			
PART NUMBER	NUMBER OF PLATES	At Tight Cap. Will Be More Than MMF.	At 3 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE	NET PRICE (1-24)
400	1⅛ Pl.	7	0.9	$0.50	$0.30
402	2 Pl.	20	1.5	.50	.30
403	3 Pl.	35	3	.60	.36
404	4 Pl.	60	8	.65	.39

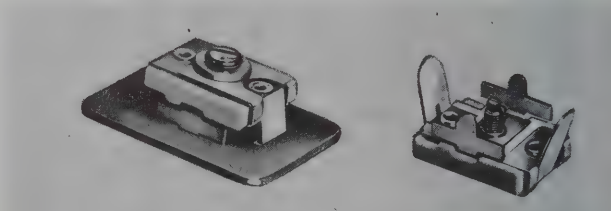


TYPE 42 MIDGET TRIMMER ⅜" x ¾"

TYPE 42 — MIDGET TRIMMER

TYPE 42		GUARANTEED RANGE			
PART NUMBER	NUMBER OF PLATES	At Tight Cap. Will Be More Than MMF.	At 3 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE	NET PRICE (1-24)
420	1⅛ Pl.	12	1	$0.50	$0.30
421	1¾ Pl.	25	2	.50	.30
422	2 Pl.	40	4	.50	.30
423	3 Pl.	100	7	.55	.33
424	4 Pl.	150	14	.65	.39
425	5 Pl.	200	24	.70	.42
426	6 Pl.	250	37	.80	.48
427	7 Pl.	300	55	.90	.54
428	8 Pl.	350	70	.95	.57
429	9 Pl.	400	90	1.05	.63
4210	10 Pl.	450	110	1.25	.75
4211	11 Pl.	500	130	1.40	.84
4212	12 Pl.	550	150	1.50	.90
4213	13 Pl.	600	170	1.65	.99
4214	14 Pl.	650	190	1.75	1.05
4215	15 Pl.	700	210	1.90	1.14

TYPE PC — PRINTED CIRCUIT TRIMMERS



The Elmenco Trimmer capacitors, Types 40, 42, and 46, have been adapted for printed circuit techniques through alteration of terminals and mounting configuration. The holes in the terminal lugs are removed since necessity for hook-up is eliminated. The resulting solid terminals have greatly increased spring action, allowing the trimmer to be "snapped in" the printed circuit board and firmly held until solderd. The mounting lug portion of the trimmer has also been modified to facilitate positioning and support of the unit. Drawings of the trippers and mounting layout are available upon request at no charge.

This printed circuit style is identified by the prefix letters "PC" preceding the regular part number. All listed values are available in the PC style.

For list price add $0.05, for net price add $0.03, to the respective prices of the standard trimmer.

NET (For quantities of 25 or more, please contact your local Arco-Elmenco Distributor)

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ELMENCO CAPACITORS — Variable Compression Mica

SINGLE AND DUAL
PADDERS

ELMENCO Padding Condensers have been acclaimed by engineers as the finest development in adjustable mica condensers.

The construction is such as to completely enclose and protect the delicate edges of the mica films, made of the finest quality clear India ruby mica.

The phosphor bronze adjusting plates assure permanent resilience and freedom from mechanical fatigue. All parts are heavily plated to resist corrosion.

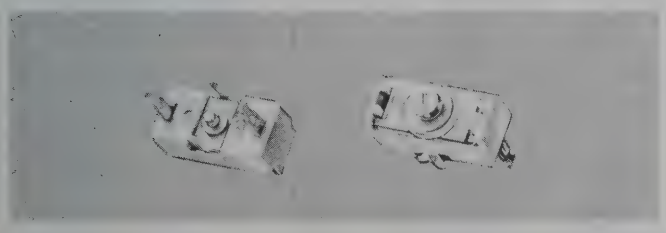
TYPE 30
500 Volts DC Flash-Test — 250 WVDC

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE: At 1¾ Inch Pounds Cap. Will Be More Than MMF.	GUARANTEED RANGE: At 3 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE	NET PRICE (1-24)
302	2 Pl.	130	15	$1.05	$0.63
303	3 Pl.	340	65	1.10	.66
304	4 Pl.	550	100	1.20	.72
305	5 Pl.	760	190	1.30	.78
306	6 Pl.	970	275	1.40	.84
307	7 Pl.	1180	350	1.50	.90
308	8 Pl.	1390	450	1.60	.96
309	9 Pl.	1600	550	1.70	1.02
310	10 Pl.	1890	650	1.80	1.08
311	11 Pl.	2110	780	1.95	1.17
312	12 Pl.	2330	880	2.05	1.23
313	13 Pl.	2605	1150	2.15	1.29
314	14 Pl.	2830	1300	2.30	1.38
315	15 Pl.	3055	1400	2.45	1.47

Screw is insulated from top plate by mica washer. Above maximum capacity values are based on using 1½ to 1¾ Mil Mica films.



TYPE 50 DUAL PADDER — 175 VDCW
(will fit any size shield having dimensions exceeding 1 1/16" x 1 1/16")



TYPE 58 PADDER 1" x 15/32" — 175 VDCW



TYPE 30 AND TYPE 30-M PADDER 7/8" x 15/16"

TYPE 30-M
1000 Volts DC Flash-Test — 500 WVDC

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE: At 1¾ Inch Pounds Cap. Will Be More Than MMF.	GUARANTEED RANGE: At 3 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE	NET PRICE (1-24)
302-M	2 Pl.	120	15	$1.05	$0.63
303-M	3 Pl.	320	65	1.15	.69
304-M	4 Pl.	500	100	1.25	.75
305-M	5 Pl.	690	180	1.35	.81
306-M	6 Pl.	880	265	1.50	.90
307-M	7 Pl.	1070	340	1.60	.96
308-M	8 Pl.	1260	425	1.70	1.02
309-M	9 Pl.	1415	525	1.85	1.11
310-M	10 Pl.	1600	615	1.95	1.17
311-M	11 Pl.	1785	730	2.10	1.26
312-M	12 Pl.	1970	800	2.25	1.35
313-M	13 Pl.	2155	1000	2.35	1.41
314-M	14 Pl.	2340	1100	2.50	1.50
315-M	15 Pl.	2525	1200	2.70	1.62

Screw is insulated from top plate by mica washer. Above maximum capacity values are based on using 2 to 2¼ Mil Mica.

TYPE 50

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE: At Tight Cap. Will Be More Than MMF.	GUARANTEED RANGE: At 2 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE	NET PRICE (1-24)
502	2 Pl.	80	7.5	$1.00	$0.60
503	3 Pl.	160	19	1.15	.69
504	4 Pl.	240	50	1.30	.78

◀ **TYPE 50** Dual Padders provide two variable trimmers mounted on a single base. This unit is designed as a tuning component for I.F. transformers; and as such, may be snap-in mounted along with the transformer coil in any size shield having dimensions exceeding 1 1/16" x 1 1/16".

TYPE 58

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE: At Tight Cap. Will Be More Than MMF.	GUARANTEED RANGE: At 2 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE	NET PRICE (1-24)
582	2 Pl.	80	7.5	$0.65	$0.39
583	3 Pl.	160	19	.70	.42
584	4 Pl.	240	50	.75	.45

◀ **TYPE 58** Padder is a single variable trimmer section provided with a two-pronged staple mounting for attachment to bracket or chassis. Base is made of lowest loss steatite and the mica is India Ruby.

NET (For quantities of 25 or more, please contact your local Arco-Elmenco Distributor)

Centralab. Ceramic Capacitors

DD CERAMIC DISC HI-KAPS®

Ideal for bypass coupling or filter service where high capacity is required and control stability is secondary. Operate for long periods of time under extreme moisture, temperature and vibration. Rated 1000 WVDC except: DD6-103, DD-153, DD-203, DD-303, DD-403 and DD-503, which are 600 WVDC. **Tolerance:** ±10% unless otherwise noted.

Cap., pF	CRL Number	Dia., In.	Cap., pF	CRL Number	Dia., In.	Cap., pF	CRL Number	Dia., In.	Cap., pF	CRL Number	Dia., In.
3.3*	DD-3R3	¼	68	DD-680	¼	500	DD-501	¼	3000†	DD-302	⅜
5	DD-050	¼	75	DD-750	¼	510	DD-511	¼	3300†	DD-332	⅜
6	DD-060	¼	82	DD-820	¼	560	DD-561	¼	3900†	DD-392	⅜
6.8	DD-6R8	¼	91	DD-910	¼	600	DD-601	¼	4000†	DD-402	⅜
7.5	DD-7R5	¼	100	DD-101	¼	680	DD-681	¼	4300†	DD-432	⅜
8	DD-080	¼	120	DD-121	¼	750	DD-751	¼	4700‡	DD-472	⅜
10	DD-100	¼	130	DD-131	¼	800†	DD-801	¼	4700†	DD-472G	⅜
12	DD-120	¼	150	DD-151	¼	820	DD-821	¼	5000‡	DD-5022	⅜
15	DD-150	¼	180	DD-181	¼	910	DD-911	¼	5000†	DD-502	⅜
18	DD-180	¼	200	DD-201	¼	1000	DD-102	⅜	5600†	DD-562	⅜
20	DD-200	¼	220	DD-221	¼	1000†	DD-102G	¼	6800†	DD-682	⅜
22	DD-220	¼	240	DD-241	¼	1200	DD-122	⅜	7500†	DD-752	⅜
24	DD-240	¼	250	DD-251	¼	1200†	DD-122G	¼	8200†	DD-822	⅜
25	DD-250	¼	270	DD-271	¼	1300	DD-132	⅜	10,000†	DD-103	1/16
27	DD-270	¼	300	DD-301	¼	1500	DD-152	⅜	10,000‡	DD-1032	1/16
30	DD-300	¼	330	DD-331	¼	1500†	DD-152G	¼	10,000†	DD-6-103	⅜
33	DD-330	¼	350	DD-351	¼	1600	DD-162	⅜	15,000§	DD-153	1/16
39	DD-390	¼	360	DD-361	¼	1800	DD-182	⅜	20,000§	DD-203	1/16
47	DD-470	¼	390	DD-391	¼	2000†	DD-202	⅜	30,000§	DD-303	⅞
50	DD-500	¼	400	DD-401	¼	2200†	DD-222	⅜	40,000§	DD-403	23/32
51	DD-510	¼	470	DD-471	¼	2500†	DD-252	⅜	50,000§	DD-503	⅞
56	DD-560	¼	470†	DD-471G	¼	2700†	DD-272	⅜			

DD INDUSTRIAL NET PRICES

Values, pF	Net Each, Lots of 1-24	25-99	100-249	250-499	500-999	1000-3000	4000-5000
3.3*-8	$0.15	$0.119	$0.10	$0.075	$0.056	$0.048	$0.040
10-240	.15	.119	.10	.075	.056	.038	.033
250-470	.15	.119	.10	.075	.056	.041	.035
470†	.15	.119	.10	.075	.056	.036	.031
500-750	.15	.119	.10	.075	.056	.041	.035
800†	.15	.119	.10	.075	.056	.036	.031
820, 910	.15	.119	.10	.075	.056	.041	.035
1,000	.15	.119	.10	.075	.056	.043	.038
1,000†	.15	.119	.10	.075	.056	.036	.031
1,200	.15	.119	.10	.075	.056	.044	.038
1,200†	.15	.119	.10	.075	.056	.036	.031
1,300, 1,500	.15	.119	.10	.075	.056	.044	.038
1,500†	.15	.119	.10	.075	.056	.036	.031
1,600, 1,800	.15	.119	.10	.075	.056	.044	.038
2,000†-3,000†	.15	.119	.10	.075	.056	.038	.033
3,300†-4,300†	.15	.119	.10	.075	.056	.044	.038
4,700‡	.15	.119	.10	.075	.056	.046	.040
4,700†	.15	.119	.10	.075	.056	.044	.038
5,000‡	.15	.119	.10	.075	.056	.046	.040
5,000†	.15	.119	.10	.075	.056	.044	.038
5,600†-7,500†	.15	.119	.10	.075	.056	.044	.038
8,200†	.15	.119	.10	.075	.056	.054	.047
10,000†	.24	.19	.16	.12	.09	.044	.038
10,000‡	.24	.19	.16	.12	.09	.062	.054
10,000†	.24	.19	.16	.12	.09	.054	.047
15,000§	.24	.19	.16	.12	.09	.054	.047
20,000§	.45	.356	.30	.225	.169	.054	.047
30,000§	.45	.356	.30	.225	.169	.099	.085
40,000§, 50,000§	.45	.356	.30	.225	.169	.155	.145

Tolerance: *±0.5 pF. †GMV. ‡±20%. §+80, —20%.

MIL-C-11015B GENERAL PURPOSE CERAMIC DISC HI-KAPS® (500 WVDC)

Cap., μμf (PF)	CRL No. & MIL-C-11015B Designation	Cap., μμf (PF)	CRL No. & MIL-C-11015B Designation	Cap., μμf (PF)	CRL No. & MIL-C-11015B Designation
2.2*	CK60BV2R2K	220*	CK60AX221K	820†	CK62BX821M
3.3*	CK60BV3R3K	220†	CK60AX221M	1000*	CK62BX102K
4.7*	CK60BV4R7K	330*	CK60AX331K	1000†	CK62BX102M
6.8*	CK60BV6R8K	330†	CK60AX331M	1500*	CK62BX152K
10*	CK60BV100K	330*	CK61BX331K	1500†	CK62BX152M
15*	CK60BV150K	330†	CK61BX331M	2200*	CK62AX222K
22*	CK60BV220K	470*	CK60AX471K	2200†	CK62AX222M
33*	CK60BX330K	470†	CK60AX471M	2200*	CK63BX222K
33†	CK60BX330M	470*	CK61BX471K	2200†	CK63BX222M
47*	CK60BX470K	470†	CK61BX471M	3300*	CK63BX332K
47†	CK60BX470M	680*	CK61BX681K	3300†	CK63BX332M
150*	CK60BX151K	680†	CK61BX681M		
150†	CK60BX151M	820*	CK62BX821K		

Tolerances: *±10%; †±20%.

MIL-C-11015B INDUSTRIAL NET PRICES

Values, μμf	Net Each, Lots of 1-24	25-99	100-249	250-499	500-999
2.2 thru 680	21c	16.6c	14c	10.5c	7.9c
820 thru 1500	27c	21.4c	18c	13.5c	10c
2200 (—AX—)	27c	21.4c	18c	13.5c	10c
2200 (—BX—), 3300	30c	23.7c	20c	15c	11.3c

3000-6000 VOLT HI-VO-DISC® CAPACITORS

All these units are highly efficient for bypass-coupling in high frequency circuits under conditions of extreme humidity or temperature. Special phenolic insulation with triple, high temperature wax impregnation. Maintain high capacity and performance at 85°C. Tolerance: ±20%.

INDUSTRIAL NET PRICES

TYPE DD30 (3000 WVDC)

Values, μμf	Net Each, Lots of 1-24	25-99	100-249	250-499	500-999
4.7 thru 120	$0.24	$0.19	$0.16	$0.12	$0.09
150	.24	.19	.16	.12	.09
180 thru 270	.24	.19	.16	.12	.09
300 thru 470	.24	.19	.16	.12	.09
500 and 560	.24	.19	.16	.12	.09
680 thru 820	.24	.19	.16	.12	.09
1000 thru 5000	.30	.237	.20	.15	.113

TYPE DD60 (6000 WVDC)

4.7 thru 820	$0.36	$0.285	$0.24	$0.18	$0.135
1000 thru 2200	.60	.475	.40	.30	.225

Capacity, μμf	3000 Volt, DC Working CRL No.	Dia.	6000 Volt, DC Working CRL No.	Dia.
4.7	DD30-4R7	¼"	DD60-4R7	5/16"
10	DD30-100	¼"	DD60-100	5/16"
15	DD30-150	¼"	DD60-150	5/16"
22	DD30-220	¼"		
25	DD30-250	¼"		
30	DD30-300	¼"	DD60-300	5/16"
33	DD30-330	¼"	DD60-330	5/16"
39	DD30-390	¼"	DD60-390	5/16"
47	DD30-470	¼"	DD60-470	5/16"
50	DD30-500	¼"	DD60-500	5/16"

SEE NEXT COLUMN

TYPE DD2 DUO-KAPS®

Single disc, dual capacity. Double Durez Insulation. Rated 600 v. DC, working; 1200 v. DC, test. Tolerance: GMV. Dia A—.390"; B—.594"; C—.719".

Cap., μμf	CRL No.	Dia.	Net Each, Lots of 1-24	25-99	100-249	250-499	500-999
2 x .001	DD2-102	A	$0.24	$0.19	$0.16	$0.12	$0.09
2 x .0015	DD2-152	B	.24	.19	.16	.12	.09
2 x .005	DD2-502*	C	.36	.285	.24	.18	.135

*Tolerance: —20, +80%.

TYPE DD3 SHIELDED DUO-KAPS®

Three leads—two capacitors in the space formerly needed for one. Shielded to minimize stray capacities between discs. Rated 600 v. DC, working; 1200 v. DC, test. Tolerance: GMV. Dia.: A—.391"; B—.593"; C—.719".

2 x .001	DD3-102	A	$0.30	$0.238	$0.20	$0.15	$0.113
2 x .0015	DD3-152	A	.30	.238	.20	.15	.113
2 x .002	DD3-202	B	.30	.238	.20	.15	.113
2 x .005	DD3-502	B	.30	.238	.20	.15	.113
2 x .01	DD3-103	C	.30	.238	.20	.15	.113

D6 TUBULAR BC HI-KAPS®

Rated 600 v. DC working; 1200 v., test. Tropicalized. Operating temp.: —55° to +85°C. Tolerance: ±0.5 μμf D6-030; ±10%, 5 μμf thru 680 μμf, ±20%, 750 μμf thru 2200 μμf; GMV, 2500 μμf and up.

Cap., μμf	CRL No.	Size *	Cap., μμf	CRL No.	Size *	Cap., μμf	CRL No.	Size *
3	D6-030	A	100	D6-101	A	820	D6-821	A
5	D6-050	A	120	D6-121	A	1000	D6-102	A
10	D6-100	A	150	D6-151	A	1200	D6-122	A
12	D6-120	A	180	D6-181	A	1500	D6-152	A
15	D6-150	A	200	D6-201	A	1800	D6-182	A
20	D6-200	A	220	D6-221	A	2000	D6-202	B
22	D6-220	A	250	D6-251	A	2200	D6-222	B
25	D6-250	A	270	D6-271	A	2500	D6-252	B
27	D6-270	A	300	D6-301	A	2700	D6-272	B
33	D6-330	A	330	D6-331	A	3000	D6-302	B
39	D6-390	A	390	D6-391	A	3300	D6-332	B
40	D6-400	A	400	D6-401	A	4000	D6-402	B
47	D6-470	A	470	D6-471	A	4700	D6-472	C
50	D6-500	A	500	D6-501	A	5000	D6-502	C
56	D6-560	A	560	D6-561	B	5600	D6-562	C
68	D6-680	A	600	D6-601	B	10000	D6-103	D
75	D6-750	A	680	D6-681	B			
82	D6-820	A	750	D6-751	A			

***Size:** A—.260" x .460". B—.260" x .790". C—.280" x .900". D—.330" x 1.21".

D6 INDUSTRIAL NET PRICES

Values, pF	Net Each, Lots of 1-24	25-99	100-249	250-499	500-999
3 thru 5000	$0.15	$0.119	$0.10	$0.075	$0.056
5600	.18	.143	.12	.09	.068
10,000	.30	.238	.20	.15	.113

TYPE CPR POLYSTRENE CAPACITORS (500 WVDC)

Highly reliable sealed polystyrene foil capacitors. Ideal direct replacements for micas and mylars in TV and radio. **Tol.**, ±5%. **Size:** 20—250μμf, .394" l. x .157-.276" dia.; 251—3000 μμf, .591" l. x .197-.413" dia.; 3001—10,000 μμf, .787" l. x .335-.531" dia. **Number indicates capacitance in μμf (PF).**

CRL No.	CRL No.	CRL No.	CRL No.	CRL No.	CRL No.
CPR-20J	CPR-68J	CPR-220J	CPR-680J	CPR-2200J	CPR-5600J
CPR-22J	CPR-75J	CPR-240J	CPR-750J	CPR-2400J	CPR-6200J
CPR-24J	CPR-82J	CPR-270J	CPR-820J	CPR-2500J	CPR-6800J
CPR-27J	CPR-91J	CPR-300J	CPR-910J	CPR-2700J	CPR-7500J
CPR-30J	CPR-100J	CPR-330J	CPR-1000J	CPR-3000J	CPR-8200J
CPR-33J	CPR-110J	CPR-350J	CPR-1100J	CPR-3300J	CPR-9100J
CPR-36J	CPR-120J	CPR-390J	CPR-1200J	CPR-3600J	CPR-10000J
CPR-39J	CPR-130J	CPR-430J	CPR-1300J	CPR-3900J	
CPR-43J	CPR-150J	CPR-470J	CPR-1500J	CPR-4300J	
CPR-47J	CPR-160J	CPR-510J	CPR-1600J	CPR-4700J	
CPR-56J	CPR-180J	CPR-560J	CPR-1800J	CPR-5000J	
CPR-62J	CPR-200J	CPR-620J	CPR-2000J	CPR-5100J	

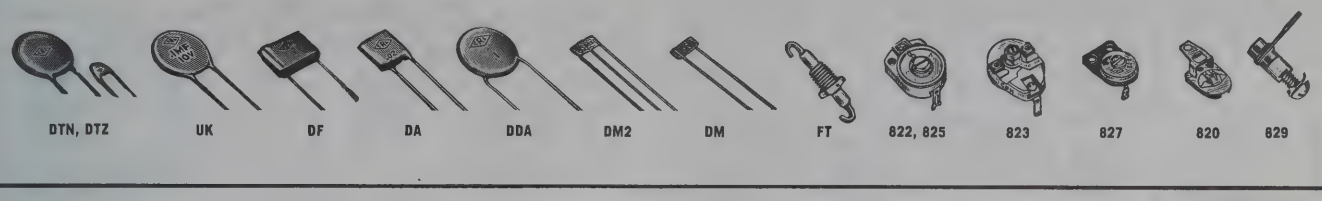
TYPE CPR INDUSTRIAL NET PRICES

Values, μμf (PF)	Net Each, Lots of 1-24	25-99	100-249	250-499	500-999
20 thru 1000	15c	11.9c	10c	7.5c	5.6c
1100 thru 3000	18c	14.3c	12c	9c	6.8c
3300 thru 10,000	21c	16.6c	14c	10.5c	7.9c

Capacity μμf	3000 V. DC Working CRL No.	Dia.	6000 V. DC Working CRL No.	Dia.
56	DD30-560	¼"	DD60-560	5/16"
68	DD30-680	¼"	DD60-680	5/16"
75	DD30-750	¼"	DD60-750	5/16"
82	DD30-820	¼"	DD60-820	5/16"
100	DD30-101	¼"	DD60-101	5/16"
120	DD30-121	¼"	DD60-121	5/16"
150	DD30-151	¼"	DD60-151	5/16"
180	DD30-181	¼"	DD60-181	5/16"
200	DD30-201	¼"	DD60-201	5/16"
220	DD30-221	¼"	DD60-221	5/16"
250	DD30-251	¼"	DD60-251	5/16"
270	DD30-271	¼"	DD60-271	5/16"
300	DD30-301	¼"	DD60-301	5/16"
330	DD30-331	¼"	DD60-331	5/16"
390	DD30-391	¼"	DD60-391	5/16"
400	DD30-401	¼"		
470	DD30-471	¼"	DD60-471	5/16"
500	DD30-501	¼"	DD60-501	5/16"
560	DD30-561	¼"	DD60-561	5/16"
680	DD30-681	¼"	DD60-681	5/16"
750	DD30-751	¼"	DD60-751	5/16"
820	DD30-821	3/8"	DD60-821	5/16"
1000	DD30-102	3/8"	DD60-102	5/16"
1200	DD30-122	3/8"	DD60-122	5/16"
1500	DD30-152	3/8"	DD60-152	5/16"
2000	DD30-202	3/8"	DD60-202	5/16"
2200	DD30-222	3/8"	DD60-222	5/16"
2500	DD30-252	3/8"		
2700	DD30-272	3/8"		
3000	DD30-302	3/8"		
3300	DD30-332	3/8"		
3900	DD30-392	3/8"		
4700	DD30-472	3/8"		
5000	DD30-502	3/8"		

© U.C.P., Inc.

Ceramic Capacitors



LOW VOLTAGE CAPACITORS

Miniature ceramic capacitors designed to meet the demands for high capacity, low voltage applications in transistor circuits. Double durez insulation with high vacuum wax impregnation to withstand extreme temperature, humidity and vibration. Where size permits, capacitors are stamped with capacity and voltage.

TYPE UK ULTRA-KAPS* (3 WVDC)

Cap., μf	CRL No.	Tol.	Max. Dia.	Net Each, Lots of 1-24	25-99	100-249	250-499	500-999
.005	UK-502	GMV	.120″	75c	59.4c	50c	37.5c	28.1c
.01	UK-103	GMV	.120″	75c	59.4c	50c	37.5c	28.1c
.02	UK-203	GMV	.120″	75c	59.4c	50c	37.5c	28.1c
.1	UK-104	GMV	.220″	42c	333c	28c	21c	158c
.22	UK-224	GMV	.290″	24c	19c	16c	12c	09c
.47	UK-474	GMV	.408″	24c	19c	16c	12c	09c
1.0	UK-105	GMV	.590″	36c	285c	24c	18c	135c
2.2	UK-225	GMV	.840″	42c	333c	28c	21c	158c

TYPE UK10 ULTRA-KAPS* (10 WVDC)

.05	UK10-503	+80 —20%	.290″	18c	143c	12c	09c	068c
.1	UK10-104	+80 —20%	.408″	18c	143c	12c	09c	068c
.2	UK10-204	+80 —20%	.590″	24c	19c	16c	12c	09c
.47	UK10-474	+80 —20%	.840″	42c	333c	28c	21c	158c

TYPE UK20 ULTRA-KAPS* (20 WVDC)

.05	UK20-503	+80 —20%	.408″	18c	143c	12c	09c	068c
.1	UK20-104	+80 —20%	.590″	21c	166c	14c	105c	079c
.2	UK20-204	+80 —20%	.840″	39c	31c	26c	195c	146c

*Trademark.

TYPE DA PLATE CAPACITOR (30 WVDC)

Cap., μf	CRL No.	Tolerance	Size in.	Net Each, Lots of 1-24	25-99	100-249	250-499	500-999
.02	DA-203	+100 —20%	½x½	$0.36	$0.285	$0.24	$0.18	$0.135
.05	DA-503	+100 —20%	½x½	.81	.641	.54	.405	.304
.1	DA-104	+100 —20%	½x½	1.35	1.070	.90	.675	.506

TYPE CK DISC CAPACITORS (50 WVDC)

Cap., μf	CRL No.	Tolerance	Max. Dia.	Net Each, Lots of 1-24	25-99	100-249	250-499	500-999
.005	CK-502	+80 —20%	.385″	21c	16.6c	14c	10.5c	7.9c
.01	CK-103	+80 —20%	.385″	21c	16.6c	14c	10.5c	7.9c
.02	CK-203	+80 —20%	.590″	21c	16.6c	14c	10.5c	7.9c
.025	CK-253	+80 —20%	.590″	21c	16.6c	14c	10.5c	7.9c
.03	CK-303	+80 —20%	.590″	21c	16.6c	14c	10.5c	7.9c
.05	CK-503	+80 —20%	.690″	30c	238c	20c	15c	113c
.1	CK-104	+80 —20%	.719″	60c	47.5c	40c	30c	22.5c

TYPE DDA DISC CAPACITORS (75 WVDC)

Cap., μf	CRL No.	Tolerance	Max. Dia.	Net Each, Lots of 1-24	25-99	100-249	250-499	500-999
.05	DDA-503	+80 —30%	.690″	30c	23.8c	20c	15c	11.3c
.1	DDA-104	+80 —30%	.719″	60c	47.5c	40c	30c	22.5c

TYPE DDM DISC CAPACITORS (150 WVDC)

.005	DDM-502	+60 —40%	.385″	30c	23.8c	20c	15c	11.3c
.01	DDM-103	+60 —40%	.385″	30c	23.8c	20c	15c	11.3c
.02	DDM-203	+60 —40%	.406″	54c	42.8c	36c	27c	20.3c
2x.01	DDM2-103	+60 —40%	.390″	54c	42.8c	36c	27c	20.3c

TYPE DM FLAT-PLATE MIN-KAPS®

150 VDCW, 300 v. DC test. Size: 3/32″ x 17/32″ x 1/64″. Tolerance: +50%, —20%, except (*) +80%, —20%.

Cap., μf	CRL No.	Net Each, Lots of 1-24	25-99	100-249	250-499	500-999
.0001	DM-101	$1.05	$0.83	$0.70	$0.525	$0.394
.0002	DM-201	1.05	.83	.70	.525	.394
.0003	DM-301	1.05	.83	.70	.525	.394
.0005	DM-501	1.05	.83	.70	.525	.394
.001	DM-102	1.05	.83	.70	.525	.394
.002*	DM-202	1.05	.83	.70	.525	.394
.003*	DM-302	1.05	.83	.70	.525	.394
.005*	DM-502	1.05	.83	.70	.525	.394
.01*	DM-103	1.05	.83	.70	.525	.394
2 x .005*	DM2-502	1.05	.83	.70	.525	.394

TYPE DF FLAT-PLATE HI-KAPS®

A dependable 600 volt ceramic capacitor recommended for general replacement applications where their unusual thinness makes them useful. Types listed below are 1 13/16″ l. x 1 1/16″ h. 600 v. DC, working; 1200 v. DC, test. Tolerance: GMV except DF-104, +80, —20%.

Cap., μf	CRL No.	Thickness	Net Each, Lots of 1-24	25-99	100-249	250-499	500-999
.05	DF-503	3/32″	$0.75	$0.594	$0.50	$0.375	$0.281
.1	DF-104	1 9/64″	1.05	.831	.70	.525	.394

FT AND MFT FEED-THRU HI-KAPS®

Rated 500 v. DC, working: 1000 v. DC, test. **Type FT:** Hooked end terminals; mounting nut supplied. **Type MFT:** 1/4″ (max.) flange eyelet inserts in .160″ hole; solders direct to chassis.

Type FT Hi-Kaps® μμf	No.	Tolerance	Type MFT Hi-Kaps® μμf	No.	Tolerance
500	FT-500	±20%	50	MFT-50	±10%
1000	FT-1000	±20%	100	MFT-100	±10%
1500	FT-1500	−20, +50%	500	MFT-500	±20%
1800	FT-1800	−20, +50%	1000	MFT-1000	GMV
2300	FT-2300	−20, +50%			

FT, MFT INDUSTRIAL NET PRICES

All Values, CRL Type	Net Each, Lots of 1-24	25-99	100-249	250-499	500-999
FT	$0.75	$0.594	$0.50	$0.375	$0.281
MFT	.30	.238	.20	.15	.113

CERAMIC TRIMMER CAPACITORS

Highly stable, small lightweight design. Power factor less than 0.2% at 1 mc. All units rated 500 v. DC, working; 1,000 v. DC, test. **Suffix Z:** Indicates zero temperature coefficient. **Suffix N:** Indicates negative coefficient. Shpg. Wt., 3 oz. max.

CRL Type 820—High dielectric ceramic base impervious to moisture. Flat rotor and stator. Mounting holes take No. 4 machine screws; 3/8″ x 27/32″.

CRL Type 822—Steatite body; silver rotor and stator plates; 41/64″ x 27/32″. Mtg. holes take No. 4 screw.

CRL Type 823—Steatite body; 15/16″ x 1 3/32″.

CRL Type 827—Ceramic molded phenolic body has high stability under vibration. Insulation resistance 10,000 megs. minimum. Size: 17/32″ x 3/4″.

CRL Types 829-3, -4, -6, -7, -10—Tiny, tubular, high voltage types for TV or FM. Ceramic bodies .215″ dia. Full capacity in 180° rotation.

Range, μμf	CRL No.	Range, μμf	CRL No.	Range, μμf	CRL No.	Range, μμf	CRL No.
1.0-3.5	820D	2.0-7.5	822-CZ	5.-12	823-EZ	2.5-7	827A
2.5-6.0	820A	2.5-13.0	822-BZ	6.-25	823-DZ	3.5-12	827B
5.0-20	820B	3.0-12	822-FZ	10.-50	823-BZ	6.0-30	827C
7.0-35	820C	4.5-25	822-AZ	12-62	823-AZ	7.0-35	827D
35-55	820E*	2.0-6.0	822-DN	5.-15	823-FN	.5-3	829-3
55-75	820F*	4.0-30	822-EN	8.-25	823-EN	1.-4	829-4
70-90	820G*	4.5-25	822-CN	8.-50	823-DN	1.-6	829-6
1.5-3	822-DZ	7.0-45	822-BN	10.-100	823-BN	1.-7.5	829-7
1.5-7	822-EZ	8.0-50	822-AN	20.-125	823-AN	1.5-10	829-10

*Less brackets

CRL TYPE 825 (MIL-C81A) TRIMMER CAPACITORS

Ceramic design meets MIL-C-81A specifications. Strong, low loss steatite base with pure silver fired on top surface to form stator plate. Rated 500 WVDC: 1500 v. DC test. Power Factor, less than 0.2% at 1 mc. Drift ±0.75% or ±0.5 μμf, whichever is greater. Insulation resistance, 10,000 megs. initial; 1000 megs. after humidity. Silver-plated brass terminals bent at 90° angle from plane of stator, 1/4″ lg. Mtg. holes clear #4 machine screws. Body, 27/32″ lg. x 41/64″ W. Shipping Weight, 2 oz.

Military Designation	CRL Cat. No.	Capacitance Range	Temp. Characteristic	Military Designation	CRL Cat. No.	Capacitance Range	Temp. Characteristic
CV11A070	825-EZ	1.5 to 7.0	NPO	CV11C300	825-CN	4.0 to 30.0	N500
CV11A120	825-FZ	3.0 to 12.0	NPO	CV11C450	825-GN	7.0 to 45.0	N500
CV11A250	825-AZ	4.5 to 25.0	NPO	CV11D060	825-DN	2.0 to 6.0	N650
CV11B130	825-AN	3.0 to 13.0	N300	CV11D300	825-EN	4.0 to 30.0	N650
CV11B200	825-FN	5.0 to 20.0	N300	CV11D450	825-BN	7.0 to 45.0	N650

TRIMMER INDUSTRIAL NET PRICES

All Values, CRL Series	Net Each, Lots of 1-9	10-24	25-99	100-249
820	$1.14	$0.95	$0.90	$0.76
822	1.14	.95	.90	.76
823	3.60	3.00	2.85	2.40
825	1.17	.98	.93	.78
827	.90	.75	.71	.60

All Values, CRL Series	Net Each, Lots of 1-24	25-99	100-249	250-499	500-999
829-3, 829-4	$0.30	$0.238	$0.20	$0.15	$0.113
829-6	.30	.238	.20	.15	.113
829-7, 829-10	.30	.238	.20	.15	.113

NOTE: Items requiring certified test data and government source inspection are special. Prices and information supplied upon request.

TEMPERATURE COMPENSATING DISC HI-KAPS®

Very popular unit that replaces mica types in all applications. High stability and small size, using TC ceramic dielectric material. Type DTZ is NPO or zero TC disc type. Type DTN is an N750TC type. Thickness: 3/32″ and 1/32″. Tolerance: ±5%.

TYPE DTN (N750)

Cap., μμf	CRL No.	Dia., In.	Cap., μμf	CRL No.	Dia., In.	Cap., μμf	CRL No.	Dia., In.
5	DTN-5*	1/4	25	DTN-25	1/4	100	DTN-100	3/8
10	DTN-10*	1/4	33	DTN-33	1/4	150	DTN-150	5/16
15	DTN-15	1/4	47	DTN-47	1/4	200	DTN-200	5/16
20	DTN-20	1/4	68	DTN-68	3/8	220	DTN-220	5/16
22	DTN-22	1/4	75	DTN-75	3/8	330	DTN-330	5/8

TYPE DTZ (NPO)

1.5	DTZ-1R5*	1/4	22	DTZ-22	3/16	100	DTZ-100	5/16
2.2	DTZ-2R2*	1/4	25	DTZ-25	3/16	120	DTZ-120	5/16
3.3	DTZ-3R3*	1/4	33	DTZ-33	3/16	150	DTZ-150	3/4
4.7	DTZ-4R7*	1/4	47	DTZ-47	5/16	180	DTZ-180	5/16
6.8	DTZ-6R8*	1/4	50	DTZ-50	5/16	200	DTZ-200	5/16
10	DTZ-10	1/4	68	DTZ-68	5/16	220	DTZ-220	5/8
15	DTZ-15	1/4	75	DTZ-75	5/16	270	DTZ-270	5/8
20	DTZ-20	1/4	82	DTZ-82	5/16			

Tolerance, ±0.5 μμf.

TYPE DTN & DTZ INDUSTRIAL NET PRICES

CRL No.	Net Each, Lots of 1-24	25-99	100-249	250-499	500-999
DTN-5 thru 100	$0.18	$0.143	$0.12	$0.09	$0.068
DTN-150 thru 330	.30	.238	.20	.15	.113
DTZ-1R5 thru 100	.18	.143	.12	.09	.068
DTZ-120 thru 270	.30	.238	.20	.15	.113

481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351

Ceramic Capacitors





Type TC



853, 854, 855



850, 858

TEMPERATURE COMPENSATING TUBULARS

Limit frequency drift in RF circuits where temperature variations are prevalent. Ceramic body construction changes capacities as the temperature varies; complies with JAN-C-20A specifications. Rated 1,200 volts DC, test: 600 volts DC, working. Extremely compact. Weight, 2 oz. **Type TCZ:** NPO or zero units, superior to micas for all uses. Show zero capacitance changeover temperature range —20°C to +85°C. Left end coded black. **Type TCN:** N750 units show negative capacity of —750 parts per million per degree C rise in temperature. Left end coded violet. Size: A—.400″ x .200″. B—.690″ x .200″. C—.860″ x .225″. D—1.165″ x .285″. E—1.625″ x 285″.

Cap. μμf	Type TCN Units: CRL Number	Size	Tol. ±	Type TCZ Units: CRL Number	Size	Tol. ±
0.5				TCZ-R5	A	.25 μμf
0.68				TCZ-R68	A	.25 μμf
1.0				TCZ-1	A	.25 μμf
1.5				TCZ-1R5	A	.25 μμf
2.2				TCZ-2R2	A	.25 μμf
3.3	TCN-3R3	A	.5 μμf	TCZ-3R3	A	.25 μμf
4.7				TCZ-4R7	A	.5 μμf
5.0	TCN-5	A	.5 μμf			
6.8				TCZ-6R8	A	.5 μμf
10	TCN-10	A	.5μμf	TCZ-10	A	.5 μμf
12	TCN-12	A	2%	TCZ-12	A	2%
15	TCN-15	A	2%	TCZ-15	A	2%
18	TCN-18	A	2%	TCZ-18	A	2%
20	TCN-20	A	2%	TCZ-20	A	2%
22	TCN-22	A	2%	TCZ-22	A	2%
24	TCN-24	A	2%	TCZ-24	A	2%
25	TCN-25	A	2%	TCZ-25	A	2%
27	TCN-27	A	2%	TCZ-27	A	2%
30	TCN-30	A	2%	TCZ-30	A	2%
33	TCN-33	A	2%	TCZ-33	A	2%
36	TCN-36	A	2%	TCZ-36	A	2%
39	TCN-39	A	2%	TCZ-39	A	2%
43	TCN-43	A	2%	TCZ-43	B	2%
47	TCN-47	A	2%	TCZ-47	B	2%
50	TCN-50	A	2%	TCZ-50	B	2%
51	TCN-51	A	2%	TCZ-51	B	2%
56	TCN-56	A	2%	TCZ-56	B	2%
62	TCN-62	A	2%	TCZ-62	B	2%
68	TCN-68	A	2%	TCZ-68	B	2%
75	TCN-75	A	2%	TCZ-75	B	2%
82	TCN-82	A	2%	TCZ-82	B	2%
91	TCN-91	A	2%	TCZ-91	C	2%
100	TCN-100	A	2%	TCZ-100	C	2%
110	TCN-110	B	5%	TCZ-110	D	5%
120	TCN-120	B	5%	TCZ-120	D	5%
130	TCN-130	B	5%	TCZ-130	D	5%
150	TCN-150	B	5%	TCZ-150	D	5%
160	TCN-160	B	5%	TCZ-160	D	5%
180	TCN-180	B	5%	TCZ-180	D	5%
200	TCN-200	B	5%	TCZ-200	D	5%
220	TCN-220	C	5%	TCZ-220	D	5%
240	TCN-240	C	5%	TCZ-240	E	5%
270	TCN-270	C	5%	TCZ-270	E	5%
300	TCN-300	D	5%	TCZ-300	E	5%
330	TCN-330	D	5%			
360	TCN-360	D	5%			
390	TCN-390	D	5%			
430	TCN-430	D	5%			
470	TCN-470	D	5%			
510	TCN-510	D	5%			
560	TCN-560	E	5%			
620	TCN-620	E	5%			
680	TCN-680	E	5%			
750	TCN-750	E	5%			

INDUSTRIAL NET PRICES
TYPE TCN (N750 UNITS)

Values, μμf	Net Each, Lots of: 1-24	25-99	100-249	250-499	500-999
3.3 and 5.0	$0.30	$0.238	$0.20	$0.15	$0.113
10	.30	.238	.20	.15	.113
12 and 15	.30	.238	.20	.15	.113
18	.30	.238	.20	.15	.113
20	.30	.238	.20	.15	.113
22 thru 62	.30	.238	.20	.15	.113
68 thru 100	.30	.238	.20	.15	.113
110 thru 270	.30	.238	.20	.15	.113
300 thru 510	.45	.356	.30	.225	.169
560 thru 750	.60	.475	.40	.30	.225

TYPE TCZ (NPO UNITS)

0.5 thru 3.3	$0.30	$.238	$0.20	$0.15	$0.113
4.7	.30	.238	.20	.15	.113
6.8	.30	.238	.20	.15	.113
10	.30	.238	.20	.15	.113
12 and 15	.30	.238	.20	.15	.113
18	.30	.238	.20	.15	.113
20	.30	.238	.20	.15	.113
22 and 24	.30	.238	.20	.15	.113
25 thru 56	.30	.238	.20	.15	.113
62 thru 100	.30	.238	.20	.15	.113
110 thru 220	.45	.356	.30	.225	.169
240 thru 300	.60	.475	.40	.30	.225

TYPE TCA AND TCL TUBULAR HI-KAPS®

Intermediate stock values. This group changes negatively capacity-wise with temperature increases. **Type TCA:** Changes 330 parts per million per degree C. **Type TCL:** Changes minus 1500 parts per million per degree C. **Size:** .400″ x .200″, except TCA-100, .690″ x .200″.

Cap. μμf	CRL Number	Tol. ±	Net Each, Lots of: 1-24	25-99	100-249	250-499	500-999
10	TCA-10	.5 μμf	$0.30	$0.238	$0.20	$0.15	$0.113
15	TCA-15	2%	.30	.238	.20	.15	.113
22	TCA-22	2%	.30	.238	.20	.15	.113
33	TCA-33	2%	.30	.238	.20	.15	.113
47	TCA-47	2%	.30	.238	.20	.15	.113
68	TCA-68	2%	.30	.238	.20	.15	.113
100	TCA-100	2%	.30	.238	.20	.15	.113
10	TCL-10	.5 μμf	.30	.238	.20	.15	.113
15	TCL-15	2%	.30	.238	.20	.15	.113
22	TCL-22	2%	.30	.238	.20	.15	.113
33	TCL-33	2%	.30	.238	.20	.15	.113
47	TCL-47	2%	.30	.238	.20	.15	.113
68	TCL-68	2%	.30	.238	.20	.15	.113
100	TCL-100	2%	.30	.238	.20	.15	.113

TRANSMITTING CAPACITORS

Designed for high voltage, high frequency circuits requiring very low power factor and stable retrace characteristics. Double cup design for long leakage paths and rugged construction.

TYPE 850 AND 858—5 AND 7.5 KV

Stud type has ⅛″ long hex studs 6-32 thread. Lug type ¾″ long solder lugs with tapped 6-32 threaded hole. Size: 1⅛″ dia. x ⅝″. Tolerance: ±10% 850 type; ±20% 858 type.

Cap. μμf	CRL No.: Stud Type	Lug Type	KV DCW	Temp. Coeff.	RF Load at 30 MC†
25	850S-25Z	850SL-25Z	7.5	NPO	7 amps
50	850S-50Z	850SL-50Z	7.5	NPO	10 amps
50	850S-50N	850SL-50N	7.5	N750	8.8 amps
75	850S-75N	850SL-75N	7.5	N750	10 amps
100	850S-100N	850SL-100N	5	N750	9.8 amps
500	858S-500		5	Hi-K	
1K	858S-1000		5	Hi-K	

TYPE 853, 854, 855—5 KV

Lead type has 1½″ axial leads. Tap type has axial screw terminals tapped 2-56. Size: 853, ½″ dia. x 7/16″. 854, ⅜″ dia. x ⅜″. 855, ¼″ dia. x 11/32″; A Series Add 1/16″ to dia. and ¾″ to length. Tolerance: ±10%.

Cap. μμf	CRL No.: Lead Type	Tap Type	KV DCW	Temp. Coeff.	RF Load at 30 MC†
3	855-3Z	855A-3Z	5	NPO	1.8 amps
5	855-5Z	855A-5Z	5	NPO	1.8 amps
10	854-10Z	854A-10Z	5	NPO	1.8 amps
10	855-10N	855A-10N	5	N750	3.2 amps
20	853-20Z	853A-20Z	5	NPO	2.8 amps
20	854-20N	854A-20N	5	N750	3.2 amps
40	853-40N	853A-40N	5	N750	5.6 amps

TYPE 857—7.5 AND 15 KV

Axial screw terminals at both ends; ¼″ deep, 10-32 NF-2 thread. Size: 1 3/32″ dia. x 1 3/64″. Tolerance: ±10%.

Cap., μμf	CRL No.	Temp. Coeff.	RF Load at 30 MC†	KV DCW
25	857-25Z	NPO	12 amps	15
50	857-50Z	NPO	12 amps	15
100	857-100N	N750	14.4 amps	15
200	857-200N	N750	18.2 amps	7.5

TYPE 859—15 AND 20 KV

Terminals 3/16″ deep both ends, tapped 10-32. Size: 2″ dia. x 2⅞″ overall. Tolerance: ±10%.

Cap. μμf	CRL No.	Temp. Coeff.	RF Load at 30 MC†	KV DCW
50	859S-50Z	NPO	30 amps	20
100	859S-100Z	NPO	30 amps	20
250	859S-250N	N750	30 amps	20
500	859S-500N	N3300	30 amps	15

†RF Load Rating based on 30°C rise in temperature.

TRANSMITTING CAPACITOR INDUSTRIAL NET PRICES

All Values, CRL Type	Net Each, Lots of: 1-9	10-24	25-99	100-249
850	$2.70	$2.43	$2.14	$1.92
853, 854, or 855	1.80	1.62	1.43	1.28
857 with suffix N	7.20	6.48	5.70	5.13
857 with suffix Z	8.40	7.56	6.65	5.99
858	2.70	2.43	2.14	1.92

All Values, CRL Type	Net Each, Lots of: 1-4	5-9	10-99	100-249
859	$54.00	$48.60	$45.00	$40.50

TYPES CE TEMPERATURE STABLE AND CF SEMI-STABLE DISC HI-KAPS®

Offer exceptional stability through an extended temperature range; for applications requiring low capacity change between —55°C and +85°C temperatures. Rated 500 WVDC. Life test, 1000 hours at 1000 v. DC at +85°C. Leakage resistance, 10,000 megs, min. initial; 1000 megs, after humidity. Phenolic insulation vacuum impregnated with high temperature wax. Power factor, 2% max. at 1 kc. Leads #22 tinned copper, 1½″ lg. minimum. Tolerance, ±10%. Only .156″ thick. **Dia.:** 150—560 μμf, .290″ 680—1800 μμf, .385″; 2000—3900 μμf, .590″; 4700—6200 μμf, .690″; 8200 and 10K μμf, .920″.

Temperature Stable "K": Cap. μμf	No. CE-	Cap. μμf	No. CE-	Cap. μμf	No. CE-	Temp. Semi-Stable "K": Cap. μμf	No. CF-	Cap. μμf	No. CF-	Cap. μμf	No. CF-
150	151	500	501	800	801	1200	122	2200	222	5000	502
220	221	560	561	1000	102	1500	152	3300	332	6200	622
330	331	680	681			1800	182	3900	392	8200	822
470	471	750	751			2000	202	4700	472	10K	103

CE, CF INDUSTRIAL NET PRICES

Values, μμf	Net Each, Lots of: 1-24	25-99	100-249	250-499	500-999
150 thru 1800	18c	14.3c	12c	9c	6.8c
2000 thru 6200	21c	16.6c	14c	10.5c	7.9c
8200 and 10K	24c	19c	16c	12c	9c

TYPE DD16 HI-KAP® BUFFERS

Compact, easy to install. Long life, low cost. Able to withstand high heat, moisture, and vibration. Size: ⅜″ dia., 1¼″ thick. Tolerance: GMV. Rated 1600 WVDC.

Cap. μf	CRL Number	Net Each, Lots of: 1-24	25-99	100-249	250-499	500-999
.003	DD-16-302 3/16″	$0.27	$0.20	$0.18	$0.14	$0.10
.004	DD16-402 1/4″	.27	.20	.18	.14	.10
.005	DD16-502 5/16″	.27	.20	.18	.14	.10
.006	DD16-602 3/8″	.27	.20	.18	.14	.10
.007	DD16-702 7/16″	.27	.20	.18	.14	.10
.0075	DD16-752 27/32″	.27	.20	.18	.14	.10
.008	DD16-802 27/32″	.27	.20	.18	.14	.10
.01	DD16-103 27/32″	.27	.20	.18	.14	.10
.015	DD16-153*	.48	.38	.32	.24	.18

*¼″ thick; tolerance, —20, +80%.

TYPE CI AC LINE DISC HI-KAPS® (1000 WVDC)

U/L Approved per Underwriters Laboratories' Examination Service #E32296, dated 12-6-60. Suitable for continuous operation at 220 v. AC, rms, 60 cycles. Recommended for AC by-pass application or where a steady or intermittent higher voltage may occur. Tol., ±20%.

Cap., μμf	CRL No.	Max. Dia.	Net Each, Lots of: 1-24	25-99	100-249	250-499	500-999
470	CI-471	.400″	18c	14.3c	12c	9c	6.8c
680	CI-681	.400″	18c	14.3c	12c	9c	6.8c
1,000	CI-102	.600″	18c	14.3c	12c	9c	6.8c
2,200	CI-222	.600″	18c	14.3c	12c	9c	6.8c
5,000	CI-502	.850″	18c	14.3c	12c	9c	6.8c
10,000	CI-103	.850″	24c	19c	16c	12c	9c

CORNING® FIXED GLASS CAPACITORS

For coupling, decoupling, filtering, timing, switching or computer circuits, CORNING Capacitors provide ultra-stable electrical performance. This stability is inherent in their fused glass and aluminum foil capacitive elements. These inorganic materials and continuous process and quality monitoring are responsible for the well-known CORNING CYFR capacitor made for the Minuteman. Many of the basic advantages of the CYFR have found their way into the standard CYFM and TYO units. The properties of these capacitors are entirely those of the closely controlled dielectric, and can't be changed by assembly methods or subsequent treatment. At 1 Kc and 25°C, dissipation factor is less than 0.001; at any given temperature, TC will not deviate from the curve by more than 5 ppm.

Corning manufactures highly stable fixed glass capacitors to meet your demanding circuit requirements. Their performance and economic advantages will add value to your equipment.

	TYPE AND MIL SPEC	MODEL	CAPACITANCE RANGE (pf)	VOLTAGE	NOMINAL DIMENSIONS Size in inches	WEIGHT IN GRAMS
CYFM	Fusion-sealed environment-proof performance at cost savings. Electrically and environmentally interchangeable with CYFR. MIL-C-11272B. 	CYFM10	0.5 to 200 220 to 300	500 300	$^{11}/_{32}$ x $^{11}/_{64}$ x $^{5}/_{64}$	0.25 - 0.50
		CYFM15	220 to 510 560 to 1200	500 300	$^{15}/_{32}$ x $^{17}/_{64}$ x $^{7}/_{64}$	0.75 - 1.25
		CYFM20	560 to 3500 3600 to 5100	500 300	$^{47}/_{64}$ x $^{27}/_{64}$ x $^{9}/_{64}$	2.50 - 4.00
		CYFM30	3600 to 6200 6800 to 10000	500 300	$^{49}/_{64}$ x $^{3}/_{4}$ x $^{9}/_{64}$	5.00 - 7.00
TYO	New printed circuit capacitor provides glass stability in a uniformly symmetric case. Eliminates shorting. Lead spacing: TYO-6—0.2", TYO-7—0.2", TYO-8—0.4". 	TYO-6	1 to 560	300	.300 x .200 x .115	.3 - .4
		TYO-7	561 to 1000	300	.300 x .300 x .115	.4 - .5
		TYO-8	1001 to 2700	300	.500 x .300 x .115	.7 - .8

STANDARD CAPACITOR VALUES, CYFM, TYO*

CAP. (pf)	MIL EQUIV.	CAP. (pf)	MIL EQUIV.	CAP. (pf)	MIL EQUIV.	CAP. (pf)	MIL. EQUIV.	CAP. (pf)	MIL EQUIV.	CAP. (pf)	MIL EQUIV.
0.5†	0R5C	7.5	7R5C	33	330J	130	131J	560	561J	2400	242J
1.0	1R0C	8.2	8R2C	36	360J	150	151J	620	621J	2700	272J
1.5	1R5C	9.1	9R1C	39	390J	160	161J	680	681J	3000	302J
2.2	2R2C	10	100C	43	430J	180	181J	750	751J	3300	332J
2.7	2R7C	11	110C	47	470J	200	201J	820	821J	3600	362J
3.0	3R0C	12	120J*	51	510J	220	221J	910	911J	3900	392J
3.3	3R3C	13	130J	56	560J	240	241J	1000	102J	4300	432J
3.6	3R6C	15	150J	62	620J	270	271J	1100	112J	4700	472J
3.9	3R9C	16	160J	68	680J	300	301J	1200	122J	5100	512J
4.3	4R3C	18	180J	75	750J	330	331J	1300	132J	5600	562J
4.7	4R7C	20	200J	82	820J	360	361J	1500	152J	6200	622J
5.1	5R1C	22	220J	91	910J	390	391J	1600	162J	6800	682J
5.6	5R6C	24	240J	100	101J	430	431J	1800	182J	7500	752J
6.2	6R2C	27	270J	110	111J	470	471J	2000	202J	8200	822J
6.8	6R8C	30	300J	120	121J	510	511J	2200	222J	9100	912J
										10000	103J

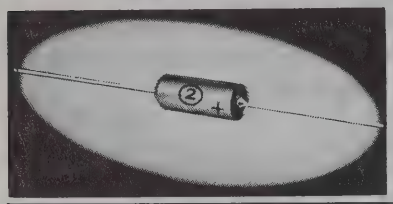
*Standard Tolerances As Shown: C = ± 25 pf J = ± 5%.
*Other Tolerances Available On Request: D = ± .50 pf F = ± 1% G = ± 2% K = ± 10%
TYO Capacitors now available in 10% and 20% Tolerances
†0.5 pf does not apply to TY capacitors

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SPRAGUE CAPACITORS

TYPE 150D SOLID-ELECTROLYTE TANTALEX® CAPACITORS



- Combine True Miniaturization with Characteristics Previously Unobtainable in Electrolytic Capacitors.
- Hermetically Sealed Metal Case.
- Solid Electrolyte Cannot Leak or Corrode, Even if Hermetic Seal is Accidentally Broken.
- Exhibit Stable Capacitance and Low Dissipation Factor over Temperature Range of —80°C to +85°C. With Appropriate Voltage Derating, May Be Operated to +125°C.
- Listed Units have Plastic Sleeves. For Bare Case, end Cat. No. in "0" instead of "2."
- For complete technical data, refer to latest issue of Engineering Bulletin 3520.
- Call your Sprague Industrial Distributor for Current Quantity Prices

μF	Size Code	Catalog Number ±20% Tol.	Catalog Number ±10% Tol.
6 WVDC — 8 VDC SURGE			
.22	A	150D224X0006A2	150D224X9006A2
.27	A	———	150D274X9006A2
.33	A	150D334X0006A2	150D334X9006A2
.39	A	———	150D394X9006A2
.47	A	150D474X0006A2	150D474X9006A2
.56	A	———	150D564X9006A2
.68	A	150D684X0006A2	150D684X9006A2
.82	A	———	150D824X9006A2
1.0	A	150D105X0006A2	150D105X9006A2
1.2	A	———	150D125X9006A2
1.5	A	150D155X0006A2	150D155X9006A2
1.8	A	———	150D185X9006A2
2.2	A	150D225X0006A2	150D225X9006A2
2.7	A	———	150D275X9006A2
3.3	A	150D335X0006A2	150D335X9006A2
3.9	A	———	150D395X9006A2
4.7	A	150D475X0006A2	150D475X9006A2
5.6	A	———	150D565X9006A2
6.8	A	150D685X0006A2	150D685X9006A2
8.2	B	———	150D825X9006B2
10	B	150D106X0006B2	150D106X9006B2
12	B	———	150D126X9006B2
15	B	150D156X0006B2	150D156X9006B2
18	B	———	150D186X9006B2
22	B	150D226X0006B2	150D226X9006B2
27	B	———	150D276X9006B2
33	B	150D336X0006B2	150D336X9006B2
39	B	———	150D396X9006B2
47	B	150D476X0006B2	150D476X9006B2
56	B	———	150D566X9006B2
60	B	150D606X0006B2	150D606X9006B2
68	R	150D686X0006R2	150D686X9006R2
82	R	— — —	150D826X9006R2
100	R	150D107X0006R2	150D107X9006R2
120	R	150D127X0006R2	150D127X9006R2
150	R	150D157X0006R2	150D157X9006R2
180	R	150D187X0006S2	150D187X9006R2
220	S	150D227X0006S2	150D227X9006S2
270	S	150D277X0006S2	150D227X9006S2
330	S	150D337X0006S2	150D337X9006S2
10 WVDC — 13 VDC SURGE			
.22	A	150D224X0010A2	150D224X9010A2
.27	A	———	150D274X9010A2
.33	A	150D334X0010A2	150D334X9010A2
.39	A	———	150D394X9010A2
.47	A	150D474X0010A2	150D474X9010A2
.56	A	———	150D564X9010A2
.68	A	150D684X0010A2	150D684X9010A2
.82	A	———	150D824X9010A2
1.0	A	150D105X0010A2	150D105X9010A2
1.2	A	———	150D125X9010A2
1.5	A	150D155X0010A2	150D155X9010A2
1.8	A	———	150D185X9010A2
2.2	A	150D225X0010A2	150D225X9010A2
2.7	A	———	150D275X9010A2
3.3	A	150D335X0010A2	150D335X9010A2
3.9	A	———	150D395X9010A2
4.7	A	150D475X0010A2	150D475X9010A2
5.6	B	———	150D565X9010B2
6.8	B	150D685X0010B2	150D685X9010B2
8.2	B	———	150D825X9010B2
10	B	150D106X0010B2	150D106X9010B2
12	B	———	150D126X9010B2
15	B	150D156X0010B2	150D156X9010B2
18	B	———	150D186X9010B2
22	B	150D226X0010B2	150D226X9010B2
27	B	———	150D276X9010B2
33	B	150D336X0010B2	150D336X9010B2
39	B	———	150D396X9010B2
40	B	150D406X0010B2	150D406X9010B2
47	R	150D476X0010R2	150D476X9010R2
56	R	———	150D566X9010R2
68	R	150D686X0010R2	150D686X9010R2
82	R	———	150D826X9010R2
100	R	150D107X0010R2	150D107X9010R2
120	R	150D127X0010R2	150D127X9010R2
150	S	150D157X0010S2	150D157X9010S2
180	S	———	150D187X9010S2
220	S	150D227X0010S2	150D227X9010S2
15 WVDC — 18 VDC SURGE			
.22	A	150D224X0015A2	150D224X9015A2
.27	A	———	150D274X9015A2
.33	A	150D334X0015A2	150D334X9015A2
.39	A	———	150D394X9015A2
.47	A	150D474X0015A2	150D474X9015A2
.56	A	———	150D564X9015A2
.68	A	150D684X0015A2	150D684X9015A2
.82	A	———	150D824X9015A2
1.0	A	150D105X0015A2	150D105X9015A2
1.2	A	———	150D125X9015A2
1.5	A	150D155X0015A2	150D155X9015A2
1.8	A	———	150D185X9015A2
2.2	A	150D225X0015A2	150D225X9015A2
2.7	A	———	150D275X9015A2
3.3	A	150D335X0015A2	150D335X9015A2
3.9	B	———	150D395X9015B2
4.7	B	150D475X0015B2	150D475X9015B2
5.6	B	———	150D565X9015B2
6.8	B	150D685X0015B2	150D685X9015B2
8.2	B	———	150D825X9015B2
10	B	150D106X0015B2	150D106X9015B2
12	B	———	150D126X9015B2
15	B	150D156X0015B2	150D156X9015B2
18	B	———	150D186X9015B2
22	B	150D226X0015B2	150D226X9015B2
27	R	———	150D276X9015R2
33	R	150D336X0015R2	150D336X9015R2
39	R	———	150D396X9015R2
47	R	150D476X0015R2	150D476X9015R2
56	R	———	150D566X9015R2
68	R	150D686X0015R2	150D686X9015R2
82	S	———	150D826X9015S2
100	S	150D107X0015S2	150D107X9015S2
120	S	———	150D127X9015S2
150	S	150D157X0015S2	150D157X9015S2
20 WVDC — 23 VDC SURGE			
.0047	A	150D472X0020A2	150D472X9020A2
.0056	A	———	150D562X9020A2
.0068	A	150D682X0020A2	150D682X9020A2
.0082	A	———	150D822X9020A2
.01	A	150D103X0020A2	150D103X9020A2
.012	A	———	150D123X9020A2
.015	A	150D153X0020A2	150D153X9020A2
.018	A	———	150D183X9020A2
.022	A	150D223X0020A2	150D223X9020A2
.027	A	———	150D273X9020A2
.033	A	150D333X0020A2	150D333X9020A2
.039	A	———	150D393X9020A2
.047	A	150D473X0020A2	150D473X9020A2
.056	A	———	150D563X9020A2
.068	A	150D683X0020A2	150D683X9020A2
.082	A	———	150D823X9020A2
.10	A	150D104X0020A2	150D104X9020A2
.12	A	———	150D124X9020A2
.15	A	150D154X0020A2	150D154X9020A2
.18	A	———	150D184X9020A2
.22	A	150D224X0020A2	150D224X9020A2
.27	A	———	150D274X9020A2
.33	A	150D334X0020A2	150D334X9020A2
.39	A	———	150D394X9020A2
.47	A	150D474X0020A2	150D474X9020A2
.56	A	———	150D564X9020A2
.68	A	150D684X0020A2	150D684X9020A2
.82	A	———	150D824X9020A2
1.0	A	150D105X0020A2	150D105X9020A2
1.2	A	———	150D125X9020A2
1.5	A	150D155X0020A2	150D155X9020A2
1.8	A	———	150D185X9020A2
2.2	A	150D225X0020A2	150D225X9020A2
2.7	B	———	150D275X9020B2
3.3	B	150D335X0020B2	150D335X9020B2
3.9	B	———	150D395X9020B2
4.7	B	150D475X0020B2	150D475X9020B2
5.6	B	———	150D565X9020B2
6.8	B	150D685X0020B2	150D685X9020B2
8.2	B	———	150D825X9020B2
10	B	150D106X0020B2	150D106X9020B2
12	B	———	150D126X9020B2
15	B	150D156X0020B2	150D156X9020B2
18	R	———	150D186X9020R2
22	R	150D226X0020R2	150D226X9020R2
27	R	———	150D276X9020R2
33	R	150D336X0020R2	150D336X9020R2
39	R	———	150D396X9020R2
47	R	150D476X0020R2	150D476X9020R2
56	S	———	150D566X9020S2
68	S	150D686X0020S2	150D686X9020S2
82	S	———	150D826X9020S2
100	S	150D107X0020S2	150D107X9020S2
35 WVDC — 40 VDC SURGE			
.0047	A	150D472X0035A2	150D472X9035A2
.0056	A	———	150D562X9035A2
.0068	A	150D682X0035A2	150D682X9035A2
.0082	A	———	150D822X9035A2
.01	A	150D103X0035A2	150D103X9035A2
.012	A	———	150D123X9035A2
.015	A	150D153X0035A2	150D153X9035A2
.018	A	———	150D183X9035A2
.022	A	150D223X0035A2	150D223X9035A2
.027	A	———	150D273X9035A2
.033	A	150D333X0035A2	150D333X9035A2
.039	A	———	150D393X9035A2
.047	A	150D473X0035A2	150D473X9035A2
.056	A	———	150D563X9035A2
.068	A	150D683X0035A2	150D683X9035A2
.082	A	———	150D823X9035A2
.10	A	150D104X0035A2	150D104X9035A2
.12	A	———	150D124X9035A2
.15	A	150D154X0035A2	150D154X9035A2
.18	A	———	150D184X9035A2
.22	A	150D224X0035A2	150D224X9035A2
.27	A	———	150D274X9035A2
.33	A	150D334X0035A2	150D334X9035A2
.39	A	———	150D394X9035A2
.47	A	150D474X0035A2	150D474X9035A2
.56	A	———	150D564X9035A2
.68	A	150D684X0035A2	150D684X9035A2
.82	A	———	150D824X9035A2
1.0	A	150D105X0035A2	150D105X9035A2
1.2	B	———	150D125X9035B2
1.5	B	150D155X0035B2	150D155X9035B2
1.8	B	— — —	150D185X9035B2
2.2	B	150D225X0035B2	150D225X9035B2
2.7	B	———	150D275X9035B2
3.3	B	150D335X0035B2	150D335X9035B2
3.9	B	———	150D395X9035B2
4.7	B	150D475X0035B2	150D475X9035B2
5.6	B	———	150D565X9035B2
6.8	B	150D685X0035B2	150D685X9035B2
8.2	R	———	150D825X9035R2
10	R	150D106X0035R2	150D106X9035R2
12	R	———	150D126X9035R2
15	R	150D156X0035R2	150D156X9035R2
18	R	———	150D186X9035R2
22	R	150D226X0035R2	150D226X9035R2
27	S	———	150D276X9035S2
33	S	150D336X0035S2	150D336X9035S2
39	S	———	150D396X9035S2
47	S	150D476X0035S2	150D476X9035S2

DIMENSIONS

Code	Bare Core D. x L.	With Sleeve D. x L.
A	.125" x .250"	.135" x .322"
B	.175" x .438"	.185" x .510"
P	.279" x .650"	.289" x .722"
S	.341" x .750"	.351" x .822"

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REM-1-6426

Sizes subject to change without notice.

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SPRAGUE CAPACITORS

TYPE 150D SOLID-ELECTROLYTE TANTALEX® CAPACITORS (Cont.)

50 WVDC, 65 VDC SURGE

μF	Size Code	Catalog Number ±20% Tol.	±10% Tol.
.0047	A	150D472X0050A2	150D472X9050A2
.0056	A	———	150D562X9050A2
.0068	A	150D682X0050A2	150D682X9050A2
.0082	A	———	150D822X9050A2
.01	A	150D103X0050A2	150D103X9050A2
.012	A	———	150D123X9050A2
.015	A	150D153X0050A2	150D153X9050A2
.018	A	———	150D183X9050A2
.022	A	150D223X0050A2	150D223X9050A2
.027	A	———	150D273X9050A2
.033	A	150D333X0050A2	150D333X9050A2
.039	A	———	150D393X9050A2
.047	A	150D473X0050A2	150D473X9050A2
.056	A	———	150D563X9050A2
.068	A	150D683X0050A2	150D683X9050A2
.082	A	———	150D823X9050A2
.1	A	150D104X0050A2	150D104X9050A2
.12	A	———	150D124X9050A2
.15	A	150D154X0050A2	150D154X9050A2
.18	A	———	150D184X9050A2
.22	A	150D224X0050A2	150D224X9050A2
.27	A	———	150D274X9050A2
.33	A	150D334X0050A2	150D334X9050A2
.39	A	———	150D394X9050A2
.47	A	150D474X0050A2	150D474X9050A2
.56	A	———	150D564X9050A2
.68	A	150D684X0050A2	150D684X9050A2
.82	A	———	150D824X9050A2
1.0	A	150D105X0050A2	150D105X9050A2
1.2	B	———	150D125X9050B2
1.5	B	150D155X0050B2	150D155X9050B2
1.8	B	———	150D185X9050B2
2.2	B	150D225X0050B2	150D225X9050B2
2.7	B	———	150D275X9050B2
3.3	B	150D335X0050B2	150D335X9050B2
3.9	B	———	150D395X9050B2
4.7	B	150D475X0050B2	150D475X9050B2
5.6	R	———	150D565X9050R2
6.8	R	150D685X0050R2	150D685X9050R2
8.2	R	———	150D825X9050R2
10	R	150D106X0050R2	150D106X9050R2
12	R	———	150D126X9050R2
15	R	150D156X0050R2	150D156X9050R2
18	R	———	150D186X9050R2
22	S	150D226X0050S2	150D226X9050S2

60 WVDC, 78 VDC SURGE

μF	Size Code	Catalog Number ±20% Tol.	±10% Tol.
.0047	A	150D472X0060A2	150D472X9060A2
.0056	A	———	150D562X9060A2
.0068	A	150D682X0060A2	150D682X9060A2
.0082	A	———	150D822X9060A2
.01	A	150D103X0060A2	150D103X9060A2
.012	A	———	150D123X9060A2
.015	A	150D153X0060A2	150D153X9060A2
.018	A	———	150D183X9060A2
.022	A	150D223X0060A2	150D223X9060A2
.027	A	———	150D273X9060A2
.033	A	150D333X0060A2	150D333X9060A2
.039	A	———	150D393X9060A2
.047	A	150D473X0060A2	150D473X9060A2
.056	A	———	150D563X9060A2
.068	A	150D683X0060A2	150D683X9060A2
.082	A	———	150D823X9060A2
.1	A	150D104X0060A2	150D104X9060A2
.12	A	———	150D124X9060A2
.15	A	150D154X0060A2	150D154X9060A2
.18	A	———	150D184X9060A2
.22	A	150D224X0060A2	150D224X9060A2
.27	A	———	150D274X9060A2
.33	A	150D334X0060A2	150D334X9060A2
.39	A	———	150D394X9060A2
.47	A	150D474X0060A2	150D474X9060A2
.56	A	———	150D564X9060A2
.68	A	150D684X0060A2	150D684X9060A2
.82	B	———	150D824X9060B2
1.0	B	150D105X0060B2	150D105X9060B2
1.2	B	———	150D125X9060B2
1.5	B	150D155X0060B2	150D155X9060B2
1.8	B	———	150D185X9060B2
2.2	B	150D225X0060B2	150D225X9060B2
2.7	B	———	150D275X9060B2
3.3	B	150D335X0060B2	150D335X9060B2
3.9	B	———	150D395X9060B2
4.7	R	150D475X0060R2	150D475X9060R2
5.6	R	———	150D565X9060R2
6.8	R	150D685X0060R2	150D685X9060R2
8.2	R	———	150D825X9060R2
10	R	150D106X0060R2	150D106X9060R2
12	S	———	150D126X9060S2
15	S	150D156X0060S2	150D156X9060S2
18	S	———	150D186X9060S2
22	S	150D226X0060S2	150D226X9060S2

75 WVDC, 97 VDC SURGE

μF	Size Code	Catalog Number ±20% Tol.	±10% Tol.
.0047	A	150D472X0075A2	150D472X9075A2
.0056	A	———	150D562X9075A2
.0068	A	150D682X0075A2	150D682X9075A2
.0082	A	———	150D822X9075A2
.01	A	150D103X0075A2	150D103X9075A2
.012	A	———	150D123X9075A2
.015	A	150D153X0075A2	150D153X9075A2
.018	A	———	150D183X9075A2
.022	A	150D223X0075A2	150D223X9075A2
.027	A	———	150D273X9075A2
.033	A	150D333X0075A2	150D333X9075A2
.039	A	———	150D393X9075A2
.047	A	150D473X0075A2	150D473X9075A2
.056	A	———	150D563X9075A2
.068	A	150D683X0075A2	150D683X9075A2
.082	A	———	150D823X9075A2
.1	A	150D104X0075A2	150D104X9075A2
.12	A	———	150D124X9075A2
.15	A	150D154X0075A2	150D154X9075A2
.18	A	———	150D184X9075A2
.22	A	150D224X0075A2	150D224X9075A2
.27	A	———	150D274X9075A2
.33	A	150D334X0075A2	150D334X9075A2
.39	A	———	150D394X9075A2
.47	A	150D474X0075A2	150D474X9075A2
.56	A	———	150D564X9075A2
.68	A	150D684X0075A2	150D684X9075A2
.82	B	———	150D824X9075B2
1.0	B	150D105X0075B2	150D105X9075B2
1.2	B	———	150D125X9075B2
1.5	B	150D155X0075B2	150D155X9075B2
1.8	B	———	150D185X9075B2
2.2	B	150D225X0075B2	150D225X9075B2
2.7	B	———	150D275X9075B2
3.3	B	150D335X0075B2	150D335X9075B2
3.9	B	———	150D395X9075B2
4.7	R	150D475X0075R2	150D475X9075R2
5.6	R	———	150D565X9075R2
6.8	R	150D685X0075R2	150D685X9075R2
8.2	R	———	150D825X9075R2
10.0	R	150D106X0075R2	150D106X9075R2
12.0	S	———	150D126X9075S2
15.0	S	150D156X0075S2	150D156X9075S2

100 WVDC, 115 VDC SURGE

μF	Size Code	Catalog Number ±20% Tol.	±10% Tol.
.0047	A	150D472X0100A2	150D472X9100A2
.0056	A	———	150D562X9100A2
.0068	A	150D682X0100A2	150D682X9100A2
.0082	A	———	150D822X9100A2
.01	A	150D103X0100A2	150D103X9100A2
.012	A	———	150D123X9100A2
.015	A	150D153X0100A2	150D153X9100A2
.018	A	———	150D183X9100A2
.022	A	150D223X0100A2	150D223X9100A2
.027	A	———	150D273X9100A2
.033	A	150D333X0100A2	150D333X9100A2
.039	A	———	150D393X9100A2
.047	A	150D473X0100A2	150D473X9100A2
.056	A	———	150D563X9100A2
.068	A	150D683X0100A2	150D683X9100A2
.082	A	———	150D823X9100A2
.1	A	150D104X0100A2	150D104X9100A2
.12	A	———	150D124X9100A2
.15	A	150D154X0100A2	150D154X9100A2
.18	A	———	150D184X9100A2
.22	A	150D224X0100A2	150D224X9100A2
.27	A	———	150D274X9100A2
.33	A	150D334X0100A2	150D334X9100A2
.39	A	———	150D394X9100A2
.47	A	150D474X0100A2	150D474X9100A2
.56	A	———	150D564X9100A2
.68	B	150D684X0100B2	150D684X9100B2
.82	B	———	150D824X9100B2
1.0	B	150D105X0100B2	150D105X9100B2
1.2	B	———	150D125X9100B2
1.5	B	150D155X0100B2	150D155X9100B2
1.8	B	———	150D185X9100B2
2.2	B	150D225X0100B2	150D225X9100B2
2.7	B	———	150D275X9100B2
3.3	R	150D335X0100B2	150D335X9100R2
3.9	R	———	150D395X9100R2
4.7	R	150D475X0100R2	150D475X9100R2
5.6	R	———	150D565X9100R2
6.8	R	150D685X0100R2	150D685X9100R2

125 WVDC, 140 VDC SURGE

μF	Size Code	Catalog Number ±20% Tol.	±10% Tol.
.0047	A	150D472X0125A2	150D472X9125A2
.0056	A	———	150D562X9125A2
.0068	A	150D682X0125A2	150D682X9125A2
.0082	A	———	150D822X9125A2
.01	A	150D103X0125A2	150D103X9125A2
.012	A	———	150D123X9125A2
.015	A	150D153X0125A2	150D153X9125A2
.018	A	———	150D183X9125A2
.022	A	150D223X0125A2	150D223X9125A2
.027	A	———	150D273X9125A2
.033	A	150D333X0125A2	150D333X9125A2
.039	A	———	150D393X9125A2
.047	A	150D473X0125A2	150D473X9125A2
.056	A	———	150D563X9125A2
.068	A	150D683X0125A2	150D683X9125A2
.082	A	———	150D823X9125A2
.1	A	150D104X0125A2	150D104X9125A2
.12	A	———	150D124X9125A2
.15	A	150D154X0125A2	150D154X9125A2
.18	A	———	150D184X9125A2
.22	A	150D224X0125A2	150D224X9125A2
.27	A	———	150D274X9125A2
.33	A	150D334X0125A2	150D334X9125A2
.39	B	———	150D394X9125B2
.47	B	150D474X0125B2	150D474X9125B2
.56	B	———	150D564X9125B2
.68	B	150D684X0125B2	150D684X9125B2
.82	B	———	150D824X9125B2
1.0	B	150D105X0125B2	150D105X9125B2
1.2	B	———	150D125X9125B2
1.5	B	150D155X0125B2	150D155X9125B2
1.8	B	———	150D185X9125B2
2.2	B	150D225X0125B2	150D225X9125B2

DIMENSIONS

Code	D. x L.
A	.125"x.250"
B	.175"x.438"
R	.279"x.650"
S	.341"x.750"

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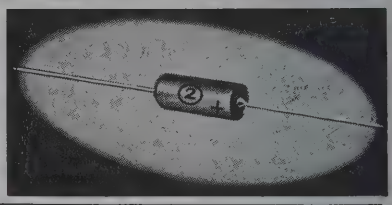
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B = .175" D. x .438" L. D = .341" D. x .750" L.

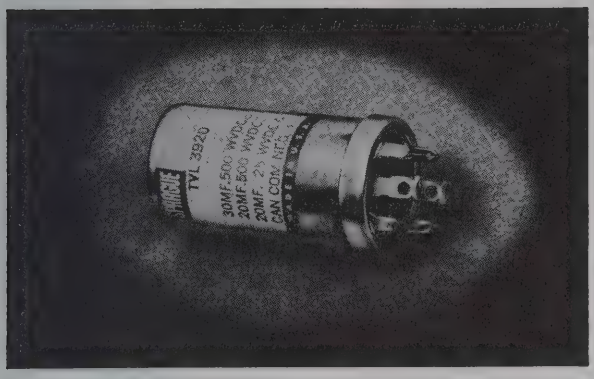
µF	Size Code	Tol.	CS12 Type Designation	CS13 Type Designation
6 WVDC				
5.6	A	10%	CS12BB565K	CS13BB565K
6.8	A	10%	CS12BB685K	CS13BB685K
6.8	A	20%	CS12BB685M	CS13BB685M
47	B	10%	CS12BB476K	CS13BB476K
47	B	20%	CS12BB476M	CS13BB476M
56	B	10%	CS12BB566K	CS13BB566K
150	C	10%	CS12BB157K	CS13BB157K
150	C	20%	CS12BB157M	CS13BB157M
180	C	10%	CS12BB187K	CS13BB187K
270	D	10%	CS12BB277K	CS13BB277K
330	D	10%	CS12BB337K	CS13BB337K
330	D	20%	CS12BB337M	CS13BB337M
10 WVDC				
3.9	A	10%	CS12BC395K	CS13BC395K
4.7	A	10%	CS12BC475K	CS13BC475K
4.7	A	20%	CS12BC475M	CS13BC475M
27	B	10%	CS12BC276K	CS13BC276K
33	B	10%	CS12BC336K	CA13BC336K
33	B	20%	CS12BC336M	CA13BC336M
39	B	10%	CS12BC396K	CS13BC396K
82	C	10%	CS12BC826K	CS13BC826K
100	C	10%	CS12BC107K	CS13BC107K
100	C	20%	CS12BC107M	CS13BC107M
120	C	10%	CS12BC127K	CS13BC127K
180	D	10%	CS12BC187K	CS13BC187K
220	D	10%	CS12BC227K	CS13BC227K
220	D	20%	CS12BC227M	CS13BC227M
15 WVDC				
2.7	A	10%	CS12BD275K	CS13BD275K
3.3	A	10%	CS12BD335K	CS13BD335K
3.3	A	20%	CS12BD335M	CS13BD335M
18	B	10%	CS12BD186K	CS13BD186K
22	B	10%	CS12BD226K	CS13BD226K
22	B	20%	CS12BD226M	CS13BD226M
56	C	10%	CS12BD566K	CS13BD566K
68	C	10%	CS12BD686K	CS13BD686K
68	C	20%	CS12BD686M	CS13BD686M
120	D	10%	CS12BD127K	CS13BD127K
150	D	10%	CS12BD157K	CS13BD157K
150	D	20%	CS12BD157M	CS13BD157M
20 WVDC				
1.2	A	10%	CS12BE125K	CS13BE125K
1.5	A	10%	CS12BE155K	CS13BE155K
1.5	A	20%	CS12BE155M	CS13BE155M
1.8	A	10%	CS12BE185K	CS13BE185K
2.2	A	10%	CS12BE225K	CS13BE225K
2.2	A	20%	CS12BE225M	CS13BE225M
8.2	B	10%	CS12BE825K	CS13BE825K
10	B	10%	CS12BE106K	CS13BE106K
10	B	20%	CS12BE106M	CS13BE106M
12	B	10%	CS12BE126K	CS13BE126K
15	B	10%	CS12BE156K	CS13BE156K
15	B	20%	CS12BE156M	CS13BE156M
27	C	10%	CS12BE276K	CS13BE276K
33	C	10%	CS12BE336K	CS13BE336K
33	C	20%	CS12BE336M	CS13BE336M
39	C	10%	CS12BE396K	CS13BE396K
47	C	10%	CS12BE476K	CS13BE476K
47	C	20%	CS12BE476M	CS13BE476M
56	D	10%	CS12BE566K	CS13BE566K
68	D	10%	CS12BE686K	CS13BE686K
68	D	20%	CS12BE686M	CS13BE686M
82	D	10%	CS12BE826K	CS13BE826K
100	D	10%	CS12BE107K	CS13BE107K
100	D	20%	CS12BE107M	CS13BE107M
35 WVDC				
.33	A	10%	CS12BF334K	CS13BF334K
.33	A	20%	CS12BF334M	CS13BF334M
.39	A	10%	CS12BF394K	CS13BF394K
.47	A	10%	CS12BF474K	CS13BF474K
.47	A	20%	CS12BF564K	CS13BF474M
.56	A	10%	CS12BF564K	CS13BF564K
.68	A	10%	CS12BF684K	CS13BF684K
.68	A	20%	CS12BF684M	CS13BF684M
.82	A	10%	CS12BF824K	CS13BF824K
1.0	A	10%	CS12BF105K	CS13BF105K
1.0	A	20%	CS12BF105M	CS13BF105M
1.2	B	10%	CS12BF125K	CS13BF125K
1.5	B	10%	CS12BF155K	CS13BF155K
1.5	B	20%	CS12BF155M	CS13BF155M
1.8	B	10%	CS12BF185K	CS13BF185K
2.2	B	10%	CS12BF225K	CS13BF225K
2.2	B	20%	CS12BF225M	CS13BF225M
2.7	B	10%	CS12BF275K	CS13BF275K
3.3	B	10%	CS12BF335K	CS13BF335K
3.3	B	20%	CS12BF335M	CS13BF335M
3.9	B	10%	CS12BF395K	CS13BF395K
4.7	B	10%	CS12BF475K	CS13BF475K
4.7	B	20%	CS12BF475M	CS13BF475M
5.6	B	10%	CS12BF565K	CS13BF565K
6.8	B	10%	CS12BF685K	CS13BF685K
6.8	B	20%	CS12BF685M	CS13BF685M
8.2	C	10%	CS12BF825K	CS13BF825K
10	C	10%	CS12BF106K	CS13BF106K
10	C	20%	CS12BF106M	CS13BF106M
12	C	10%	CS12BF126K	CS13BF126K
15	C	10%	CS12BF156K	CS13BF156K
15	C	20%	CS12BF156M	CS13BF156M
18	C	10%	CS12BF186K	CS13BF186K
22	C	10%	CS12BF226K	CS13BF226K
22	C	20%	CS12BF226M	CS13BF226M
27	D	10%	CS12BF276K	CS13BF276K
33	D	10%	CS12BF336K	CS13BF336K
33	D	20%	CS12BF336M	CS13BF336M
39	D	10%	CS12BF396K	CS13BF396K
47	D	10%	CS12BF476K	CS13BF476K
47	D	20%	CS12BF476M	CS13BF476M
50 WVDC				
1.0	A	10%	CS12BG105K	CS13BG105K
1.0	A	20%	CS12BG105M	CS13BG105M
1.2	B	10%	CS12BG125K	CS13BG125K
1.5	B	10%	CS12BG155K	CS13BG155K
1.5	B	20%	CS12BG155M	CS13BG155M
1.8	B	10%	CS12BG185K	CS13BG185K
2.2	B	10%	CS12BG225K	CS13BG225K
2.2	B	20%	CS12BG225M	CS13BG225M
2.7	B	10%	CS12BG275K	CS13BG275K
3.3	B	10%	CS12BG335K	CS13BG335K
3.3	B	20%	CS12BG335M	CS13BG335M
3.9	B	10%	CS12BG395K	CS13BG395K
4.7	B	10%	CS12BG475K	CS13BG475K
4.7	B	20%	CS12BG475M	CS13BG475M
5.6	C	10%	CS12BG565K	CS13BG565K
6.8	C	10%	CS12BG685K	CS13BG685K
6.8	C	20%	CS12BG685M	CS13BG685M
8.2	C	10%	CS12BG825K	CS13BG825K
10	C	10%	CS12BG106K	CS13BG106K
10	C	20%	CS12BG106M	CS13BG106M
12	C	10%	CS12BG126K	CS13BG126K
15	C	10%	CS12BG156K	CS13BG156K
15	C	20%	CS12BG156M	CS13BG156M
18	C	10%	CS12BG186K	CS13BG186K
22	D	10%	CS12BG226K	CS13BG226K
22	D	20%	CS12BG226M	CS13BG226M
75 WVDC				
.10	A	10%	CS12BH104K	CS13BH104K
.10	A	20%	CS12BH104M	CS13BH104M
.12	A	10%	CS12BH124K	CS13BH124K
.15	A	10%	CS12BH154K	CS13BH154K
.15	A	20%	CS12BH154M	CS13BH154M
.18	A	10%	CS12BH184K	CS13BH184K
.22	A	10%	CS12BH224K	CS13BH224K
.22	A	20%	CS12BH224M	CS13BH224M
.27	A	10%	CS12BH274K	CS13BH274K
.33	A	10%	CS12BH334K	CS13BH334K
.33	A	20%	CS12BH334M	CS13BH334M
.39	A	10%	CS12BH394K	CS13BH394K
.47	A	10%	CS12BH474K	CS13BH474K
.47	A	20%	CS12BH474M	CS13BH474M
.56	A	10%	CS12BH564K	CS13BH564K
.68	A	10%	CS12BH684K	CS13BH684K
.68	A	20%	CS12BH684M	CS13BH684M
.82	B	10%	CS12BH824K	CS13BH824K
1.0	B	10%	CS12BH105K	CS13BH105K
1.0	B	20%	CS12BH105M	CS13BH105M
1.2	B	10%	CS12BH125K	CS13BH125K
1.5	B	10%	CS12BH155K	CS13BH155K
1.5	B	20%	CS12BH155M	CS13BH155M
1.8	B	10%	CS12BH185K	CS13BH185K
2.2	B	10%	CS12BH225K	CS13BH225K
2.2	B	20%	CS12BH225M	CS13BH225M
2.7	B	10%	CS12BH275K	CS13BH275K
3.3	B	10%	CS12BH335K	CS13BH335K
3.3	B	20%	CS12BH335M	CS13BH335M
3.9	B	10%	CS12BH395K	CS13BH395K
4.7	C	10%	CS12BH475K	CS13BH475K
4.7	C	20%	CS12BH475M	CS13BH475M
5.6	C	10%	CS12BH565K	CS13BH565K
6.8	C	10%	CS12BH685K	CS13BH685K
6.8	C	20%	CS12BH685M	CS13BH685M
8.2	C	10%	CS12BH825K	CS13BH825K
10	C	10%	CS12BH106K	CS13BH106K
10	C	20%	CS12BH106M	CS13BH106M
12	D	10%	CS12BH126K	CS13BH126K
15	D	10%	CS12BH156K	CS13BH156K
15	D	20%	CS12BH156M	CS13BH156M
100 WVDC				
.0047	A	10%	CS12BJ472K	CS13BJ472K
.0047	A	20%	CS12BJ472M	CS13BJ472M
.0056	A	10%	CS12BJ562K	CS13BJ562K
.0068	A	10%	CS12BJ682K	CS13BJ682K
.0068	A	20%	CS12BJ682M	CS13BJ682M
.0082	A	10%	CS12BJ822K	CS13BJ822K
.01	A	10%	CS12BJ103K	CS13BJ103K
.01	A	20%	CS12BJ103M	CS13BJ103M
.012	A	10%	CS12BJ123K	CS13BJ123K
.015	A	10%	CS12BJ153K	CS13BJ153K
.015	A	20%	CS12BJ153M	CS13BJ153M
.018	A	10%	CS12BJ183K	CS13BJ183K
.022	A	10%	CS12BJ223K	CS13BJ223K
.022	A	20%	CS12BJ223M	CS13BJ223M
.027	A	10%	CS12BJ273K	CS13BJ273K
.033	A	10%	CS12BJ333K	CS13BJ333K
.033	A	20%	CS12BJ333M	CS13BJ333M
.039	A	10%	CS12BJ393K	CS13BJ393K
.047	A	10%	CS12BJ473K	CS13BJ473K
.047	A	20%	CS12BJ473M	CS13BJ473M
.056	A	10%	CS12BJ563K	CS13BJ563K
.068	A	10%	CS12BJ683K	CS13BJ683K
.068	A	20%	CS12BJ683M	CS13BJ683M
.082	A	10%	CS12BJ823K	CS13BJ823K
.10	A	10%	CS12BJ104K	CS13BJ104K
.10	A	20%	CS12BJ104M	CS13BJ104M
.12	A	10%	CS12BJ124K	CS13BJ124K
.15	A	10%	CS12BJ154K	CS13BJ154K
.15	A	20%	CS12BJ154M	CS13BJ154M
.18	A	10%	CS12BJ184K	CS13BJ184K
.22	A	10%	CS12BJ224K	CS13BJ224K
.22	A	20%	CS12BJ224M	CS13BJ224M
.27	A	10%	CS12BJ274K	CS13BJ274K
.33	A	10%	CS12BJ334K	CS13BJ334K
.33	A	20%	CS12BJ334M	CS13BJ334M
.39	A	10%	CS12BJ394K	CS13BJ394K
.47	A	10%	CS12BJ474K	CS13BJ474K
.47	A	20%	CS12BJ474M	CS13BJ474M
.56	A	10%	CS12BJ564K	CS13BJ564K
.68	B	10%	CS12BJ684K	CS13BJ684K
.68	B	20%	CS12BJ684M	CS13BJ684M
.82	B	10%	CS12BJ824K	CS13BJ824K
1.0	B	10%	CS12BJ105K	CS13BJ105K
1.0	B	20%	CS12BJ105M	CS13BJ105M
1.2	B	10%	CS12BJ125K	CS13BJ125K
1.5	B	10%	CS12BJ155K	CS13BJ155K
1.5	B	20%	CS12BJ155M	CS13BJ155M
1.8	B	10%	CS12BJ185K	CS13BJ185K
2.2	B	10%	CS12BJ225K	CS13BJ225K
2.2	B	20%	CS12BJ225M	CS13BJ225M
2.7	B	10%	CS12BJ275K	CS13BJ275K

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SPRAGUE CAPACITORS

TVL TWIST-LOK® ELECTROLYTICS



- Hermetically Sealed in Aluminum Cans for Long Life and Dependable Performance in TV, Radio and Hi-Fi
- Designed for 85C (185F) Operation
- Stand Up Under Extremely High Temperatures Often Encountered in TV, Hi-Fi, and Auto Radio Cabinets
- Withstand High Surge Voltages
- Ideal for High Ripple Selenium Rectifier Circuits
- Can Be Safely Mounted "Above Ground" Using Phenolic Mounting Plate and Insulating Tube
- Easy to Mount — Unit Locks Firmly in Place with a Twist of the Tabs
- Furnished Complete with Both Phenolic and Metal Mounting Plates

The Twist-lok Capacitors listed here include only popular ratings for industrial applications. For the complete line of more than 1800 Twist-lok Capacitors, please refer to Distributor's Guide to Replacement Electrolytic Capacitors, C-1002.

μF	WVDC	Dia. x Length	Cat. No.	Net
		SINGLE UNITS		
2000	6	1⅜ x 2	TVL-1115	$1.83
225	15	¾ x 2	TVL-1160	1.05
1000	15	1 x 2½	TVL-1165	1.53
2000	15	1⅜ x 2	TVL-1168	2.07
3000	15	1⅜ x 2	TVL-1170	2.55
4000	15	1⅜ x 3½	TVL-1173	2.25
40	25	¾ x 2	TVL-1210	.81
500	25	1 x 1½	TVL-1220	1.53
1000	25	1⅜ x 2	TVL-1230	2.13
100	50	¾ x 2	TVL-1317	.99
150	50	¾ x 2½	TVL-1320	1.08
250	50	1 x 2½	TVL-1324	1.20
500	50	1⅜ x 2	TVL-1330	1.59
1000	50	1⅜ x 2½	TVL-1338	2.25
1500	50	1⅜ x 2½	TVL-1341	2.64
30	150	1 x 2	TVL-1408	.93
50	150	1 x 1½	TVL-1415	.99
80	150	1 x 2½	TVL-1420	1.11
100	150	1 x 2½	TVL-1423	1.20
120	150	1 x 2	TVL-1425	1.29
120	150	1⅜ x 2½	TVL-1426	1.29
140	150	1 x 2½	TVL-1428	1.29
150	150	1 x 3	TVL-1429	1.29
150	150	1⅜ x 3	TVL-1430	1.29
200	150	1⅜ x 2	TVL-1431	1.47
300	150	1⅜ x 2	TVL-1434	1.68
160	200	1⅜ x 3	TVL-1473	1.89
20	250	1 x 2	TVL-1509	.96
40	250	1 x 2	TVL-1519	1.08
100	250	1 x 3	TVL-1535	1.62
150	250	1⅜ x 2½	TVL-1540	1.86
200	250	1⅜ x 3½	TVL-1547	2.19
80	300	1 x 2½	TVL-1573	1.53
100	300	1 x 4	TVL-1578	1.74
125	300	1⅜ x 3½	TVL-1580	2.10
150	300	1⅜ x 3½	TVL-1584	2.10
250	300	1⅜ x 4	TVL-1590	3.33
30	350	1 x 2	TVL-1617	1.14
40	350	1 x 2	TVL-1621	1.20
50	350	1 x 2	TVL-1622	1.26
60	350	1 x 3	TVL-1624	1.32
80	350	1⅜ x 2	TVL-1630	1.71
125	350	1⅜ x 3½	TVL-1638	2.37
150	350	1⅜ x 2½	TVL-1642	2.37
4	450	1 x 2	TVL-1702	.84
10	450	1 x 2	TVL-1705	$ .93
15	450	1 x 2	TVL-1709	1.02
20	450	1 x 2	TVL-1714	1.08
30	450	1 x 2½	TVL-1720	1.17
40	450	1 x 3	TVL-1725	1.23
50	450	1 x 3	TVL-1728	1.41
60	450	1⅜ x 2	TVL-1730	1.56
80	450	1⅜ x 2½	TVL-1735	1.83
100	450	1⅜ x 3	TVL-1750	2.07
125	450	1⅜ x 4	TVL-1760	2.31
40	475	1⅜ x 2	TVL-1820	1.50
10	500	1 x 1½	TVL-1940	1.02
20	500	1 x 2½	TVL-1943	1.11
30	500	1 x 2½	TVL-1947	1.20
40	500	1 x 3	TVL-1950	1.50
80	500	1⅜ x 3	TVL-1958	2.16
90	500	1⅜ x 3	TVL-1960	2.10
		DUAL UNITS		
20-20	150-150	1 x 2	TVL-2415	1.02
30-20	150-150	1 x 1½	TVL-2422	1.11
40-20	150-150	1 x 2	TVL-2425	1.11
40-30	150-150	1 x 2	TVL-2427	1.11
40-40	150-150	1 x 1½	TVL-2428	1.14
50-30	150-150	1 x 1½	TVL-2432	1.20
50-50	150-150	1 x 1½	TVL-2435	1.29
60-60	150-150	1 x 3½	TVL-2438	1.41
70-30	150-150	1 x 2	TVL-2439	1.32
75-75	150-150	1 x 3	TVL-2440	1.56
80-40	150-150	1⅜ x 2½	TVL-2442	1.38
80-50	150-150	1 x 2½	TVL-2442.1	1.44
80-80	150-150	1⅜ x 2	TVL-2442.4	1.59
125-100	150-150	1⅜ x 2½	TVL-2443.3	2.01
150-80	150-150	1⅜ x 2½	TVL-2443.5	1.83
200-5	150-150	1⅜ x 2	TVL-2444	1.62
200-125	150-150	1⅜ x 3½	TVL-2445	2.25
200-150	150-150	1⅜ x 4	TVL-2446	2.25
200-200	150-150	1⅜ x 2½	TVL-2447	2.40
60-60	200-200	1 x 3	TVL-2461	2.04
60-60	200-200	1⅜ x 2	TVL-2462	2.04
100-100	200-200	1⅜ x 3	TVL-2464	2.10
200-5	200-200	1⅜ x 2	TVL-2470	1.83
20-20	250-250	1 x 1½	TVL-2515	1.14
40-40	250-250	1 x 2	TVL-2520	1.50
150-150	250-250	1⅜ x 4	TVL-2535	3.09
200-200	250-250	1⅜ x 4	TVL-2538	3.63

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All prices and sizes subject to change without notice.

SPRAGUE CAPACITORS

TVL TWIST-LOK® ELECTROLYTICS, continued

μF	WVDC	Dia. x Length	Cat. No.	Net
40-30	300-300	1 x 3	TVL-2574	$1.59
80-80	300-300	1⅜ x 3	TVL-2585	2.43
120-20	300-300	1⅜ x 3½	TVL-2588	2.40
120-40	300-300	1⅜ x 3½	TVL-2589	2.61
15-15	350-350	1 x 2	TVL-2625	1.35
30-30	350-350	1 x 2½	TVL-2628	1.74
50-30	350-350	1⅜ x 2½	TVL-2630	1.89
60-30	350-350	1⅜ x 3	TVL-2631	1.89
80-20	350-350	1⅜ x 3	TVL-2633	2.10
80-40	350-350	1⅜ x 3	TVL-2634	2.46
80-80	350-350	1⅜ x 4	TVL-2635	2.82
90-40	350-350	1⅜ x 3	TVL-2637	2.58
100-60	350-350	1⅜ x 3½	TVL-2639	2.88
100-100	350-350	1⅜ x 3	TVL-2641	3.69
160-10	350-350	1⅜ x 3	TVL-2643	2.58
100-30	400-50	1⅜ x 3	TVL-2655	2.34
80-80	400-200	1⅜ x 3½	TVL-2656	2.37
80-60	400-400	1⅜ x 3	TVL-2677	2.82
120-40	400-400	1⅜ x 4	TVL-2679	3.15
30-200	450-150	1⅜ x 3	TVL-2715	2.10
40-10	450-300	1 x 3	TVL-2724	1.56
5-5	450-450	1 x 2	TVL-2748	1.02
10-10	450-450	1 x 2	TVL-2750	1.14
15-15	450-450	1 x 2½	TVL-2753	1.35
20-10	450-450	1 x 2½	TVL-2754	1.35
30-10	450-450	1 x 3	TVL-2757	1.44
30-30	450-450	1⅜ x 2	TVL-2759	1.83
40-20	450-450	1⅜ x 2½	TVL-2762	1.95
40-40	450-450	1⅜ x 2½	TVL-2764	2.07
50-50	450-450	1⅜ x 3	TVL-2767	2.31
60-20	450-450	1⅜ x 3	TVL-2768	2.13
60-40	450-450	1⅜ x 3½	TVL-2770	2.37
60-60	450-450	1⅜ x 3½	TVL-2772	2.70
80-10	450-450	1⅜ x 3	TVL-2776	2.16
80-20	450-450	1⅜ x 3	TVL-2776.5	2.34
80-30	450-450	1⅜ x 4	TVL-2777	2.52
80-40	450-450	1⅜ x 3½	TVL-2778	3.03
100-40	450-450	1⅜ x 4	TVL-2780	2.91
15-15	475-475	1 x 2½	TVL-2820	2.01
30-10	475-475	1 x 3	TVL-2824	1.56
40-10	475-475	1⅜ x 2	TVL-2827	1.86
80-50	475-475	1⅜ x 4	TVL-2851	3.12
10-10	500-500	1 x 2½	TVL-2933	1.17
20-20	500-500	1⅜ x 2½	TVL-2935	1.71
30-10	500-500	1⅜ x 3	TVL-2936	1.56
30-30	500-500	1⅜ x 2½	TVL-2937	1.95
40-40	500-500	1⅜ x 3	TVL-2940	2.58
60-40	500-500	1⅜ x 3½	TVL-2944	2.76

TRIPLE UNITS

40-20-20	150-150-25	1 x 2½	TVL-3422	1.38
50-30-20	150-150-25	1 x 2½	TVL-3426.7	1.50
50-50-20	150-150-25	1 x 3	TVL-3430	1.59
80-40-20	150-150-25	1 x 2½	TVL-3432	1.68
80-40-300	150-150-25	1⅜ x 2½	TVL-3432.4	2.22
20-20-20	150-150-150	1 x 1½	TVL-3433	1.38
30-30-10	150-150-150	1 x 2	TVL-3435	1.71
40-20-10	150-150-150	1 x 2	TVL-3436	1.41
40-20-20	150-150-150	1 x 1½	TVL-3437	1.44
40-30-20	150-150-150	1 x 2	TVL-3438	1.50
40-40-40	150-150-150	1 x 2	TVL-3440	1.56
50-40-10	150-150-150	1 x 2½	TVL-3441	1.53
50-50-50	150-150-150	1 x 3	TVL-3442	1.80
60-40-20	150-150-150	1 x 3	TVL-3443	1.65
70-15-15	150-150-150	1 x 2½	TVL-3443.3	1.62
70-40-40	150-150-150	1 x 3	TVL-3443.4	2.43
80-30-10	150-150-150	1 x 3	TVL-3443.8	1.65
80-40-20	150-150-150	1 x 3	TVL-3444	1.74
100-30-10	150-150-150	1 x 3	TVL-3447	1.83
120-80-40	150-150-150	1⅜ x 3½	TVL-3448	2.28
120-120-40	150-150-150	1⅜ x 2	TVL-3448.2	2.43
200-100-60	150-150-150	1⅜ x 3½	TVL-3450	2.73
200-150-150	150-150-150	1⅜ x 4	TVL-3452	4.56
80-10-20	200-200-50	1 x 3	TVL-3471	1.68
20-20-20	250-250-250	1 x 2	TVL-3532	1.56
40-20-20	250-250-250	1 x 3½	TVL-3540	1.74
80-10-10	250-250-250	1 x 3	TVL-3543	$1.92
80-80-60	250-250-250	1⅜ x 3	TVL-3545	2.94
10-10-10	300-300-300	1 x 2	TVL-3580	1.44
60-20-10	300-300-300	1⅜ x 2	TVL-3581	2.07
80-40-40	300-300-300	1⅜ x 2½	TVL-3583	2.85
120-50-40	300-300-300	1⅜ x 4	TVL-3585	3.51
140-100-20	300-300-300	1⅜ x 4½	TVL-3585.5	3.72
20-10-10	350-350-350	1 x 2	TVL-3639.6	1.62
30-20-10	350-350-350	1 x 2½	TVL-3639.8	1.95
60-40-20	350-350-350	1⅜ x 4	TVL-3640	2.55
60-50-50	350-350-350	1⅜ x 2½	TVL-3641	2.94
80-60-60	350-350-350	1⅜ x 4	TVL-3642	3.33
90-40-20	350-350-350	1⅜ x 4	TVL-3645	3.15
20-20-20	400-400-25	1 x 3	TVL-3678	1.71
10-10-10	400-400-400	1 x 2½	TVL-3690	1.44
90-10-5	400-400-400	1⅜ x 3	TVL-3696	2.64
10-10-10	450-450-25	1 x 2½	TVL-3729	1.44
10-10-20	450-450-25	1 x 2	TVL-3731	1.44
40-20-20	450-450-25	1⅜ x 2½	TVL-3743.7	2.10
10-10-10	450-450-450	1 x 2½	TVL-3776	1.56
15-15-15	450-450-450	1 x 3	TVL-3778.2	1.86
20-10-10	450-450-450	1 x 3	TVL-3779	1.74
20-20-20	450-450-450	1⅜ x 2½	TVL-3780	2.16
30-10-10	450-450-450	1⅜ x 2	TVL-3780.5	1.89
30-20-20	450-450-450	1⅜ x 3	TVL-3781	2.31
30-30-30	450-450-450	1⅜ x 3½	TVL-3782	2.61
40-10-10	450-450-450	1⅜ x 3	TVL-3783	2.01
40-30-20	450-450-450	1⅜ x 3	TVL-3784	2.58
40-40-10	450-450-450	1⅜ x 2½	TVL-3785	2.49
40-40-20	450-450-450	1⅜ x 3	TVL-3786	2.67
40-40-40	450-450-450	1⅜ x 3	TVL-3787	2.94
50-40-30	450-450-450	1⅜ x 3½	TVL-3788	2.94
60-20-20	450-450-450	1⅜ x 3	TVL-3789	2.76
60-30-10	450-450-450	1⅜ x 3	TVL-3790	2.70
60-40-20	450-450-450	1⅜ x 3½	TVL-3791	3.00
80-40-20	450-450-450	1⅜ x 4	TVL-3793	3.24
30-30-20	475-475-475	1⅜ x 3	TVL-3840	2.67
40-30-10	475-475-475	1⅜ x 3	TVL-3842.6	2.70
40-30-30	475-475-475	1⅜ x 4	TVL-3843	3.09
10-10-10	500-500-500	1 x 2½	TVL-3952	1.62
30-20-20	500-500-500	1⅜ x 3	TVL-3956	2.52
40-10-10	500-500-500	1⅜ x 3	TVL-3962	2.34
40-40-10	500-500-500	1⅜ x 3½	TVL-3965	3.03

QUADRUPLE UNITS

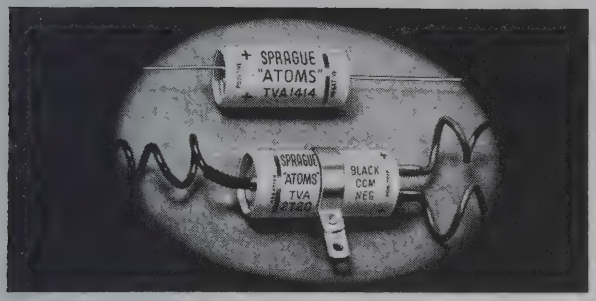
40-40-40-30	150-150-150-150	1⅜ x 2	TVL-4441	1.98
100-80-60-40	150-150-150-150	1⅜ x 2	TVL-4445	2.79
200-200-60-30	175-175-175-175	1⅜ x 4	TVL-4450	3.33
60-40-20-50	300-300-300-25	1⅜ x 3½	TVL-4570	2.82
40-20-10-10	300-300-300-300	1⅜ x 2	TVL-4578	2.37
40-40-20-10	300-300-300-300	1⅜ x 3½	TVL-4579	2.73
40-40-30-20	300-300-300-300	1⅜ x 3	TVL-4580	2.91
60-40-10-10	300-300-300-300	1⅜ x 2½	TVL-4583	2.73
200-20-20-20	300-300-300-300	1⅜ x 4	TVL-4590	3.75
40-20-20-10	350-350-350-350	1⅜ x 2½	TVL-4635	2.61
40-40-40-40	350-350-350-350	1⅜ x 4	TVL-4635.3	3.60
80-60-40-20	350-350-350-350	1⅜ x 4	TVL-4635.7	3.84
90-40-30-30	350-350-350-350	1⅜ x 4	TVL-4635.8	4.08
50-40-30-20	400-400-400-400	1⅜ x 4	TVL-4674	3.39
80-25-10-10	400-400-400-400	1⅜ x 4	TVL-4680	3.15
30-30-20-20	450-450-450-450	1⅜ x 3	TVL-4769.4	3.12
35-35-10-5	450-450-450-450	1⅜ x 3	TVL-4771	2.76
40-10-10-10	450-450-450-450	1⅜ x 3	TVL-4771.3	2.46
40-35-10-10	450-450-450-450	1⅜ x 3	TVL-4771.8	2.88
40-40-20-20	450-450-450-450	1⅜ x 2½	TVL-4773	3.33
40-40-30-30	450-450-450-450	1⅜ x 4	TVL-4774	3.63
40-40-40-40	450-450-450-450	1⅜ x 4	TVL-4775	3.87
60-20-20-20	450-450 450-450	1⅜ x 4	TVL-4778	3.39
60-30-10-2	450-450-450-450	1⅜ x 3	TVL-4779	3.06
80-10-10-10	450-450-450-450	1⅜ x 4	TVL-4783	3.03
20-20-10-10	475-475-475-475	1⅜ x 2½	TVL-4832	2.61
20-20-20-20	475-475-475-475	1⅜ x 3	TVL-4834	3.06
40-20-10-10	475-475-475-475	1⅜ x 3	TVL-4840	3.06
10-10-10-10	500-500-500-500	1⅜ x 2	TVL-4940	2.10
40-40-8-8	500-500-500-500	1⅜ x 3½	TVL-4944	3.42

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® U.C.P., Inc.

SPRAGUE CAPACITORS

ATOM® ELECTROLYTICS



- The Smallest Dependable Standard Tubular—Designed for 85C (185F) Operation in Voltages to 475 WVDC
- Whether For AC-DC Sets, Auto Radios, Home Radio-phono Combinations, Or TV Sets, The SPRAGUE Line Will Handle All Your Replacement Requirements—No Dual Inventory Problems
- Have Low Leakage And Long Shelf Life
- Will Withstand High Temperatures, High Ripple Currents, High Surge Voltages
- Metal Case Construction with Outer Kraftboard Insulating Case Except as Noted by † Sign

SINGLE UNITS

μF	WVDC	D. x L.*	Cat. No.	Net
750	3	1/2 x 2 7/16	TVA-1097	$ .93
50	6	3/8 x 1 1/4	TVA-1100	.57
100	6	1/2 x 1 3/16	TVA-1101	.72
250	6	1/2 x 1 3/16	TVA-1102	.81
500	6	9/16 x 1 7/16	TVA-1103	.93
1000	6	11/16 x 1 11/16	TVA-1104	1.14
1500	6	3/4 x 1 15/16	TVA-1105	1.26
2000	6	3/4 x 1 15/16	TVA-1106	1.38
50	10NP	1/2 x 1 7/16	TVAN-1117	.66
100	12	1/2 x 1 3/16	TVA-1130	.72
250	12	9/16 x 1 3/16	TVA-1131	.87
500	12	5/8 x 1 7/16	TVA-1132	1.02
1000	12	3/4 x 1 15/16	TVA-1133	1.35
100	15	1/2 x 1 3/16	TVA-1160	.75
250	15	9/16 x 1 7/16	TVA-1161	.93
500	15	5/8 x 1 11/16	TVA-1162	1.05
1000	15	3/4 x 1 11/16	TVA-1163	1.39
2000	15	7/8 x 2 11/16	★TVA-1170	1.92
2	25	3/8 x 1 1/4	TVA-1201	.54
2	25NP	1/2 x 1 7/16	TVAN-1202	.54
5	25	3/8 x 1 1/4	TVA-1203	.60
10	25	3/8 x 1 1/4	TVA-1204	.60
20	25	3/8 x 1 1/8	TVA-1204.5	.60
25	25	3/8 x 1 1/8	TVA-1205	.60
50	25	1/2 x 1 3/16	TVA-1206	.66
100	25	1/2 x 1 3/16	TVA-1207	.81
250	25	5/8 x 1 7/16	TVA-1208	1.02
500	25	11/16 x 1 11/16	TVA-1209	1.38
1000	25	3/4 x 2 1/8	TVA-1211	1.98
20	30NP	5/8 x 1 7/16	TVAN-1220	.60
1	50	3/8 x 1 1/4	TVA-1300	.54
2	50	3/8 x 1 1/4	TVA-1301	.54
3	50	1/2 x 1 3/16	TVA-1302	.60
4	50NP	5/8 x 1 5/16	★TVAN-1302.5	.60
5	50	3/8 x 1 1/4	TVA-1303	.60
10	50	3/8 x 1 1/8	TVA-1304	.60
15	50	3/8 x 1 1/8	TVA-1305	.60
20	50	3/8 x 1 1/8	TVA-1305.5	.60
25	50	3/8 x 1 1/8	TVA-1306	.63
50	50	9/16 x 1 3/16	TVA-1308	.72
100	50	9/16 x 1 7/16	TVA-1310	.84
150	50	11/16 x 1 7/16	TVA-1311	.93
250	50	3/4 x 1 7/16	TVA-1312	1.05
500	50	7/8 x 1 11/16	TVA-1315	1.44
10	90	3/8 x 1 3/4	TVA-1320	.63
1	150	3/8 x 1 1/4	TVA-1400	.57
4	150	3/8 x 1 1/8	TVA-1402	.60
5	150	3/8 x 1 1/8	TVA-1403	.60
8	150	1/2 x 1 3/16	TVA-1405	.63
10	150	1/2 x 1 3/16	TVA-1406	.63
12	150	1/2 x 1 3/16	TVA-1407	.66
16	150	1/2 x 1 7/16	TVA-1409	.69
20	150	9/16 x 1 7/16	TVA-1410	.72
25	150	11/16 x 1 7/16	TVA-1411	.75
30	150	3/4 x 1 3/16	TVA-1412	.78
40	150	3/4 x 1 7/16	TVA-1413	.81
50	150	3/4 x 1 11/16	TVA-1414	.84
60	150	7/8 x 1 7/16	TVA-1415	.90
80	150	7/8 x 1 7/16	TVA-1418	.96
100	150	7/8 x 1 15/16	TVA-1420	$1.05
150	150	1 x 1 15/16	TVA-1422	1.14
200	150	1 x 2 7/16	TVA-1423	1.32
250	150	1 x 2 15/16	★TVA-1424	1.41
300	150	1 3/8 x 3 3/16	TVA-1425	1.53
80	175	1 x 1 15/16	TVA-1430	.99
2	200NP	1/2 x 1 7/16	TVAN-1435.1	.66
100	200	1 x 2 3/16	TVA-1445	1.14
150	200	1 x 2 11/16	★TVA-1447	1.53
200	200	1 x 3 3/16	★TVA-1480	1.74
4	250	1/2 x 1 3/16	TVA-1501	.60
8	250	1/2 x 1 7/16	TVA-1503	.69
10	250	9/16 x 1 7/16	TVA-1504	.72
12	250	9/16 x 1 7/16	TVA-1505	.75
16	250	3/4 x 1 3/16	TVA-1507	.78
20	250	3/4 x 1 3/16	TVA-1508	.81
30	250	3/4 x 1 11/16	TVA-1510	.87
40	250	3/4 x 1 15/16	TVA-1511	.93
50	250	7/8 x 1 11/16	TVA-1512	1.02
60	250	15/16 x 1 11/16	TVA-1513	1.08
70	250	1 x 1 15/16	TVA-1515	1.11
100	250	1 x 2 3/16	TVA-1522	1.47
100	300	1 x 2 15/16	TVA-1573	1.59
140	300	1 3/8 x 3 3/8	★TVA-1575†	1.89
150	300	1 3/8 x 3 7/8	TVA-1576†	1.95
200	300	1 3/8 x 4 5/8	TVA-1578†	2.70
4	350	5/8 x 1 3/16	TVA-1601	.63
5	350NP	3/4 x 1 11/16	TVAN-1602	.75
8	350	5/8 x 1 7/16	TVA-1603	.72
10	350	11/16 x 1 7/16	TVA-1604	.75
12	350	3/4 x 1 7/16	TVA-1605	.78
16	350	3/4 x 1 7/16	TVA-1607	.84
20	350	3/4 x 1 11/16	TVA-1601	.89
30	350	3/4 x 1 15/16	TVA-1610	.99
40	350	7/8 x 1 15/16	TVA-1611	1.05
60	350	1 x 1 15/16	TVA-1613	1.17
100	350	1 x 2 11/16	TVA-1620	1.86
200	350	1 3/8 x 4 1/8	TVA-1624†	3.12
10	400NP	1 x 1 15/16	★TVAN-1650	.90
20	400NP	1 x 2 3/16	TVAN-1652	.90
1	450	1/2 x 1 3/16	TVA-1700	.66
2	450	1/2 x 1 3/16	TVA-1701	.66
4	450	5/8 x 1 3/16	TVA-1702	.69
5	450	5/8 x 1 7/16	TVA-1703	.72
8	450	11/16 x 1 7/16	TVA-1704	.75
10	450	3/4 x 1 7/16	TVA-1705	.78
12	450	3/4 x 1 7/16	TVA-1706	.81
16	450	3/4 x 1 11/16	TVA-1708	.84
20	450	7/8 x 1 11/16	TVA-1709	.93
30	450	7/8 x 1 15/16	TVA-1711	1.02
40	450	1 x 1 15/16	TVA-1712	1.08
50	450	1 x 2 7/16	TVA-1713	1.26
60	450	1 x 2 11/16	TVA-1714	1.41
80	450	1 x 3 11/16	TVA-1716	1.68
100	450	1 3/8 x 3 15/16	TVA-1718	1.92
10	475	3/4 x 1 15/16	TVA-1802	.81
20	475	7/8 x 2 3/16	TVA-1804	.96
8	500	7/8 x 1 11/16	TVA-1902	$ .78
10	500	7/8 x 1 11/16	TVA-1903	.81
16	500	15/16 x 2 3/16	TVA-1905	.90
20	500	1 x 2 3/16	TVA-1906	.96
40	500	1 x 2 5/16	TVA-1908	1.35
8	600	13/16 x 1 1/4	TVA-1962	1.71
10	600	15/16 x 1 1/4	TVA-1963	1.77
16	600	15/16 x 1 3/4	TVA-1965	2.07
20	600	15/16 x 1 3/4	TVA-1966	2.13

DUAL UNITS (COMMON NEGATIVE—3 LEADS)

μF	WVDC	D. x L.*	Cat. No.	Net
10-10	25-25	3/4 x 1 3/16	★TVA-2210	.84
10-10	50-50	3/4 x 1 3/16	★TVA-2315	.84
8-8	150-150	3/4 x 1 3/16	★TVA-2415	.90
16-16	150-150	3/4 x 1 7/16	★TVA-2420	1.08
20-20	150-150	3/4 x 1 7/16	★TVA-2425	.96
20-20	150-150	3/4 x 1 7/16	★TVA-2428	.99
30-20	150-150	7/8 x 1 7/16	★TVA-2421	1.02
30-30	150-150	7/8 x 1 7/16	★TVA-2434	1.08
40-20	150-150	7/8 x 1 7/16	★TVA-2438	1.05
40-30	150-150	7/8 x 1 11/16	★TVA-2442	1.08
40-40	150-150	7/8 x 1 15/16	★TVA-2445	1.11
50-30	150-150	7/8 x 1 15/16	★TVA-2450	1.17
50-50	150-150	7/8 x 1 15/16	★TVA-2453	1.26
60-20	150-150	7/8 x 2 15/16	★TVA-2455	1.20
80-20	150-150	7/8 x 2 7/16	★TVA-2459	1.29
80-30	150-150	7/8 x 2 3/16	TVA-2460	1.32
80-40	150-150	7/8 x 2 7/16	★TVA-2461	1.32
80-50	150-150	7/8 x 2 7/16	★TVA-2462	1.41
100-50	150-150	1 x 2 11/16	★TVA-2463	1.59
100-100	150-150	1 3/8 x 3 3/8	TVA-2464†	1.92
150-150	150-150	1 3/8 x 4 1/8	★TVA-2466†	2.07
200-5	150-150	1 x 3 7/16	★TVA-2467	1.59
200-100	150-150	1 3/8 x 5 1/8	★TVA-2470†	2.16
250-50	150-150	1 3/8 x 3 1/8	TVA-2473†	1.86
250-200	150-150	1 3/8 x 4 1/8	TVA-2475†	2.52
60-125	200-50	1 1/8 x 2 7/8	★TVA-2484†	1.50
200-5	200-200	1 x 3 11/16	★TVA-2498	2.16
20-20	250-250	7/8 x 1 11/16	★TVA-2515	1.11
40-10	250-250	7/8 x 1 15/16	★TVA-2520	1.23
80-10	250-250	1 x 2 1/8	★TVA-2525	1.53
120-80	250-250	1 3/8 x 3 7/8	TVA-2535†	2.40
200-100	300-50	1 1/4 x 4 1/2	★TVA-2565†	2.58
150-100	300-300	1 3/8 x 4 7/8	TVA-2590†	3.21
140-5	350-350	1 1/4 x 3 7/8	★TVA-2640†	2.49
80-100	450-50	1 3/8 x 4 3/4	TVA-2711†	2.22
8-8	450-450	7/8 x 1 11/16	★TVA-2720	1.02
10-10	450-450	7/8 x 1 15/16	★TVA-2722	1.11
16-8	450-450	7/8 x 2 3/16	★TVA-2725	1.20
20-20	450-450	7/8 x 2 11/16	★TVA-2730	1.50
30-30	450-450	1 x 3 3/16	★TVA-2735	1.80
40-40	450-450	1 x 3 15/16	★TVA-2740	2.04
50-30	450-450	1 x 3 15/16	★TVA-2743	2.04
80-30	450-450	1 x 4 7/16	★TVA-2750	2.49
20-100	475-50	1 x 2 7/16	★TVA-2765	1.50

*Add 1/16" to diameter and 1/8" to length to allow for outer insulating tube on all units except those marked (†) which are of Kraftboard construction.
★Mounting straps attached

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SPRAGUE CAPACITORS

ATOM® ELECTROLYTICS, continued

μF	WVDC	Diam. x Length *	Cat. No.	Net
	DUAL UNITS (SEPERATE SECTIONS—4 LEADS)			
20-20	150-150	1 x 2⅜	★TU-220 †	$1.23
40-20	150-150	1 1/16 x 2⅝	★TU-420 †	1.32
16-16	250-250	1 x 2⅞	TU-216 †	1.32
8-8	450-450	1 1/16 x 3⅜	★TU-88 †	1.29
16-16	450-450	1⅜ x 3⅛	★TU-1616†	1.68
120-120	150-150	1⅛ x 5	TU-2120	2.07
	TRIPLE UNITS			
40-40-250	150-150-10	15/16 x 1 15/16	★TVA-3406	1.56
30-30-100	150-150-12	⅞ x 1 15/16	★TVA-3419	1.38
60-40-250	150-150-25	1 x 1 15/16	★TVA-3421.5	1.86
20-20-20	150-150-25	⅞ x 1 7/16	★TVA-3415	1.47
40-20-20	150-150-25	⅞ x 1 11/16	★TVA-3422.9	1.53
40-30-20	150-150-25	⅞ x 1 11/16	★TVA-3423	1.56
40-40-20	150-150-25	⅞ x 2 3/16	★TVA-3425	1.59
40-40-100	150-150-25	⅞ x 2 7/16	★TVA-3427	1.68
50-30-20	150-150-25	⅞ x 2 3/16	★TVA-3430	1.59
50-30-100	150-150-25	⅞ x 2 7/16	★TVA-3432	1.68
50-30-200	150-150-25	1 x 2 3/16	★TVA-3433	1.65
50-50-20	150-150-25	15/16 x 2 3/16	★TVA-3436	1.65
80-20-100	150-150-25	1¼ x 2⅞	TVA-3437†	1.68
80-40-20	150-150-25	1 x 1 15/16	★TVA-3437.1	1.68
250-120-50	150-150-25	1⅜ x 1⅞	★TVA-3437.6†	2.61
20-20-20	150-150-150	⅞ x 1 11/16	★TVA-3440	1.50
30-25-20	150-150-150	⅞ x 2 3/16	★TVA-3442	1.35
30-30-20	150-150-150	⅞ x 2 3/16	★TVA-3443	1.38
30-30-30	150-150-150	⅞ x 2 3/16	★TVA-3444	1.56
40-20-20	150-150-150	⅞ x 1 15/16	★TVA-3446	1.35
40-30-20	150-150-150	⅞ x 2 3/16	★TVA-3448	1.56
40-40-20	150-150-150	⅞ x 2 7/16	★TVA-3450	1.41
40-40-40	150-150-150	1 x 2 7/16	★TVA-3451	1.68
50-30-20	150-150-150	1 x 2 7/16	★TVA-3453	1.62
50-50-50	150-150-150	1 x 2 15/16	★TVA-3453.5	1.71
80-40-20	150-150-150	1 x 2 15/16	★TVA-3455	1.74
80-40-40	150-150-150	1 x 2 15/16	★TVA-3456	1.71
80-50-50	150-150-150	1 x 3 3/16	★TVA-3456.5	$1.86
80-60-20	150-150-150	1 x 2 15/16	★TVA-3457	1.80
250-200-10	150-150-150	1⅜ x 3⅜	★TVA-3460†	2.76
80-10-100	300-250-50	1⅜ x 3⅜	★TVA-3556†	2.16
80-40-100	300-300-5	1⅜ x 3⅞	TVA-3558†	2.40
100-60-100	300-300-50	1⅜ x 3⅞	TVA-3559†	2.97
120-40-100	300-300-50	1⅜ x 4⅜	TVA-3560†	3.06
120-40-10	300-300-250	1⅜ x 3⅜	TVA-3563†	2.91
80-40-40	300-300-300	1⅜ x 3⅝	TVA-3569†	2.79
140-5-200	350-350-200	1½ x 5⅛	TVA-3620†	4.02
60-60-60	350-350-250	1⅜ x 3⅞	TVA-3626†	2.85
60-60-4	350-350-350	1⅜ x 3⅜	TVA-3630†	2.31
10-80-60	400-250-150	1⅜ x 3⅜	TVA-3650†	2.04
5-80-40	450-400-400	1⅜ x 4⅛	★TVA-3712†	2.73
12-12-20	450-450-25	1 x 1 15/16	★TVA-3716	1.38
20-20-20	450-450-25	1 x 2 7/16	★TVA-3718	1.86
40-40-20	450-450-25	1 x 3 15/16	★TVA-3720	2.28
	QUADRUPLE UNITS			
40-20-20-100	150-150-150-25	1¼ x 2⅞	TVA-4517†	1.74
60-40-40-20	150-150-150-25	1¼ x 2⅝	★TVA-4929†	1.98
150-100-20-100	300-300-300-25	1⅜ x 4⅝	TVA-4580†	3.72
80-40-10-40	300-300-300-250	1⅜ x 4⅛	TVA-4582†	3.09
120-40-40-10	300-300-300-250	1⅜ x 4⅝	TVA-4584†	3.72
140-5-200-30	350-300-200-150	1½ x 4⅞	TVA-4576†	3.63
140-5-200-30	350-300-200-200	1½ x 5⅛	TVA-4607†	4.59
80-60-40-20	350-350-300-150	1½ x 4⅜	TVA-4618†	3.54
80-10-40-100	400-400-300-50	1⅜ x 4⅛	TVA-4659†	3.27
10-80-40-100	450-300-250-50	1⅜ x 4⅛	★TVA-4705†	2.88
20-120-40-100	450-300-250-50	1⅜ x 4⅜	★TVA-4706†	3.69
10-80-40-40	450-300-250-250	1⅜ x 4⅜	★TVA-4708†	2.97
10-20-20-10	450-300-300-300	1⅜ x 3⅛	TVA-4712†	2.10
20-20-20-10	450-450-450-450	1⅜ x 3⅝	TVA-4742†	2.55
40-20-20-10	450-450-450-450	1⅜ x 4⅜	TVA-4748†	2.82
40-40-20-20	450-450-450-450	1½ x 4¼	TVA-4750†	3.27
	QUINTUPLE UNITS			
40-20-20-20-50	300-300-300-300-50	1⅜ x 3⅛	TVA-5100†	3.03

*Add 1/16" to diameter and ⅛" to length to allow for outer insulating tube on all units except those marked (†) which are of cardboard construction.
★Mounting straps attached



TYPE HLVB HIGH-MF ELECTROLYTICS

- Designed For Low-Voltage Filter Circuits.
- Large Values of Capacitance in Relatively Small Physical Size.
- Molded Phenolic Case For Physical Protection and Moisture Resistance. Assures Long and Depndable Service Life.
- Easily and Securely Mounted With hardware Listed Below.

μF	WVDC	Diam. x Length	Cat. No.	Net
500	6	1 7/16 x 2¾	HLVB-56	$1.83
1000	6	1 7/16 x 2¾	HLVB-106	2.04
1500	6	1 7/16 x 2¾	HLVB-156	2.16
2000	6	1 7/16 x 2¾	HLVB-206	2.28
4000	10	1 7/16 x 3⅜	HLVB-4010	2.85
6000	10	1 7/16 x 4⅜	HLVB-6010	4.50
10000	10	1 13/16 x 4⅜	HLVB-10010	4.95
500	12	1 7/16 x 2¾	HLVB-512	1.92
1000	12	1 7/16 x 2¾	HLVB-1012	2.25
1500	12	1 7/16 x 2¾	HLVB-1512	2.37
2000	12	1 7/16 x 2¾	HLVB-2012	2.49
500	15	1 7/16 x 2¾	HLVB-515	1.95
1000	15	1 7/16 x 2¾	HLVB-1015	2.28
1500	15	1 7/16 x 2¾	HLVB-1515	2.40
2000	15	1 7/16 x 2¾	HLVB-2015	2.82
4000	15	1 7/16 x 4⅜	HLVB-4015	4.26
6000	15	1 13/16 x 4⅜	HLVB-6015	4.83
6000	20	2 1/16 x 4⅜	HLVB-6020	5.19
500	25	1 7/16 x 2¾	HLVB-525	2.28
1000	25	1 7/16 x 2¾	HLVB-1025	2.91
2000	25	1 7/16 x 4⅜	HLVB-2025	3.45
4000	25	1 13/16 x 4⅜	HLVB-4025	4.77
500	50	1 7/16 x 3⅜	HLVB-550	2.55
1000	50	1 13/16 x 3⅜	HLVB-1050	4.20
2000	50	1 13/16 x 4⅜	HLVB-2050	5.46
3000	50	1 13/16 x 4⅜	HLVB-3050	6.90
4000	50	2 1/16 x 4⅜	HLVB-4050	$7.50
1000	150	1 13/16 x 4⅜	HLVB-10150	6.30
500	200	1 13/16 x 4⅜	HLVB-5200	5.88

HLVB MOUNTING HARDWARE
HORIZONTAL "U" BRACKETS

Capacitor Size Dia. x Length	Cat. No.	Net
1 7/16 x 2¾	ABB-1	.18
1 7/16 x 3⅜ } 1 13/16 x 3⅜ }	ABB-2	.21
1 13/16 x 4⅜ } 2 1/16 x 4⅜ }	ABB-3	.24

END CAPS

Cap. Diam.	Cat. No.	Net
1 7/16	ABC-2	.15
1 13/16	ABC-4	.18
2 1/16	ABC-6	.21

VERTICAL MOUNTING CLAMPS

Cap. Diam.	Cat. No.	Net
1 13/16	CMC-28A	.18
2 1/16	CMC-32	.36

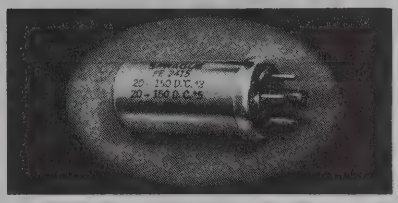
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SPRAGUE CAPACITORS

PE OCTAL-BASE ELECTROLYTICS

- For Applications where Rapid Changing of Capacitors is Desired
- Will Fit Standard Octal-Base Tube Sockets
- Hermetically Sealed in Metal Cans for Long Life
- Will Stand Up Under High Temperatures, High Ripple Currents, High Surge Voltages



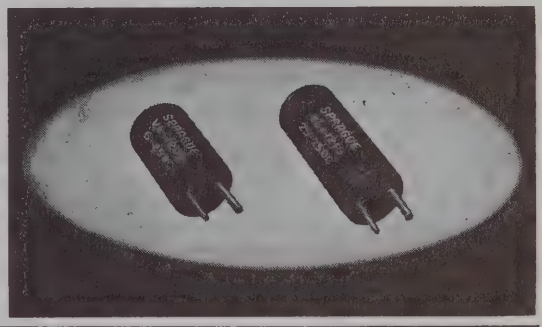
Terminal Code

Sections	−	+
Single	1	5
Dual	1	3,5
Triple	1	3,5,7
Quadruple	Gnd Lug	1,3,5,7

μF	WVDC	Diam. x Lgth.	Cat. No.	Net
100	350	1⅜ x 3	PE-1636	$3.51
10	450	1 5/32 x 2½	PE-1705	2.43
20	450	1 5/32 x 2½	PE-1714	2.58
40	450	1⅜ x 2½	PE-1725	2.73
80	450	1⅜ x 3½	PE-1730	3.33
20-20	150-150	1 5/32 x 2½	PE-2415	2.52
40-40	150-150	1 5/32 x 2½	PE-2428	2.64
10-10	450-450	1 5/32 x 2½	PE-2750	2.64
20-20	450-450	1⅜ x 2½	PE-2755	3.03
40-40	450-450	1⅜ x 3½	PE-2764	3.57
10-10-10	450-450-450	1 5/32 x 2½	PE-3776	3.06
20-20-20	450-450-450	1⅜ x 3	PE-3780	3.66
30-30-10-20	450-450-450-50	1⅜ x 3½	PE-4741	4.11

VL VERTI-LYTIC® ELECTROLYTICS

- For Replacement of Units of this Type Found on Printed Wiring Boards in Original Equipment
- Sections Housed in Sturdy, Pre-Molded Phenolic Cases
- Resin End Fill Will Not Contaminate Electrolyte — Protects Against Drying or Entrance of External Moisture
- Low Leakage Current and Long Shelf Life
- Polarity Easily Determined by Larger Diameter of Negative Lead
- For Complete Technical Data, See Latest Issue of Sprague Engineering Bulletin 3060



μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net
3 WVDC				
1	⅜ x ¾	VL-1031	89D100	$ .87
2	⅜ x ¾	VL-1032	89D101	.87
3	⅜ x ¾	VL-1033	89D102	.87
4	⅜ x ¾	VL-1034	89D103	.87
5	⅜ x ¾	VL-1035	89D104	.87
6	⅜ x ¾	VL-1036	89D105	.87
8	⅜ x ¾	VL-1037	89D106	.87
10	⅜ x ¾	VL-1038	89D107	.87
15	⅜ x ¾	VL-1039	89D108	.87
20	⅜ x ¾	VL-1040	89D109	.87
25	⅜ x ¾	VL-1041	89D110	.87
35	⅜ x ¾	VL-1043	89D111	.90
50	⅜ x ¾	VL-1045	89D112	.93
75	⅜ x ¾	VL-1048	89D113	1.02
100	⅜ x ¾	VL-1051	89D114	1.05
150	⅜ x ⅞	VL-1055	89D115	1.05
200	⅜ x ⅞	VL-1059	89D116	1.08
250	7/16 x ⅞	VL-1063	89D117	1.17
290	7/16 x ⅞	VL-1067	89D118	1.20
6 WVDC				
1	⅜ x ¾	VL-1080	89D119	.87
2	⅜ x ¾	VL-1081	89D120	.87
3	⅜ x ¾	VL-1082	89D121	.87
4	⅜ x ¾	VL-1083	89D122	.87
5	⅜ x ¾	VL-1084	89D123	.87
6	⅜ x ¾	VL-1085	89D124	.87
8	⅜ x ¾	VL-1086	89D125	.87
10	⅜ x ¾	VL-1087	89D126	.87
15	⅜ x ¾	VL-1088	89D127	.87
20	⅜ x ¾	VL-1089	89D128	.87
25	⅜ x ¾	VL-1090	89D129	.87
35	⅜ x ¾	VL-1092	89D130	.90
50	⅜ x ¾	VL-1094	89D131	.93
75	⅜ x ¾	VL-1097	89D132	1.02
100	⅜ x ⅞	VL-1100	89D133	1.05
150	7/16 x ⅞	VL-1104	89D134	1.14
200	7/16 x ⅞	VL-1108	89D135	1.17

μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net
12 WVDC				
1	⅜ x ¾	VL-1120	89D136	$ .87
2	⅜ x ¾	VL-1121	89D137	.87
3	⅜ x ¾	VL-1122	89D138	.87
4	⅜ x ¾	VL-1123	89D139	.87
5	⅜ x ¾	VL-1124	89D140	.90
6	⅜ x ¾	VL-1125	89D141	.90
8	⅜ x ¾	VL-1126	89D142	.90
10	⅜ x ¾	VL-1127	89D143	.90
15	⅜ x ¾	VL-1128	89D144	.93
20	⅜ x ¾	VL-1129	89D145	.93
25	⅜ x ¾	VL-1130	89D146	.93
35	⅜ x ¾	VL-1132	89D147	.93
50	⅜ x ¾	VL-1134	89D148	.99
75	⅜ x ⅞	VL-1137	89D149	1.05
100	7/16 x ⅞	VL-1140	89D150	1.14
140	7/16 x ⅞	VL-1144	89D151	1.17
15 WVDC				
1	⅜ x ¾	VL-1160	89D152	.87
2	⅜ x ¾	VL-1161	89D153	.87
3	⅜ x ¾	VL-1162	89D154	.87
4	⅜ x ¾	VL-1163	89D155	.87
5	⅜ x ¾	VL-1164	89D156	.90
6	⅜ x ¾	VL-1165	89D157	.90
8	⅜ x ¾	VL-1166	89D158	.90
10	⅜ x ¾	VL-1167	89D159	.93
15	⅜ x ¾	VL-1168	89D160	.93
20	⅜ x ¾	VL-1169	89D161	.93
25	⅜ x ¾	VL-1170	89D162	.93
35	⅜ x ⅞	VL-1172	89D163	.93
50	⅜ x ⅞	VL-1174	89D164	.99
75	⅜ x ⅞	VL-1177	89D165	1.08
90	7/16 x ⅞	VL-1180	89D166	1.17
25 WVDC				
1	⅜ x ¾	VL-1200	89D167	.90
2	⅜ x ¾	VL-1201	89D168	.90

μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net
25 WVDC ctd.				
3	⅜ x ¾	VL-1202	89D169	$ .93
4	⅜ x ¾	VL-1203	89D170	.99
5	⅜ x ¾	VL-1204	89D171	.99
6	⅜ x ¾	VL-1205	89D172	.99
8	⅜ x ¾	VL-1206	89D173	.99
10	⅜ x ¾	VL-1207	89D174	.99
15	⅜ x ¾	VL-1208	89D175	.99
20	⅜ x ¾	VL-1209	89D176	.99
25	⅜ x ¾	VL-1210	89D177	.99
35	⅜ x ⅞	VL-1212	89D178	1.05
50	⅜ x ⅞	VL-1215	89D179	1.05
70	7/16 x ⅞	VL-1218	89D180	1.17
50 WVDC				
1	⅜ x ¾	VL-1300	89D181	.90
2	⅜ x ¾	VL-1301	89D182	.90
3	⅜ x ¾	VL-1302	89D183	.93
4	⅜ x ¾	VL-1303	89D184	.99
5	⅜ x ¾	VL-1304	89D185	.99
6	⅜ x ¾	VL-1305	89D186	.99
8	⅜ x ¾	VL-1306	89D187	.99
10	⅜ x ¾	VL-1307	89D188	.99
15	⅜ x ¾	VL-1308	89D189	.99
20	⅜ x ⅞	VL-1309	89D190	.99
25	7/16 x ⅞	VL-1310	89D191	.99
6-6 WVDC				
100-30	7/16 x 1 3/16	VL-2150	.....	1.26
10-10 WVDC				
50-50	½ x ⅞	VL-2250	.....	1.17
80-80	½ x ⅞	VL-2350	.....	1.32
8-8-8 WVDC				
100-100-60	½ x 1 3/16	VL-3320	.....	2.07
10-10-3 WVDC				
50-50-15	½ x ⅞	VL-3350	.....	1.80

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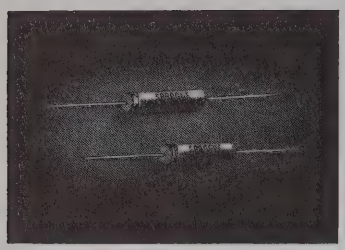
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- No Corrosion as with Competitive Units
- Extremely Low Leakage Current, Long Shelf Life
- Withstand Temperatures Up to 85C (185F)
- Furnished with Clear Plastic Outer Insulating Sleeves
- Packed 5 to a Handy Rigid Kleer-Pak® Plastic Box

For Complete Technical Data, See Latest Issue of Sprague Engineering Bulletin 3150

μF	D. x L.*	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net
1 WVDC				
5	3/16 x 1/2	TE-1010	.....	$ .51
3 WVDC				
1	1/4 x 1/2	TE-1050	30D105G003BA0	.51
2	1/4 x 1/2	TE-1051	30D205G003BA0	.51
3	1/4 x 1/2	TE-1052	30D305G003BA0	.51
4	1/4 x 1/2	TE-1052.1	30D405G003BA0	.51
5	1/4 x 1/2	TE-1052.2	30D505G003BA0	.51
6	1/4 x 1/2	TE-1052.3	30D605G003BA0	.51
8	1/4 x 1/2	TE-1052.5	30D805G003BA0	.51
10	1/4 x 1/2	TE-1053	30D106G003BA0	.51
15	1/4 x 1/2	TE-1053.5	30D156G003BA0	.51
20	1/4 x 1/2	TE-1054	30D206G003BA0	.51
25	1/4 x 1/2	TE-1055	30D256G003BA0	.51
35	1/4 x 11/16	TE-1056	.....	.57
40	1/4 x 11/16	TE-1057	.....	.72
50	1/4 x 11/16	TE-1058	30D506G003BB0	.72
75	5/16 x 11/16	TE-1059	.....	.75
100	5/16 x 11/16	TE-1059.5	30D107G003CB0	.81
110	5/16 x 13/16	TE-1060	.....	.81
150	5/16 x 13/16	TE-1061	30D157G003CC0	.81
200	5/16 x 13/16	TE-1064	30D207G003CC0	.81
250	3/8 x 13/16	TE-1065	30D257G003DD0	.81
300	3/8 x 13/16	TE-1066	.....	.87
400	3/8 x 1 1/4	TE-1067	.....	.93
500	3/8 x 1 1/4	TE-1068	30D507G003DF0	.99
6 WVDC				
1	1/4 x 1/2	TE-1080	30D105G006BA0	.54
2	1/4 x 1/2	TE-1081	30D205G006BA0	.54
3	1/4 x 1/2	TE-1082	30D305G006BA0	.54
4	1/4 x 1/2	TE-1083	30D405G006BA0	.54
5	1/4 x 1/2	TE-1084	30D505G006BA0	.54
6	1/4 x 1/2	TE-1085	30D605G006BA0	.54
8	1/4 x 1/2	TE-1086	30D805G006BA0	.54
10	1/4 x 1/2	TE-1087	30D106G006BA0	.54
15	1/4 x 1/2	TE-1089	30D156G006BA0	.54
20	1/4 x 1/2	TE-1090	30D206G006BA0	.54
25	1/4 x 11/16	TE-1091	30D256G006BB0	.54
30	1/4 x 11/16	TE-1092	.....	.57
35	1/4 x 11/16	TE-1093	30D356G006BB0	.57
40	1/4 x 11/16	TE-1095	30D406G006BB0	.57
50	5/16 x 11/16	TE-1100	.....	.75
60	5/16 x 11/16	TE-1101	.....	.75
75	3/16 x 11/16	TE-1101.5	.....	.81
100	5/16 x 13/16	TE-1102	30D107G006CC0	.81
150	3/8 x 13/16	TE-1103	30D157G006DC0	.81
200	3/8 x 13/16	TE-1104	30D207G006DC0	.84
250	3/8 x 15/16	TE-1105	30D257G006DD0	.87
300	3/8 x 1 1/4	TE-1106	30D307G006DF0	.93
10 WVDC				
10	1/4 x 1/2	TE-1114	.....	$ .57
15	1/4 x 1/2	TE-1116	.....	.57
25	1/4 x 11/16	TE-1118	.....	.75
50	5/16 x 11/16	TE-1119	.....	.81
100	5/16 x 13/16	TE-1119.3	.....	.81
200	3/8 x 1 1/4	TE-1119.6	.....	.96
12 WVDC				
1	1/4 x 1/2	TE-1120	30D105G012BA0	.57
2	1/4 x 1/2	TE-1121	30D205G012BA0	.57
3	1/4 x 1/2	TE-1122	30D305G012BA0	.57
4	1/4 x 1/2	TE-1123	30D405G012BA0	.57
5	1/4 x 1/2	TE-1127	30D505G012BA0	.57
6	1/4 x 1/2	TE-1127.1	30D605G012BA0	.57
8	1/4 x 1/2	TE-1127.3	30D805G012BA0	.57
10	1/4 x 1/2	TE-1128	30D106G012BA0	.57
15	1/4 x 1/2	TE-1129	30D156G012BA0	.57
20	1/4 x 11/16	TE-1130	30D206G012BB0	.57
25	1/4 x 11/16	TE-1131	30D256G012BB0	.75
35	5/16 x 11/16	TE-1132	.....	.75
50	5/16 x 11/16	TE-1133	30D506G012CB0	.81
75	5/16 x 13/16	TE-1134	30D756G012CC0	.81
100	5/16 x 13/16	TE-1135	30D107G012CC0	.81
150	3/8 x 15/16	TE-1136	30D157G012DD0	.87
200	3/8 x 1 1/4	TE-1137	30D207G012DF0	.93
250	3/8 x 1 1/4	TE-1138	30D257G012DF0	.96
15 WVDC				
1	1/4 x 1/2	TE-1148	30D105G015BA0	.57
2	1/4 x 1/2	TE-1149	30D205G015BA0	.57
3	1/4 x 1/2	TE-1150	30D305G015BA0	.57
4	1/4 x 1/2	TE-1151	30D405G015BA0	.57
5	1/4 x 1/2	TE-1152	30D505G015BA0	.57
6	1/4 x 1/2	TE-1153	30D605G015BA0	.57
8	1/4 x 1/2	TE-1154	30D805G015BA0	.57
10	1/4 x 1/2	TE-1155	30D106G015BA0	.57
15	1/4 x 11/16	TE-1156	30D156G015BB0	.57
20	1/4 x 11/16	TE-1157	30D206G015BB0	.57
25	1/4 x 11/16	TE-1157.1	30D256G015BB0	.75
30	5/16 x 11/16	TE-1158	30D306G015CB0	.75
35	5/16 x 11/16	TE-1159	30D356G015CB0	.75
50	5/16 x 11/16	TE-1160	30D506G015CB0	.81
75	5/16 x 13/16	TE-1161	30D756G015CC0	.81
100	3/8 x 13/16	TE-1162	30D107G015DC0	.81
150	3/8 x 15/16	TE-1163	30D157G015DD0	.87
200	3/8 x 1 1/4	TE-1164	30D207G015DF0	.96
25 WVDC				
1	1/4 x 1/2	TE-1200	30D105G025BA0	$ .54
2	1/4 x 1/2	TE-1201	30D205G025BA0	.57
3	1/4 x 1/2	TE-1201.1	30D305G025BA0	.57
4	1/4 x 1/2	TE-1201.2	30D405G025BA0	.57
5	1/4 x 1/2	TE-1202	30D505G025BA0	.57
6	1/4 x 1/2	TE-1203	30D605G025BA0	.57
8	1/4 x 1/2	TE-1203.5	30D805G025BA0	.60
10	1/4 x 11/16	TE-1204	30D105G025BB0	.60
15	1/4 x 11/16	TE-1205	30D156G025BB0	.75
20	5/16 x 11/16	TE-1206	.....	.81
25	5/16 x 11/16	TE-1207	30D256G025CB0	.81
35	5/16 x 11/16	TE-1208	30D356G025CB0	.81
50	5/16 x 13/16	TE-1209	30D506G025CC0	.81
75	3/8 x 13/16	TE-1210	30D756G025DC0	.87
100	3/8 x 15/16	TE-1211	30D107G025DD0	.90
50 WVDC				
1	1/4 x 1/2	TE-1300	30D105G050BA0	.54
2	1/4 x 1/2	TE-1301	30D205G050BA0	.54
3	1/4 x 1/2	TE-1302	30D305G050BA0	.57
4	1/4 x 1/2	TE-1302.1	30D405G050BA0	.57
5	1/4 x 11/16	TE-1303	30D505G050BB0	.57
6	1/4 x 11/16	TE-1303.1	30D605G050BB0	.81
8	1/4 x 11/16	TE-1303.3	30D805G050BB0	.81
10	5/16 x 11/16	TE-1304	30D106G050CB0	.81
15	5/16 x 11/16	TE-1304.2	30D156G050CB0	.81
20	5/16 x 13/16	TE-1305	30D206G050CC0	.81
35	3/8 x 13/16	TE-1306	30D356G050DC0	.84
50	3/8 x 15/16	TE-1307	30D506G050DD0	.87
100 WVDC				
1	1/4 x 1/2	TE-1400	30D105G100BA0	.81
2	1/4 x 11/16	TE-1401	30D205G100BB0	.81
3	5/16 x 11/16	TE-1403	30D305G100CB0	.81
4	5/16 x 11/16	TE-1403	30D405G100CB0	.81
5	5/16 x 13/16	TE-1404	30D505G100CC0	.81
6	5/16 x 13/16	TE-1405	30D605G100CC0	.81
8	3/8 x 13/16	TE-1406	30D805G100DC0	.81
10	3/8 x 13/16	TE-1407	30D106G100DC0	.81
15	3/8 x 15/16	TE-1408	30D156G10DD00	.84
20	3/8 x 1 1/4	TE-1409	30D206G100DF0	.84
150 WVDC				
1	1/4 x 1/2	TE-1500	30D105G150BA0	.84
2	1/4 x 11/16	TE-1501	30D205G150BB0	.84
3	5/16 x 11/16	TE-1502	30D305G150CB0	.84
4	5/16 x 13/16	TE-1503	30D405G150CC0	.84
5	5/16 x 13/16	TE-1504	30D505G150CC0	.84
6	3/8 x 13/16	TE-1505	30D605G150DC0	.84
8	3/8 x 13/16	TE-1506	30D805G150DC0	.84
10	3/8 x 15/16	TE-1507	30D106G150DD0	.84
12	3/8 x 1 1/4	TE-1508	.....	.87

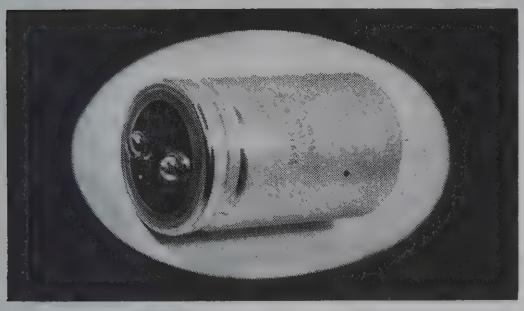
*Add 1/16" to dimensions to allow for insulating sleeve.

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TYPE 36D POWERLYTIC® ALUMINUM ELECTROLYTICS



- For Maximum Capacitance in a Given Case Size.
- Especially Suitable for Transistorized Circuitry where High Capacitance is Required.
- Maximum Space Economy at Operating Temperatures Up To 65 C.
- Low ESR and Leakage Currents. • Extremely Long Shelf Life.
- Uses Most Reliable Seal Developed by Sprague for Aluminum Electrolytic Capacitors. Pressure-type Safety Vents Employing Silicone Rubber Are Used On All Cases.
- High Screw Insert Terminal, 9/32" high. • Plastic Outer Tube.
- Superior Electrical and Life Characteristics Are Insured By Careful Raw Material Inspection, High Quality Control Standards and Close Manufacturing Supervision. For Complete Technical Data, Consult Sprague Engineering Bulletin 3431.

μF	Case Code	WVDC	Catalog No.
270,000	DF	3	36D274G003DF2A
120,000	DC	6	36D124G006DC2A
190,000	DF	6	36D194G006DF2A
6,000	AA	10	36D602G010AA2A
12,000	AB	10	36D123G010AB2A
18,000	AC	10	36D183G010AC2A
28,000	BB	10	36D283G010BB2A
42,000	BC	10	36D423G010BC2A
48,000	CB	10	36D483G010CB2A
100,000	DC	10	36D104G010DC2A
160,000	DF	10	36D164G010DF2A
4,600	AA	15	36D462G015AA2A
9,200	AB	15	36D922G015AB2A
13,000	AC	15	36D133G015AC2A
21,000	BB	15	36D213G015BB2A
31,000	BC	15	36D313G015BC2A
36,000	CB	15	36D363G015CB2A
54,000	CC	15	36D543G015CC2A
63,000	CD	15	36D633G015CD2A
80,000	DC	15	36D803G015DC2A
2,700	AA	25	36D272G025AA2A
5,500	AB	25	36D552G025AB2A
8,200	AC	25	36D822G025AC2A
18,000	BC	25	36D183G025BC2A
32,000	CC	25	36D323G025CC2A
47,000	DC	25	36D473G025DC2A
55,000	DD	25	36D553G025DD2A
71,000	DF	25	36D713G025DF2A
36,000	DC	30	36D363G030DC2A
42,000	DD	30	36D423G030DD2A
5,500	AC	40	36D552G040AC2A
8,400	BB	40	36D842G040BB2A
12,000	BC	40	36D123G040BC2A
21,000	CC	40	36D213G040CC2A
25,000	CD	40	36D253G040CD2A
1,300	AA	50	36D132G050AA2A
2,600	AB	50	36D262G050AB2A
3,900	AC	50	36D392G050AC2A
6,000	BB	50	36D602G050BB2A
9,000	BC	50	36D902G050BC2A
15,000	CC	50	36D153G050CC2A
22,000	DC	50	36D223G050DC2A
2,500	AC	75	36D252F075AC2A
3,900	BB	75	36D392F075BB2A
5,900	BC	75	36D592F075BC2A
11,000	CD	75	36D113F075CD2A
14,000	DC	75	36D143F075DC2A
22,000	DF	75	36D223F075DF2A

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μF	Case Code	WVDC	Catalog No.
450	AA	100	36D451F100AA2A
1,300	AC	100	36D132F100AC2A
3,000	BC	100	36D302F100BC2A
5,300	CC	100	36D532F100CC2A
7,800	DC	100	36D782F100DC2A
300	AA	150	36D301F150AA2A
900	AC	150	36D901F150AC2A
1,400	BB	150	36D142F150BB2A
2,100	BC	150	36D212F150BC2A
3,600	CC	150	36D362F150CC2A
5,300	DC	150	36D532F150DC2A
7,800	DF	150	36D782F150DF2A
250	AA	200	36D251F200AA2A
430	AB	200	36D431F200AB2A
640	AC	200	36D641F200AC2A
1,400	BC	200	36D142F200BC2A
1,600	CB	200	36D162F200CB2A
3,700	DC	200	36D372F200DC2A
5,500	DF	200	36D552F200DF2A
530	AC	250	36D531F250AC2A
1,200	BC	250	36D122F250BC2A
3,000	DC	250	36D302F250DC2A
4,500	DF	250	36D452F250DF2A
240	AB	300	36D241F300AB2A
820	BC	300	36D821F300BC2A
2,100	DC	300	36D212F300DC2A
95	AA	350	36D950F350AA2A
190	AB	350	36D191F350AB2A
420	BB	350	36D421F350BB2A
650	BC	350	36D651F350BC2A
1,100	CC	350	36D112F350CC2A
1,600	DC	350	36D162F350DC2A
2,500	DF	350	36D252F350DF2A
420	BC	400	36D421F400BC2A
50	AA	450	36D500F450AA2A
140	AC	450	36D141F450AC2A
220	BB	450	36D221F450BB2A
330	BC	450	36D331F450BC2A
860	DC	450	36D861F450DC2A

CALL YOUR SPRAGUE DISTRIBUTOR FOR QUANTITY PRICES

CASE CODE	BARE CAN D x L	CASE CODE	BARE CAN D x L	VERTICAL MOUNTING Cat. No.	CLAMPS Dia.
AA	1⅜ x 2⅛	CB	2½ x 3⅛	CMC-22	1⅜
AB	1⅜ x 3⅛	CC	2½ x 4⅛		
AC	1⅜ x 4⅛	CD	2½ x 4⅝	CMC-32	2
BB	2 x 3⅛	DC	3 x 4⅛	CMC-40	2½
BC	2 x 4⅛	DD	3 x 4⅝	CMC-48	3
		DF	3 x 5⅝		

Add 1/32" to diameter and 1/16" to length for plastic outer tube.

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REM-15b-6526

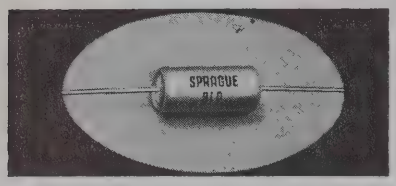
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SPRAGUE CAPACITORS

VITAMIN Q® SUBMINIATURE PAPER CAPACITORS



These capacitors are the most widely used of all paper capacitors in commercial and military electronic equipment. Hermetically sealed in metal cases, they are electrically and mechanically designed to meet stringent operating requirements.

Impregnated with Vitamin Q, a substantially linear, controlled molecular weight, hydrocarbon polymer, which is exclusive with Sprague, these dependable capacitors are available for operation in two temperature ranges: −55°C to +85°C and −55°C to +125°C. Because of their Vitamin Q impregnation, these subminiature capacitors have a higher insulation resistance and longer life than comparable units with ordinary oils.

Sprague Subminiature paper capacitors exceed the performance requirements of military specification MIL-C-25A. A limited number of the ratings shown here are listed in the military specification and should be ordered by their MIL type designation where equipment specifications so require. (See page after next.)

Listed below are the most popular insulated section (ungrounded case) capacitors. For technical data on these and other types, ratings, and tolerances, as well as on wax-impregnated units for absolute minimum size, refer to the latest issue of Engineering Bulletin 2110.

Call your Sprague Industrial Distributor for Current Quantity Prices.

CHOICE OF INSERTED TAB OR EXTENDED FOIL CONSTRUCTION

In the past, inserted tab capacitors have not been recommended for low-voltage applications (e.g., below 10 volts) but recent improvements in design now make it possible to recommend them for operation at all voltages from 1 to rated, in nearly all applications.

From the application standpoint, the principal difference between the two construction types is that, at resonance, losses are likely to be lower in the extended foil type. This is because the resistive component of impedance is likely to be higher at resonance in the inserted tab type of construction. Unless unusual circuit requirements make the losses at resonance a critical factor, the inserted tab construction is recommended, primarily because of the smaller size of the capacitor roll.

TYPE 91P, INSERTED TAB CONSTRUCTION, 85°C OPERATION

			Capacitance Tolerance ±20%				Capacitance Tolerance ±10%			
			Style 2 (bare metal case)		Style 4 (w/plastic sleeve)*		Style 2 (bare metal case)		Style 4 (w/plastic sleeve)*	
μF	WVDC	Size D. x L.	Cat. No.		Cat. No.		Cat. No.		Cat. No.	
.001	100	.175 x ¾	91P10201S2	Call Your Sprague Industrial Distributor for Current Quantity Prices	91P10201S4	Call Your Sprague Industrial Distributor for Current Quantity Prices	91P10291S2	Call Your Sprague Industrial Distributor for Current Quantity Prices	91P10291S4	Call Your Sprague Industrial Distributor for Current Quantity Prices
	200	.235 x ¾	91P10202S2		91P10202S4		91P10292S2		91P10292S4	
	300	.235 x ¾	91P10203S2		91P10203S4		91P10293S2		91P10293S4	
	400	.235 x ¾	91P10204S2		91P10204S4		91P10294S2		91P10294S4	
	600	.235 x ¾	91P10206S2		91P10206S4		91P10296S2		91P10296S4	
.0015	100	.175 x ¾	91P15201S2		91P15201S4		91P15291S2		91P15291S4	
	200	.235 x ¾	91P15202S2		91P15202S4		91P15292S2		91P15292S4	
	300	.235 x ¾	91P15203S2		91P15203S4		91P15293S2		91P15293S4	
	400	.235 x ¾	91P15204S2		91P15204S4		91P15294S2		91P15294S4	
	600	.235 x ¾	91P15206S2		91P15206S4		91P15296S2		91P15296S4	
.0022	100	.175 x ¾	91P22201S2		91P22201S4		91P22291S2		91P22291S4	
	200	.235 x ¾	91P22202S2		91P22202S4		91P22292S2		91P22292S4	
	300	.235 x ¾	91P22203S2		91P22203S4		91P22293S2		91P22293S4	
	400	.235 x ¾	91P22204S2		91P22204S4		91P22294S2		91P22294S4	
	600	.235 x ¾	91P22206S2		91P22206S4		91P22296S2		91P22296S4	
.0033	100	.175 x ¾	91P33201S2		91P33201S4		91P33291S2		91P33291S4	
	200	.235 x ¾	91P33202S2		91P33202S4		91P33292S2		91P33292S4	
	300	.235 x ¾	91P33203S2		91P33203S4		91P33293S2		91P33293S4	
	400	.235 x ¾	91P33204S2		91P33204S4		91P33294S2		91P33294S4	
	600	.235 x ¾	91P33206S2		91P33206S4		91P33296S2		91P33296S4	
.0047	100	.175 x ¾	91P47201S2		91P47201S4		91P47291S2		91P47291S4	
	200	.235 x ¾	91P47202S2		91P47202S4		91P47292S2		91P47292S4	
	300	.235 x ¾	91P47203S2		91P47203S4		91P47293S2		91P47293S4	
	400	235 x ¾	91P47204S2		91P47204S4		91P47294S2		91P47294S4	
	600	.235 x ¾	91P47206S2		91P47206S4		91P47296S2		91P47296S4	
.0068	100	.175 x ¾	91P68201S2		91P68201S4		91P68291S2		91P68291S4	
	200	.235 x ¾	91P68202S2		91P68202S4		91P68292S2		91P68292S4	
	300	.235 x ¾	91P68203S2		91P68203S4		91P68293S2		91P68293S4	
	400	.235 x ¾	91P68204S2		91P68204S4		91P68294S2		91P68294S4	
	600	.235 x ¾	91P68206S2		91P68206S4		91P68296S2		91P68296S4	

*For Style 4 units add .0625" to diameter and 1/16" to length.

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SPRAGUE CAPACITORS

TYPE 91P, continued

μF	WVDC	Size D. x L.	Capacitance Tolerance ±20% — Style 2 (bare metal case) Cat. No.	Capacitance Tolerance ±20% — Style 4 (w/plastic sleeve)* Cat. No.	Capacitance Tolerance ±10% — Style 2 (bare metal case) Cat. No.	Capacitance Tolerance ±10% — Style 4 (w/plastic sleeve)* Cat. No.
.01	100	.175 x ¾	91P10301S2	91P10301S4	91P10391S2	91P10391S4
	200	.235 x ¾	91P10302S2	91P10302S4	91P10392S2	91P10392S4
	300	.235 x ¾	91P10303S2	91P10303S4	91P10393S2	91P10393S4
	400	.235 x ¾	91P10304S2	91P10304S4	91P10394S2	91P10394S4
	600	.312 x ⅞	91P10306S2	91P10306S4	91P10396S2	91P10396S4
.015	100	.175 x ¾	91P15301S2	91P15301S4	91P15391S2	91P15391S4
	200	.235 x ¾	91P15302S2	91P15302S4	91P15392S2	91P15392S4
	300	.235 x ¾	91P15303S2	91P15303S4	91P15393S2	91P15393S4
	400	.312 x ⅞	91P15304S2	91P15304S4	91P15394S2	91P15394S4
	600	.312 x ⅞	91P15306S2	91P15306S4	91P15396S2	91P15396S4
.022	100	.195 x ¾	91P22301S2	91P22301S4	91P22391S2	91P22391S4
	200	.235 x ¾	91P22302S2	91P22302S4	19P22392S2	91P22392S4
	300	.312 x ⅞	91P22303S2	91P22303S4	91P22393S2	91P22393S4
	400	.312 x ⅞	91P22304S2	91P22304S4	91P22394S2	91P22394S4
	600	.312 x ⅞	91P22306S2	91P22306S4	91P22396S2	91P22396S4
.033	100	.235 x ¾	91P33301S2	91P33301S4	91P33391S2	91P33391S4
	200	.312 x ⅞	91P33302S2	91P33302S4	91P33392S2	91P33392S4
	300	.312 x ⅞	91P33303S2	91P33303S4	91P33393S2	91P33393S4
	400	.312 x ⅞	91P33304S2	91P33304S4	91P33394S2	91P33394S4
	600	.400 x ⅞	91P33306S2	91P33306S4	91P33396S2	91P33396S4
.047	100	.312 x ⅞	91P47301S2	91P47301S4	91P47391S2	91P47391S4
	200	.312 x ⅞	91P47302S2	91P47302S4	91P47392S2	91P47392S4
	300	.312 x ⅞	91P47303S2	91P47303S4	91P47393S2	91P47393S4
	400	.400 x ⅞	91P47304S2	91P47304S4	91P47394S2	91P47394S4
	600	.400 x 1⅜	91P47306S2	91P47306S4	91P47396S2	91P47396S4
.068	100	.312 x ⅞	91P68301S2	91P68301S4	91P68391S2	91P68391S4
	200	.312 x ⅞	91P68302S2	91P68302S4	91P68392S2	91P68392S4
	300	.400 x ⅞	91P68303S2	91P68303S4	91P68393S2	91P68393S4
	400	.400 x 1⅛	91P68304S2	91P68304S4	91P68394S4	91P68394S4
	600	.400 x 1⅛	91P68306S2	91P68306S4	91P68396S2	91P68396S4
.1	100	.312 x ⅞	91P10401S2	91P10401S4	91P10491S2	91P10491S4
	200	.400 x ⅞	91P10402S2	91P10402S4	91P10492S2	91P10492S4
	300	.400 x 1⅛	91P10403S2	91P10403S4	91P10493S2	91P10493S4
	400	.400 x 1⅛	91P10404S2	91P10404S4	91P10494S2	91P10494S4
	600	.562 x 1⅛	91P10406S2	91P10406S4	91P10496S2	91P10496S4
.15	100	.400 x ⅞	91P15401S2	91P15401S4	91P15491S2	91P15491S4
	200	.400 x 1⅛	91P15402S2	91P15402S4	91P15492S2	91P15492S4
	300	.400 x 1⅜	91P15403S2	91P15403S4	91P15493S2	91P15493S4
	400	.562 x 1⅛	91P15404S2	91P15404S4	91P15494S2	91P15494S4
	600	.562 x 1⅜	91P15406S2	91P15406S4	91P15496S2	91P15496S4
22	100	.400 x 1⅛	91P22401S2	91P22401S4	91P22491S2	91P22491S4
	200	.400 x 1⅜	91P22402S2	91P22402S4	91P22492S2	91P22492S4
	300	.562 x 1⅛	91P22403S2	91P22403S4	91P22493S2	91P22493S4
	400	.562 x 1⅜	91P22404S2	91P22404S4	91P22494S2	91P22494S4
	600	.562 x 1⅞	91P22406S2	91P22406S4	91P22496S2	91P22496S4
.33	100	.400 x 1⅜	91P33401S2	91P33401S4	91P33491S2	91P33491S4
	200	.562 x 1⅛	91P33402S2	91P33402S4	91P33492S2	91P33492S4
	300	.562 x 1⅜	91P33403S2	91P33403S4	91P33493S2	91P33493S4
	400	.562 x 1⅞	91P33404S2	91P33404S4	91P33494S2	91P33494S4
	600	.670 x 1⅞	91P33406S2	91P33406S4	91P33496S2	91P33496S4
.47	100	.562 x 1⅛	91P47401S2	91P47401S4	91P47491S2	91P47491S4
	200	.562 x 1⅜	91P47402S2	91P47402S4	91P47492S2	91P47492S4
	300	.562 x 1⅞	91P47403S2	91P47403S4	91P47493S2	91P47493S4
	400	.670 x 1⅞	91P47404S2	91P47404S4	91P47494S2	91P47494S4
	600	.750 x 2⅛	91P47406S2	91P47406S4	91P47496S2	91P47496S4
68	100	.562 x 1⅜	91P68401S2	91P68401S4	91P68491S2	91P68491S4
	200	.562 x 1⅞	91P68402S2	91P68402S4	91P68492S2	91P68492S4
	300	.670 x 1⅞	91P68403S2	91P68403S4	91P68493S2	91P68493S4
	400	.750 x 2⅛	91P68404S2	91P68404S4	91P68494S2	91P68494S4
	600	1.000 x 1 13/16	91P68406S2	91P68406S4	91P68496S2	91P68496S4
1.0	100	.562 x 1⅞	91P10501S2	91P10501S4	91P10591S2	91P10591S4
	200	.670 x 1⅞	91P10502S2	91P10502S4	91P10592S2	91P10592S4
	300	.750 x 2⅛	91P10503S2	91P10503S4	91P10593S2	91P10593S4
	400	1.000 x 1 13/16	91P10504S2	91P10504S4	91P10594S2	91P10594S4

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*For Style 4 units add .0625" to diameter and 1/16" to length.

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SPRAGUE CAPACITORS

TYPE 96P, INSERTED TAB CONTRUCTION, 125°C OPERATION

μF	WVDC	Size D. x L.	Capacitance Tolerance ±20%				Capacitance Tolerance ±10%			
			Style 2 (bare metal case)		Style 4 (w/plastic sleeve)*		Style 2 (bare metal case)		Style 4 (w/plastic sleeve)*	
			Cat. No.		Cat. No.		Cat. No.		Cat. No.	
	100	.175 x ¾	96P10201S2		96P10201S4		96P10291S2		96P10201S4	
	200	.235 x ¾	96P10202S2		96P10202S4		96P10292S2		96P10202S4	
.001	300	.235 x ¾	96P10203S2		96P10203S4		96P10293S2		96P10203S4	
	400	.235 x ¾	96P10204S2		96P10204S4		96P10294S2		96P10204S4	
	600	.235 x ¾	96P10206S2		96P10206S4		96P10296S2		96P10206S4	
.0012	600	.235 x 1 1/16	———		———		96P12296S2		96P12296S4	
	100	.175 x ¾	96P15201S2		96P15201S4		96P15291S2		96P15291S4	
	200	.235 x ¾	96P15202S2		96P15202S4		96P15292S2		96P15292S4	
.0015	300	.235 x ¾	96P15203S2		96P15203S4		96P15293S2		96P15293S4	
	400	.235 x ¾	96P15204S2		96P15204S4		96P15294S2		96P15294S4	
	600	.235 x ¾	96P15206S2		96P15206S4		96P15296S2		96P15296S4	
.0018	600	.235 x 1 1/16	———		———		96P18296S2		96P18296S4	
	100	.175 x ¾	96P22201S2		96P22201S4		96P22291S2		96P22201S4	
	200	.235 x ¾	96P22202S2		96P22202S4		96P22292S2		96P22202S4	
.0022	300	.235 x ¾	96P22203S2		96P22203S4		96P22293S2		96P22203S4	
	400	.235 x ¾	96P22204S2		96P22204S4		96P22294S2		96P22204S4	
	600	.235 x ¾	96P22206S2		96P22206S4		96P22296S2		96P22026S4	
.0027	600	.235 x 1 1/16	———		———		96P27296S2		96P27296S4	
	100	.175 x ¾	96P33201S2		96P33201S4		96P33291S2		96P33291S4	
	200	.235 x ¾	97P33202S2		96P33202S4		96P33292S2		96P33292S4	
.0033	300	.235 x ¾	96P33203S2		96P33203S4		96P33293S2		96P33293S4	
	400	.235 x ¾	96P33204S2		96P33204S4		96P33294S2		96P33294S4	
	600	.235 x ¾	96P33206S2		96P33206S4		96P33296S2		96P33296S4	
.0039	600	.235 x 1 1/16	———		———		96P39296S2		96P33296S4	
	100	.175 x ¾	96P47201S2		96P47201S4		96P47291S2		96P47291S4	
	200	.235 x ¾	96P47202S2		96P47202S4		96P47292S2		96P47292S4	
.0047	300	.235 x ¾	96P47203S2		96P47203S4		96P47293S2		96P47293S4	
	400	.235 x ¾	96P47204S2		96P47204S4		96P47294S2		96P47294S4	
	600	.235 x ¾	96P47206S2		96P47206S4		96P47296S2		96P47296S4	
.0056	600	.235 x 1 1/16	———		———		96P56296S2		96P56296S4	
	100	.175 x ¾	96P68201S2		96P68201S4		96P68291S2		96P68391S4	
	200	.235 x ¾	96P68202S2		96P68202S4		96P68292S2		96P68392S4	
.0068	300	.235 x ¾	96P68203S2		96P68203S4		96P68293S2		96P68393S4	
	400	.235 x ¾	96P68204S2		96P68204S4		96P68294S2		96P68394S4	
	600	.235 x ¾	96P68206S2		96P68206S4		96P68296S2		96P68396S4	
.0082	400	.400 x 1 5/16	———		———		96P82294S2		96P82294S4	
	600	.562 x 1 1/16	———		———		96P82296S2		96P82296S4	
	100	.175 x ¾	96P10301S2		96P10301S4		96P10391S2		96P10391S4	
	200	.235 x ¾	96P10302S2		96P10302S4		96P10392S2		96P10392S4	
.01	300	.235 x ¾	96P10303S2		96P10303S4		97P10393S2		96P10393S4	
	400	.235 x ¾	96P10304S2		96P10304S4		96P10394S2		96P10394S4	
	600	.312 x ⅞	96P10306S2		96P10306S4		96P10396S2		96P10396S4	
.012	200	.235 x 1 1/16	———		———		96P12392S2		96P12392S4	
	600	.312 x 1 1/16	———		———		96P12396S2		96P12396S4	
	100	.175 x ¾	96P15301S2		96P15301S4		96P15391S2		96P15391S4	
	200	.235 x ¾	96P15302S2		96P15302S4		96P15392S2		96P15392S4	
.015	300	.235 x ¾	96P15303S2		96P15303S4		96P15393S2		96P15393S4	
	400	.312 x ⅞	96P15304S2		96P15304S4		96P15394S2		96P15394S4	
	600	.312 x ⅞	96P15306S2		96P15306S4		96P15396S2		96P15396S4	
	1000	.400 x 1 1/16	———		———		96P153910S2		96P153910S4	
	200	.235 x 1 1/16	———		———		96P18392S2		96P18392S4	
.018	600	.312 x 1 3/16	———		———		96P18396S2		96P18396S4	
	1000	.400 x 1 1/16	———		———		96P183910S2		96P183910S4	
	100	.195 x ¾	96P22301S2		96P22301S4		96P22391S2		96P22391S4	
	200	.235 x ¾	96P22302S2		96P22302S4		96P22392S2		96P22392S4	
.022	300	.312 x ⅞	96P22303S2		96P22303S4		96P22393S2		96P22393S4	
	400	.312 x ⅞	96P22304S2		96P22304S4		96P22394S2		96P22394S4	
	600	.312 x ⅞	96P22306S2		96P22306S4		96P22396S2		96P22396S4	
	1000	.400 x 1 1/16	———		———		96P223910S2		96P223910S4	
	100	.235 x 1 11/16	———		———		96P27391S2		96P27391S4	
.027	400	.312 x 1 3/16	———		———		96P27394S2		96P27394S4	
	600	.312 x 1 3/16	———		———		96P27396S2		96P27396S4	
	1000	.400 x 1 1/16	———		———		96P273910S2		96P273910S4	
	100	.235 x ¾	96P33301S2		96P33301S4		96P33391S2		96P33391S4	
	200	.312 x ⅞	96P33302S2		96P33302S4		96P33392S2		96P33392S4	
.033	300	.312 x ⅞	96P33303S2		96P33303S4		96P33393S2		96P33393S4	
	400	.312 x ⅞	96P33304S2		96P33304S4		96P33394S2		96P33394S4	
	600	.400 x ⅞	96P33306S2		96P33306S4		96P33396S2		96P33396S4	
	1000	.400 x 1 5/16	———		———		96P333910S2		96P333910S4	
	200	.312 x 1 3/16	———		———		96P39392S2		96P39392S4	
.039	400	.400 x 1 3/16	———		———		96P39394S2		96P39394S4	
	600	.400 x 1 1/16	———		———		96P39396S2		96P39396S4	
	1000	.562 x 1 1/16	———		———		96P393910S2		96P393910S4	
	100	.312 x ⅞	96P47301S2		96P47301S4		96P47391S2		96P47391S4	
	200	.312 x ⅞	96P47302S2		96P47302S4		96P47392S2		96P47392S4	
.047	300	.312 x ⅞	96P47303S2		96P47303S4		96P473932S		96P47393S4	
	400	.400 x ⅞	96P47304S2		96P47304S4		96P47394S2		96P47394S4	
	600	.400 x 1 1/8	96P47306S2		96P47306S4		96P47396S2		96P47396S4	
	1000	.562 x 1 5/16	———		———		96P47910S2		96P473910S4	
	200	.312 x 1 3/16	———		———		96P56392S2		96P56392S4	
.056	400	.400 x 1 1/16	———		———		96P56394S2		96P56394S4	
	600	.400 x 1 5/16	———		———		96P56396S2		96P56396S4	
	1000	.562 x 1 5/16	———		———		96P563910S2		96P563910S4	

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*For Style 4 units add .0625" to diameter and 1/16" to length.

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SPRAGUE CAPACITORS

TYPE 96P, continued

μF	WVDC	Size D. x L.	Capacitance Tolerance ±20% — Style 2 (bare metal case) Cat. No.	Style 4 (w/plastic sleeve)* Cat. No.	Capacitance Tolerance ±10% — Style 2 (bare metal case) Cat. No.	Style 4 (w/plastic sleeve)* Cat. No.
	100	.312 x ⅞	96P68301S2	96P68301S4	96P68391S2	96P68391S4
	200	.312 x ⅞	96P68302S2	96P68302S4	96P68392S2	96P68392S4
.068	300	.400 x ⅞	96P68303S2	96P68303S4	96P68393S2	96P68393S4
	400	.400 x 1⅛	96P68304S2	96P68304S4	96P68394S2	96P68394S4
	600	.400 x 1⅜	96P68306S2	96P68306S4	96P68396S2	96P68396S4
	1000	.562 x 1⅝	———	———	96P683910S2	96P683910S4
	100	.312 x 13/16	———	———	96P82391S2	96P82391S4
	200	.400 x 13/16	———	———	96P82392S2	96P82392S4
.082	400	.400 x 1⅝	———	———	96P82394S2	96P82394S4
	600	.562 x 1 1/16	———	———	96P82396S2	96P82396S4
	1000	.562 x 1⅝	———	———	96P823910S2	96P823910S4
	100	.312 x ⅞	96P10401S2	96P10401S4	96P10491S2	96P10491S4
	200	.400 x ⅞	96P10402S2	96P10402S4	96P10492S2	96P10492S4
.1	300	.400 x 1⅛	96P10403S2	96P10403S4	96P10493S2	96P10493S4
	400	.400 x 1⅜	96P10404S2	96P10404S4	96P10494S2	96P10494S4
	600	.562 x 1⅛	96P10406S2	96P10406S4	96P10496S2	96P10496S4
	1000	.562 x 1⅝	———	———	96P104910S2	96P104910S4
	100	.400 x 13/16	———	———	96P12491S2	96P12491S4
	200	.400 x 1 1/16	———	———	96P12492S2	96P12492S4
.12	400	.562 x 1 1/16	———	———	96P12494S2	96P12494S4
	600	.562 x 1⅝	———	———	96P12496S2	96P12496S4
	1000	.670 x 1⅝	———	———	96P124910S2	96P124910S4
	100	.400 x ⅞	96P15491S2	96P15401S4	96P15491S2	96P15491S4
	200	.400 x 1⅛	96P15492S2	96P15402S4	96P15492S2	96P15492S4
.15	300	.400 x 1⅜	96P15493S2	96P15403S4	96P15493S2	96P15493S4
	400	.562 x 1⅛	96P15494S2	96P15404S4	96P15494S2	96P15494S4
	600	.562 x 1⅜	96P15496S2	96P15406S4	96P15496S2	96P15496S4
	1000	.670 x 1⅝	———	———	96P154910S2	96P154910S4
	100	.400 x 1 1/16	———	———	96P18491S2	96P18491S4
	200	.400 x 1⅝	———	———	96P18492S2	96P18492S4
.18	400	.562 x 1⅝	———	———	96P18494S2	96P18494S4
	600	.562 x 1 13/16	———	———	96P18496S2	96P18496S4
	1000	.750 x 2 1/16	———	———	96P184910S2	96P184910S4
	100	.400 x 1⅛	96P22401S2	96P22401S4	96P22491S2	96P22491S4
	200	.400 x 1⅜	96P22402S2	96P22402S4	96P22492S2	96P22492S4
.22	300	.562 x 1⅛	96P22403S2	96P22403S4	96P22493S2	96P22493S4
	400	.562 x 1⅜	96P22404S2	96P22404S4	96P22494S2	96P22494S4
	600	.562 x 1⅞	96P22406S2	96P22406S4	96P22496S2	96P22496S4
	1000	.750 x 2 1/16	———	———	96P224910S2	96P224910S4
	100	.400 x 1 1/16	———	———	96P27491S2	96P27491S4
	200	.562 x 1⅝	———	———	96P27492S2	96P27492S4
.27	400	.562 x 1⅝	———	———	96P27494S2	96P27494S4
	600	.562 x 1 13/16	———	———	96P27496S2	96P27496S4
	1000	.750 x 2 1/16	———	———	96P274910S2	96P274910S4
	100	.400 x 1⅜	96P33401S2	96P33401S4	96P33491S2	96P33491S4
	200	.562 x 1⅛	96P33402S2	96P33402S4	96P33492S2	96P33492S4
.33	300	.562 x 1⅜	96P33403S2	96P33403S4	96P33493S2	96P33493S4
	400	.562 x 1⅞	96P33404S2	96P33404S4	96P33494S2	96P33494S4
	600	.670 x 1⅞	96P33406S2	96P33406S4	96P33496S2	96P33496S4
	1000	.750 x 1⅝	———	———	96P334910S2	96P334910S4
	100	.562 x 1 1/16	———	———	96P39491S2	96P39491S4
	200	.562 x 1⅝	———	———	96P39492S2	96P39492S4
.39	400	.670 x 1 13/16	———	———	96P39494S2	96P39494S4
	600	.750 x 2 1/16	———	———	96P39496S2	96P39496S4
	1000	1.000 x 2 1/16	———	———	96P394910S2	96P394910S4
	100	.562 x 1⅛	96P47401S2	96P47401S4	96P47491S2	96P47491S4
	200	.562 x 1⅜	96P47402S2	96P47402S4	96P47492S2	96P47492S4
.47	300	.562 x 1⅞	96P47403S2	96P47403S4	96P47493S2	96P47493S4
	400	.670 x 1⅞	96P47404S2	96P47404S4	96P47494S2	96P47494S4
	600	.750 x 2⅛	96P47406S2	96P47406S4	96P47496S2	96P47496S4
	1000	1.000 x 2 1/16	———	———	96P474910S2	96P474910S4
	100	.562 x 1⅝	———	———	96P56491S2	96P56491S4
.56	200	.562 x 1 13/16	———	———	96P56492S2	96P56492S4
	400	.750 x 2 1/16	———	———	96P56494S2	96P56494S4
	600	1.000 x 1 13/16	———	———	96P56496S2	96P56496S4
	100	.562 x 1⅜	96P68401S2	96P68401S4	96P68491S2	96P68491S4
	200	.562 x 1⅞	96P68402S2	96P68402S4	96P68492S2	96P68492S4
.68	300	.670 x 1⅞	96P68403S2	96P68403S4	96P68493S2	96P68493S4
	400	.750 x 2 1/16	96P68404S2	96P68404S4	96P68494S2	96P68494S4
	600	1.000 x 1 13/16	96P68406S2	96P68406S4	96P68496S2	96P68496S4
	100	.562 x 1 13/16	———	———	96P82491S2	96P82491S4
.82	200	.670 x 1 13/16	———	———	96P82492S2	96P82492S4
	400	1.000 x 1 13/16	———	———	96P82494S2	96P82494S4
	100	.562 x 1⅞	96P10501S2	96P10501S4	96P10591S2	96P10591S4
1.0	200	.670 x 1⅞	96P10502S2	96P10502S4	96P10592S2	96P10592S4
	300	.750 x 2 1/16	96P10503S2	96P10503S4	96P10593S2	96P10593S4
	400	1.000 x 1 13/16	96P10504S2	96P10504S4	96P10594S2	96P10594S4

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*For Style 4 units add .0625" to diameter and 1/16" to length.

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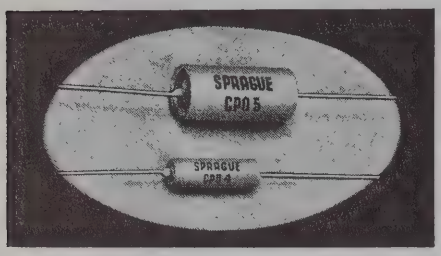
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SPRAGUE CAPACITORS

TYPE CP05 CAPACITORS TO MIL-C-25C



- Vitamin Q impregnation assures performance above and beyond MIL-C-25C requirements.
- Inserted tab construction for applications where minimum size is necessary.
- Positive hermetic closure of the metal cases assured by glass-to-metal solder-seal terminals.
- Type CP05 has insulating sleeve.
- Capacitance Tolerance ±10%. Characteristic K Temperature Range (−55°C to +125°C).
- Only popular insulated section (ungrounded case) capacitors are listed. For information on grounded case units, consult you Sprague Industrial Distributor.
- Call your Sprague Industrial Distributor for Quantity Prices.

μF	WVDC	D. x L.	Cat. No.*
.001	600	.298 x 13/16	CP05A1KF102K3
.0012	600	.298 x 13/16	CP05A1KF122K3
.0015	600	.298 x 13/16	CP05A1KF152K3
.0018	600	.298 x 13/16	CP05A1KF182K3
.0022	600	.298 x 13/16	CP05A1KF222K3
.0027	600	.298 x 13/16	CP05A1KF272K3
.0033	600	.298 x 13/16	CP05A1KF332K3
.0039	600	.298 x 13/16	CP05A1KF392K3
.0047	600	.298 x 13/16	CP05A1KF472K3
.0056	600	.298 x 13/16	CP05A1KF562K3
.0068	600	.298 x 13/16	CP05A1KF682K3
.0082	400	.298 x 13/16	CP05A1KE822K3
	600	.375 x 15/16	CP05A1KF822K3
.01	400	.298 x 13/16	CP05A1KE103K3
	600	.375 x 15/16	CP05A1KF103K3
.012	200	.298 x 13/16	CP05A1KC123K3
	600	.375 x 15/16	CP05A1KF123K3
	200	.298 x 13/16	CP05A1KC153K3
.015	600	.375 x 15/16	CP05A1KF153K3
	1000	.463 x 15/16	CP05A1KG153K3
	200	.298 x 13/16	CP05A1KC183K3
.018	600	.375 x 15/16	CP05A1KF183K3
	1000	.463 x 1 3/16	CP05A1KG183K3
	200	.298 x 13/16	CP05A1KC223K3
.022	600	.375 x 15/16	CP05A1KF223K3
	1000	.463 x 1 3/16	CP05A1KG223K3
	100	.298 x 13/16	CP05A1KB273K3
.027	400	.375 x 15/16	CP05A1KE273K3
	600	.463 x 15/16	CP05A1KF273K3
	1000	1.463 x 1 7/16	CP05A1KG273K3
	100	.298 x 13/16	CP05A1KB333K3
.033	400	.375 x 15/16	CP05A1KE333K3
	600	.463 x 15/16	CP05A1KF333K3
	1000	1.463 x 1 7/16	CP05A1KG333K3
	200	.375 x 15/16	CP05A1KC393K3
.039	400	.463 x 15/16	CP05A1KE393K3
	600	.463 x 1 7/16	CP05A1KF393K3
	1000	.625 x 1 7/16	CP05A1KG393K3
	200	.375 x 15/16	CP05A1KC473K3
.047	400	.463 x 15/16	CP05A1KE473K3
	600	.463 x 1 3/16	CP05A1KF473K3
	1000	.625 x 1 3/16	CP05A1KG473K3
	200	.375 x 15/16	CP05A1KC563K3
.056	400	.463 x 1 3/16	CP05A1KE563K3
	600	.463 x 1 7/16	CP05A1KF563K3
	1000	.625 x 1 7/16	CP05A1KG563K3
	200	.375 x 15/16	CP05A1KC683K3
.068	400	.463 x 1 3/16	CP05A1KE683K3
	600	.463 x 1 7/16	CP05A1KF685K3
	1000	.625 x 1 7/16	CP05A1KG683K3
	100	.375 x 15/16	CP05A1KB823K3
	200	.463 x 15/16	CP05A1KC823K3
.082	400	.463 x 1 7/16	CP05A1KE823K3
	600	.625 x 1 3/16	CP05A1KF823K3
	1000	.625 x 1 11/16	CP05A1KG823K3
	100	.463 x 15/16	CP05A1KB104K3
	200	.463 x 15/16	CP05A1KC104K3
.1	400	.463 x 1 7/16	CP05A1KE104K3
	600	.625 x 1 3/16	CP05A1KF104K3
	1000	.625 x 1 11/16	CP05A1KG104K3
	100	.463 x 15/16	CP05A1KB124K3
	200	.463 x 1 3/16	CP05A1KC124K3
.12	400	.625 x 1 3/16	CP05A1KE124K3
	600	.625 x 1 7/16	CP05A1KF124K3
	1000	.733 x 1 11/16	CP05A1KG124K3
	100	.463 x 15/16	CP05A1KB154K3
	200	.463 x 1 1/8	CP05A1KC154K3
.15	400	.625 x 1 3/16	CP05A1KE154K3
	600	.625 x 1 7/16	CP05A1KF154K3
	1000	.733 x 1 11/16	CP05A1KG154K3
	100	.463 x 1 3/16	CP05A1KB184K3
	200	.463 x 1 7/16	CP05A1KC184K3
.18	400	.625 x 1 7/16	CP05A1KE184K3
	600	.625 x 1 15/16	CP05A1KF184K3
	1000	.813 x 2 3/16	CP05A1KG184K3
	100	.463 x 1 3/16	CP05A1KB224K3
	200	.463 x 1 7/16	CP05A1KC224K3
.22	400	.625 x 1 7/16	CP05A1KE224K3
	600	.625 x 1 15/16	CP05A1KF224K3
	1000	.813 x 2 3/16	CP05A1KG224K3
	100	.463 x 1 7/16	CP05A1KB274K3
	200	.625 x 1 3/16	CP05A1KC274K3
.27	400	.625 x 1 15/16	CP05A1KE274K3
	600	.733 x 1 15/16	CP05A1KF274K3
	1000	.813 x 2 11/16	CP05A1KG274K3
	100	.463 x 1 7/16	CP05A1KB334K3
	200	.625 x 1 3/16	CP05A1KC334K3
.33	400	.625 x 1 15/16	CP05A1KE334K3
	600	.733 x 1 15/16	CP05A1KF334K3
	1000	.813 x 2 11/16	CP05A1KG334K3
	100	.625 x 1 3/16	CP05A1KB394K3
	200	.625 x 1 7/16	CP05A1KC394K3
.39	400	.733 x 1 15/16	CP05A1KE394K3
	600	.813 x 2 3/16	CP05A1KF394K3
	1000	1.063 x 2 3/16	CP05A1KG394K3
	100	.625 x 1 3/16	CP05A1KB474K3
	200	.625 x 1 7/16	CP05A1KC474K3
.47	400	.733 x 1 15/16	CP05A1KE474K3
	600	.813 x 2 3/16	CP05A1KF474K3
	1000	1.063 x 2 3/16	CP05A1KG474K3
	100	.625 x 1 7/16	CP05A1KB564K3
	200	.625 x 1 15/16	CP05A1KC564K3
.56	400	.813 x 2 3/16	CP05A1KE564K3
	600	1.063 x 1 15/16	CP05A1KF564K3
	100	.625 x 1 7/16	CP05A1KB684K3
.68	200	.625 x 1 15/16	CP05A1KC684K3
	400	.813 x 2 3/16	CP05A1KE684K3
	600	1.063 x 1 15/16	CP05A1KF684K3
	100	.625 x 1 13/16	CP05A1KB824K3
.82	200	.733 x 1 15/16	CP05A1KC824K3
	400	1.063 x 1 15/16	CP05A1KE824K3
	100	.625 x 1 15/16	CP05A1KB105K3
1.0	200	.733 x 1 15/16	CP05A1KC105K3
	400	1.063 x 1 15/16	CP05A1KE105K3

*For Vibration Grade 1, change last digit of Catalog Number to "1."

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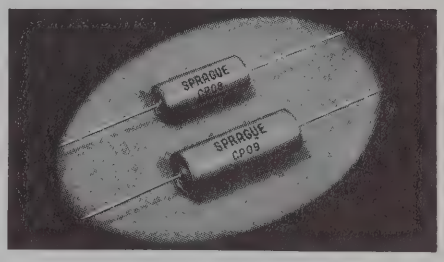
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SPRAGUE CAPACITORS

TYPE CP09 CAPACITORS TO MIL-C-25A

- Vitamin Q impregnation assures performance above and beyond MIL-C-25A requirements.
- Positive hermetic closure of the metal cases with glass-to-metal solder-seal terminals.
- Available in Characteristic E (−55°C to +85°C) or Characteristic K (−55°C to +125°C).
- Type CP09 has insulating sleeve.
- Extended foil, non-inductive section construction.
- Listed below are popular insulated section (ungrounded case) capacitors. Consult your Sprague Industrial Distributor for information on grounded case units.
- Call your Sprague Industrial Distributor for Quantity Prices.



			Characteristic E −55°C to +85°C				Characteristic K −55°C to +125°C			
			±20% Tol.		±10% Tol.		±20% Tol.		±10% Tol.	
μF	WVDC	Size D. x L.	Cat. No.		Cat. No.		Cat. No.		Cat. No.	
.001	600	.298 x 13/16	CP09A1EF102M	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR QUANTITY PRICES	CP09A1EF102K	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR QUANTITY PRICES	CP09A1KF102M	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR QUANTITY PRICES	CP09A1KF102K	CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR QUANTITY PRICES
.0015	600	.298 x 13/16	CP09A1EF152M		CP09A1EF152K		CP09A1KF152M		CP09A1KF152K	
.0022	600	.298 x 13/16	CP09A1EF222M		CP09A1EF222K		CP09A1KF222M		CP09A1KF222K	
.0033	400	.298 x 13/16	CP09A1EE332M		CP09A1EE332K		CP09A1KE332M		CP09A1KE332K	
	600	.375 x 15/16	CP09A1EF332M		CP09A1EF332K		CP09A1KF332M		CP09A1KF332K	
.0047	200	.298 x 13/16	CP09A1EC472M		CP09A1EC472K		CP09A1KC472M		CP09A1KC472K	
	600	.375 x 15/16	CP09A1EF472M		CP09A1EF472K		CP09A1KF472M		CP09A1KF472K	
.0068	200	.298 x 13/16	CP09A1EC682M		CP09A1EC682K		CP09A1KC682M		CP09A1KC682K	
	600	.375 x 15/16	CP09A1EF682M		CP09A1EF682K		CP09A1KF682M		CP09A1KF682K	
.01	100	.298 x 13/16	CP09A1EB103M		CP09A1EB103K		CP09A1KB103M		CP09A1KB103K	
	600	.375 x 15/16	CP09A1EF103M		CP09A1EF103K		CP09A1KF103M		CP09A1KF103K	
.015	100	.298 x 13/16	CP09A1EB153M		CP09A1EB153K		CP09A1KB153M		CP09A1KB153K	
	400	.375 x 15/16	CP09A1EE153M		CP09A1EE153K		CP09A1KE153M		CP09A1KE153K	
	600	.463 x 15/16	CP09A1EF153M		CP09A1EF153K		CP09A1KF153M		CP09A1KF153K	
.022	200	.375 x 15/16	CP09A1EC223M		CP09A1EC223K		CP09A1KC223M		CP09A1KC223K	
	600	.463 x 15/16	CP09A1EF223M		CP09A1EF223K		CP09A1KF223M		CP09A1KF223K	
.033	200	.375 x 15/16	CP09A1EC333M		CP09A1E333K		CP09A1KC333M		CP09A1KC333K	
	400	.463 x 15/16	CP09A1EE333M		CP09A1EE333K		CP09A1KE333M		CP09A1KE333K	
	600	.463 x 13/16	CP09A1EF333M		CP09A1EF333K		CP09A1KF333M		CP09A1KF333K	
.047	100	.375 x 15/16	CP09A1EB473M		CP09A1EB473K		CP09A1KB473M		CP09A1KB473K	
	200	.463 x 15/16	CP09A1EC473M		CP09A1EC473K		CP09A1KC473M		CP09A1KC473K	
	400	.463 x 13/16	CP09A1EE473M		CP09A1EE473K		CP09A1KE473M		CP09A1KE473K	
	600	.463 x 17/16	CP09A1EF473M		CP09A1EF473K		CP09A1KF473M		CP09A1KF473K	
.068	200	.463 x 15/16	CP09A1EC683M		CP09A1EC683K		CP09A1KC683M		CP09A1KC683K	
	400	.463 x 17/16	CP09A1EE683M		CP09A1EE683K		CP09A1KE683M		CP09A1KE683K	
	600	.625 x 13/16	CP09A1EF683M		CP09A1EF683K		CP09A1KF683M		CP09A1KF683K	
.1	100	.463 x 15/16	CP09A1EB104M		CP09A1EB104K		CP09A1KB104M		CP09A1KB104K	
	200	.463 x 13/16	CP09A1EC104M		CP09A1EC104K		CP09A1KC104M		CP09A1KC104K	
	400	.625 x 13/16	CP09A1EE104M		CP09A1EE104K		CP09A1KE104M		CP09A1KE104K	
	600	.625 x 17/16	CP09A1EF104M		CP09A1EF104K		CP09A1KF104M		CP09A1KF104K	
.15	100	.463 x 13/16	CP09A1EB154M		CP09A1EB154K		CP09A1KB154M		CP09A1KB154K	
	200	.463 x 17/16	CP09A1EC154M		CP09A1EC154K		CP09A1KC154M		CP09A1KC154K	
	400	.625 x 17/16	CP09A1EE154M		CP09A1EE154K		CP09A1KE154M		CP09A1KE154K	
	600	.625 x 111/16	CP09A1EF154M		CP09A1EF154K		CP09A1KF154M		CP09A1KF154K	
.22	100	.463 x 17/16	CP09A1EB224M		CP09A1EB224K		CP09A1KB224M		CP09A1KB224K	
	200	.625 x 13/16	CP09A1EC224M		CP09A1EC224K		CP09A1KC224M		CP09A1KC224K	
	400	.625 x 111/16	CP09A1EE224M		CP09A1EE224K		CP09A1KE224M		CP09A1KE224K	
	600	.733 x 111/16	CP09A1EF224M		CP09A1EF224K		CP09A1KF224M		CP09A1KF224K	
.33	100	.625 x 13/16	CP09A1EB334M		CP09A1EB334K		CP09A1KB334M		CP09A1KB334K	
	200	.625 x 17/16	CP09A1EC334M		CP09A1EC334K		CP09A1KC334M		CP09A1KC334K	
	400	.733 x 111/16	CP09A1EE334M		CP09A1EE334K		CP09A1KE334M		CP09A1KE334K	
	600	.813 x 23/16	CP09A1EF334M		CP09A1EF334K		CP09A1KF334M		CP09A1KF334K	
.47	100	.625 x 17/16	CP09A1EB474M		CP09A1EB474K		CP09A1KB474M		CP09A1KB474K	
	200	.625 x 111/16	CP09A1EC474M		CP09A1EC474K		CP09A1KC474M		CP09A1KC474K	
	400	.813 x 23/16	CP09A1EE474M		CP09A1EE474K		CP09A1KE474M		CP09A1KE474K	
	600	.813 x 27/16	CP09A1EF474M		CP09A1EF474K		CP09A1KF474M		CP09A1KF474K	
.68	100	.625 x 111/16	CP09A1EB684M		CP09A1EB684K		CP09A1KB684M		CP09A1KB684K	
	200	.733 x 111/16	CP09A1EC684M		CP09A1EC684K		CP09A1KC684M		CP09A1KC684K	
1.0	100	.733 x 111/16	CP09A1EB105M		CP09A1EB105K		CP09A1KB105M		CP09A1KB105K	
	200	.813 x 23/16	CP09A1EC105M		CP09A1EC105K		CP09A1KC105M		CP09A1KC105K	

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SPRAGUE CAPACITORS

TYPE CP09 CAPACITORS TO MIL-C-25C

(±10% CAPACITANCE TOLERANCE, CHARACTERISTIC K)

μF	WVDC	D. x L.	Cat. No.
.001	600	.298 x 13/16	CP09A1KF102K3
	1000	.463 x 15/16	CP09A1KG102K3
.0012	600	.298 x 13/16	CP09A1KF122K3
	1000	.463 x 15/16	CP09A1KG122K3
.0015	600	.298 x 13/16	CP09A1KF152K3
	1000	.463 x 15/16	CP09A1KG152K3
.0018	600	.298 x 13/16	CP09A1KF182K3
	1000	.463 x 15/16	CP09A1KG182K3
.0022	600	.298 x 13/16	CP09A1KF222K3
	1000	.463 x 15/16	CP09A1KG222K3
.0027	400	.298 x 13/16	CP09A1KE272K3
	600	.375 x 15/16	CP09A1KF272K3
	1000	.463 x 15/16	CP09A1KG272K3
.0033	400	.298 x 13/16	CP09A1KE332K3
	600	.375 x 15/16	CP09A1KF332K3
	1000	.463 x 15/16	CP09A1KG332K3
.0039	200	.298 x 13/16	CP09A1KC392K3
	600	.375 x 15/16	CP09A1KF393K3
	1000	.463 x 15/16	CP09A1KG393K3
.0047	200	.298 x 13/16	CP09A1KC472K3
	600	.375 x 15/16	CP09A1KF472K3
	1000	.463 x 15/16	CP09A1KG472K3
.0056	200	.298 x 13/16	CP09A1KC562K3
	600	.375 x 15/16	CP09A1KF562K3
	1000	.463 x 15/16	CP09A1KG562K3
.0068	200	.298 x 13/16	CP09A1KC682K3
	600	.375 x 15/16	CP09A1KF682K3
	1000	.463 x 15/16	CP09A1KG682K3
.0082	100	.298 x 13/16	CP09A1KB822K3
	600	.375 x 15/16	CP09A1KF822K3
	1000	.463 x 15/16	CP09A1KG822K3
.01	100	.298 x 13/16	CP09A1KB103K3
	600	.375 x 15/16	CP09A1KF103K3
	1000	463 x 15/16	CP09A1KG103K3
.012	100	.298 x 13/16	CP09A1KB123K3
	400	.375 x 15/16	CP09A1KE123K3
	600	.463 x 15/16	CP09A1KF123K3
	1000	.463 x 13/16	CP09A1KG123K3
.015	100	.298 x 13/16	CP09A1KB153K3
	400	.375 x 15/16	CP09A1KE153K3
	600	.463 x 15/16	CP09A1KF153K3
	1000	.463 x 13/16	CP09A1KG153K3
.018	200	.375 x 15/16	CP09A1KC183K3
	600	.463 x 15/16	CP09A1KF183K3
	1000	.463 x 17/16	CP09A1KG183K3
.022	200	.375 x 15/16	CP09A1KC223K3
	600	.463 x 15/16	CP09A1KF223K3
	1000	.463 x 17/16	CP09A1KG223K3

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

μF	WVDC	D. x L.	Cat. No.
.027	200	.375 x 15/16	CP09A1KC273K3
	400	.463 x 15/16	CP09A1KE273K3
	600	.463 x 13/16	CP09A1KF273K3
	1000	.625 x 13/16	CP09A1KG273K3
.033	200	.375 x 15/16	CP09A1KC333K3
	400	.463 x 15/16	CP09A1KE333K3
	600	.463 x 13/16	CP09A1KF333K3
	1000	.625 x 13/16	CP09A1KG333K3
.039	100	.375 x 15/16	CP09A1KB393K3
	200	.463 x 15/16	CP09A1KC393K3
	400	.463 x 13/16	CP09A1KE393K3
	600	.463 x 17/16	CP09A1KF393K3
	1000	.625 x 17/16	CP09A1KG393K3
.047	100	.375 x 15/16	CP09A1KB473K3
	200	.463 x 15/16	CP09A1KC473K3
	400	.463 x 13/16	CP09A1KE473K3
	600	.463 x 17/16	CP09A1KF473K3
	1000	.625 x 17/16	CP09A1KG473K3
.056	200	.463 x 15/16	CP09A1KC563K3
	400	.463 x 17/16	CP09A1KE563K3
	600	.625 x 13/16	CP09A1KF563K3
	1000	.625 x 111/16	CP09A1KG563K3
.068	200	.463 x 15/16	CP09A1KC683K3
	400	.463 x 17/16	CP09A1KE683K3
	600	.625 x 13/16	CP09A1KF683K3
	1000	.625 x 111/16	CP09A1KG683K3
.082	100	.463 x 15/16	CP09A1KB823K3
	200	.463 x 13/16	CP09A1KC823K3
	400	.625 x 13/16	CP09A1KE823K3
	600	.625 x 17/16	CP09A1KF823K3
	1000	.733 x 111/16	CP09A1KG823K3
.1	100	.463 x 15/16	CP09A1KB104K3
	200	.463 x 13/16	CP09A1KC104K3
	400	.625 x 13/16	CP09A1KE104K3
	600	.625 x 17/16	CP09A1KF104K3
	1000	.733 x 111/16	CP09A1KG104K3
.12	100	.463 x 13/16	CP09A1KB124K3
	200	.463 x 17/16	CP09A1KC124K3
	400	.625 x 17/16	CP09A1KE124K3
	600	.625 x 111/16	CP09A1KF124K3
	1000	.733 x 115/16	CP09A1KG124K3
.15	100	.463 x 13/16	CP09A1KB154K3
	200	.463 x 17/16	CP09A1KC154K3
	400	.625 x 17/16	CP09A1KE154K3
	600	.625 x 111/16	CP09A1KF154K3
	1000	.733 x 115/16	CP09A1KG154K3
.18	100	.463 x 17/16	CP09A1KB184K3
	200	.625 x 13/16	CP09A1KC184K3
	400	.625 x 111/16	CP09A1KE184K3
	600	.733 x 111/16	CP09A1KF184K3
	1000	.813 x 23/16	CP09A1KG184K3
.22	100	.463 x 17/16	CP09A1KB224K3
	200	.625 x 13/16	CP09A1KC224K3
	400	.625 x 111/16	CP09A1KE224K3
	600	.733 x 111/16	CP09A1KF224K3
	1000	.813 x 23/16	CP09A1KG224K3

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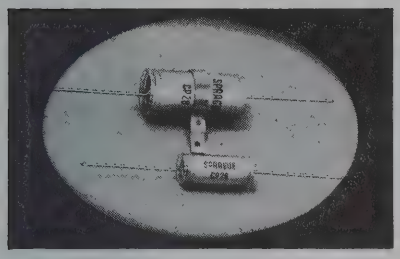
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SPRAGUE CAPACITORS

MIL-C-25A CAPACITORS — TYPES CP26 and CP28



- Impregnated with specially processed mineral oil to exceed performance requirements of Specification MIL-C-25A
- Type CP26 has outer insulating sleeve — Type CP28 has insulating sleeve plus metal strap for radial mounting.
- Hermetically sealed for protection against leakage and contamination
- Meet temperature characteristic E (—55°C to +85°C operation)
- Capacitor sections are insulated from metal cases
- Call Your Sprague Distributor for Current Prices

NOTE: Capacitors listed below have a capacitance tolerance of ±10%. For ±20% units, change last letter in catalog number from K to M.

TYPE CP26 (without Mounting Bracket)

µF	Volts	Diam. x Length	Cat. No.
.006	600	½ x 1 5/16	CP26A1EF602K
.01	600	½ x 1 5/16	CP26A1EF103K
.02	600	½ x 1 13/16	CP26A1EF203K
.05	600	1 1/16 x 1 11/16	CP26A1EF503K
.5	200	1 1/16 x 2 5/16	CP26A1EC504K

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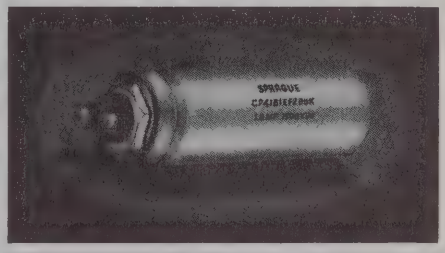
TYPE CP28 (Radial Mounting Bracket)

µF	Volts	Diam. x Length	Cat. No.
.1	600	1 1/16 x 2 1/16	CP28A1EF104K
.25	600	1 1/16 x 2 5/16	CP28A1EF254K
.5	600	1 1/16 x 2 13/16	CP28A1EF504K

Call Your Sprague Distributor for Current Prices

MIL-C-25A CAPACITORS — TYPES CP40 and CP41

- Designed and manufactured for service life and performance characteristics exceeding MIL requirements
- Type CP40 has screw and nut connection on positive terminal, can is negative — Type CP41 has two solder-lug terminals, with capacitor section insulated from metal case
- Impregnated with specially processed mineral oil for characteristic E operation — Will withstand wide temperature variations (—55°C to +85°C)
- Hermetically sealed in metal cases, with threaded screw necks for mounting purposes
- Call Your Sprague Distributor for Current Prices



NOTE: Capacitors listed below have a capacitance tolerance of ±10%. For ±20% units, change last letter in catalog number from K to M.

TYPE CP40 (One Terminal)

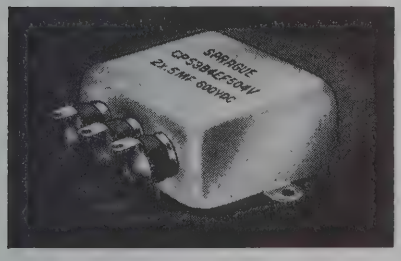
µF	Volts	Diam. x Length	Cat. No.
2.0	600	1½ x 3⅜	CP40C2EF205K
4.0	600	1½ x 5¼	CP40C2EF405K

Call Your Sprague Distributor for Prices

TYPE CP41 (Two Terminals)

µF	Volts	Diam. x Length	Cat. No.
2.0	600	1½ x 3⅜	CP41B1EF205K
4.0	600	1½ x 5¼	CP41B1EF405K

Call Your Sprague Distributor for Prices



MIL-C-25A CAPACITORS—TYPE CP53

- Impregnated with specially processed mineral oil to exceed performance requirements of MIL-C-25A
- Hermetically sealed, with silicone rubber compression terminals
- Rated for—55°C to +85°C operation
- Drawn metal cases have mounting flanges as integral part of containers
- Single and dual capacitance units have insulated sections — triple capacitance units have grounded cases
- Call Your Sprague Distributor for Current Prices

NOTE: Capacitors listed below have capacitance tolerances of +20%, —10% (V) or ±10% (K). For ±20% units, change last letter in catalog number from K to M or V to M.

Single Capacitance

µF	Volts	L. x W. x H.	Cat. No.
.05	600	1 13/16 x 1 x ¾	CP53B1EF503K
.05	1000	1 13/16 x 1 x ¾	CP53B1EG503K
.1	600	1 13/16 x 1 x ¾	CP53B1EF104K
.1	1000	1 13/16 x 1 x ¾	CP53B1EG104K
.25	600	1 13/16 x 1 x ¾	CP53B1EF254K
.25	1000	1 13/16 x 1 x ⅞	CP53B1EG254K
.5	400	1 13/16 x 1 x ⅞	CP53B1EE504K
.5	600	1 13/16 x 1 x 1	CP53B1EF504K
.5	1000	2 x 1¾ x ⅞	CP53B1EG504K
1.0	600	2 x 1¾ x 1	CP53B1EF105K
1.0	1000	2 x 2 x 1⅛	CP53B1EG105K
2.0	100	2 x 1¾ x ⅞	CP53B1EB205K
2.0	200	2 x 2 x 1	CP53B1EC205K
2.0	600	2 x 2 x 1⅛	CP53B1EF205K
4.0	100	2 x 2 x 1⅛	CP53B1EB405K

Call Your Sprague Distributor for Prices

Dual Capacitance

µF	Volts	L. x W. x H.	Cat. No.
.05 + .05	600	1 13/16 x 1 x ¾	CP53B4EF503V
.05 + .05	1000	1 13/16 x 1 x ¾	CP53B4EG503V
.1 + .1	600	1 13/16 x 1 x ¾	CP53B4EF104V
.1 + .1	1000	1 13/16 x 1 x ⅞	CP53B4EG104V
.25 + .25	600	1 13/16 x 1 x 1	CP53B4EF254V
.25 + .25	1000	2 x 1¾ x ⅞	CP53B4EG254V
.5 + .5	600	2 x 1¾ x 1	CP53B4EF504V
.5 + .5	1000	2 x 2 x 1⅛	CP53B4EG504V
1.0 + 1.0	600	2 x 2 x 1⅛	CP53B4EF105V

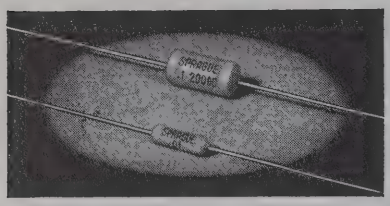
Triple Capacitance

µF	Volts	L. x W. x H.	Cat. No.
.05 + .05 + .05	600	1 13/16 x 1 x ¾	CP53B5EF503V
.1 + .1 + .1	600	1 13/16 x 1 x ⅞	CP53B5EF104V
.5 + .5 + .5	600	2 x 2 x 1⅛	CP53B5EF504V

Call Your Sprague Distributor for Prices

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SPRAGUE CAPACITORS



TYPE 192P PACER® FILMITE® 'E' CAPACITORS

- **Completely New Construction for Minimum Size. Extended Foil Film Sections Terminate in End Caps. Best Possible Non-Inductive Section. Rated for —55C to +85C.**
- Controlled Dimensions—May Be Used With Automatic Insertion Equipment.
- Wound With Polyester Film Dielectric and Thin Gage Foil Under Controlled Atmospheric Conditions. Protected by Hard Durable Orange Epoxy Coating ● Also Available in Kleer-Pak® Boxes.

● For Quantity Prices Call Your Sprague Industrial Distributor ● Rated at 200 VDC ● See Latest Issue of Sprague Engineering Bulletin 2066.

μF	D. x L.	Cat. No.	Net. (1-24)	μF	D. x L.	Cat. No.	Net. (1-24)	μF	D. x L.	Cat. No.	Net. (1-24)	μF	D. x L.	Cat. No.	Net. (1-24)
.00047	.138 x 5/16	192P47192	$.33	.0022	.170 x 5/16	192P22292	$.27	.01	.170 x 1/2	192P10392	$.30	.047	.290 x 1/2	192P47392	$.39
.00056	.138 x 5/16	192P56192	.30	.0027	.170 x 5/16	192P27292	.27	.012	.204 x 7/16	192P12392	.30	.056	.290 x 5/8	192P56392	.39
.00068	.138 x 5/16	192P68192	.30	.0033	.170 x 5/16	192P33292	.27	.015	.204 x 7/16	192P15392	.30	.068	.290 x 5/8	192P68392	.42
.00082	.138 x 5/16	192P82192	.30	.0039	.170 x 7/16	192P39292	.27	.018	.204 x 9/16	192P18392	.30	.082	.318 x 5/8	192P82392	.45
.001	.138 x 5/16	192P10292	.27	.0047	.170 x 7/16	192P47292	.27	.022	.204 x 9/16	192P22392	.30	.1	.318 x 5/8	192P10492	.45
.0012	.138 x 5/16	192P12292	.27	.0056	.170 x 7/16	192P56292	.27	.027	.225 x 9/16	192P27392	.33	.12	.318 x 7/8	192P12492	.48
.0015	.138 x 5/16	192P15292	.27	.0068	.170 x 7/16	192P68292	.27	.033	.225 x 9/16	192P33392	.33	.15	.318 x 7/8	192P15492	.48
.0018	.170 x 5/16	192P18292	.27	.0082	.170 x 1/2	192P82292	.30	.039	.290 x 1/2	192P39392	.36	.22	.318 x 1 3/16	192P22492	.51

TYPE 155P & 156P MOLDED METALLIZED PAPER CAPACITORS



- Superior to Most Competitive Units—Withstand Twice Rated Voltage Tests Giving Extra Design Safety Factor. Stand up Under High Humidity Condition.
- Self-generated Noise Practically Non-Existent. ● Sealed With Epoxy.
- Type 155P—Molded in Case. Type 156P in Premolded Case. Available in Kleer-Pak® Boxes. Complete Technical Data in Latest Issue of Sprague Bulletin 2030.
- For Current Quantity Prices Call Your Sprague Industrial Distributor.

μF	D. x L.	Ordering Information	Net. Ea. (1-24)
200 VOLTS D-C			
.01	5/16 x 1	155P10302	$ .42
.015	5/16 x 1	155P15302	.42
.02	5/16 x 1	155P-.02-200	.42
.022	5/16 x 1	155P22302	.42
.03	5/16 x 1	155P-.03-200	.45
.033	5/16 x 1	155P33302	.45
.047	5/16 x 1	155P47302	.45
.05	5/16 x 1	155P-.05-200	.45
.068	5/16 x 1	155P68302	.45
.1	5/16 x 1	155P10402	.45
.15	3/8 x 1 1/4	155P15402	.45
.22	3/8 x 1 1/4	155P22402	.45
.25	7/16 x 1 1/4	155P-.25-200	.66
.33	7/16 x 1 1/4	155P33402	.66
.47	7/16 x 1 1/4	155P47402	.66
.5	1/2 x 1 1/2	155P-.5-200	.78
.68	1/2 x 1 1/2	155P68402	.78
1.0	1/2 x 1 1/2	155P10502	1.05
1.5	5/8 x 1 7/8	155P15502	1.20
2.0	5/8 x 1 7/8	155P20502	1.41
2.5	3/4 x 2 1/4	156P25502	1.65
3.0	3/4 x 2 1/4	156P30502	1.80
3.5	3/4 x 2 1/4	156P35502	2.10
4.0	3/4 x 2 1/4	156P40502	2.22
4.5	7/8 x 2 1/2	156P45502	2.40
5.0	7/8 x 2 1/2	156P50502	2.55
5.5	7/8 x 2 1/2	156P55502	2.70
6.0	7/8 x 2 1/2	156P60502	3.00
6.5	7/8 x 2 1/2	156P65502	3.15
200 VOLTS D-C (Cont.)			
7.0	7/8 x 2 1/2	156P70502	$3.33
7.5	7/8 x 2 1/2	156P75502	3.15
8.0	1 x 2 1/2	156P80502	3.75
8.5	1 x 2 1/2	156P85502	3.90
9.0	1 x 2 1/2	156P90502	4.05
9.5	1 x 2 1/2	156P95502	4.20
400 VOLTS D-C			
.01	5/16 x 1	155P10304	.42
.015	5/16 x 1	155P15304	.42
.02	5/16 x 1	155P-.02-400	.42
.022	5/16 x 1	155P22304	.42
.025	3/8 x 1 1/4	155P-.025-400	.42
.03	3/8 x 1 1/4	155P-.03-400	.42
.033	3/8 x 1 1/4	155P33304	.42
.04	3/8 x 1 1/4	155P-.04-400	.42
.047	3/8 x 1 1/4	155P47304	.42
.05	3/8 x 1 1/4	155P-.05-400	.45
.068	3/8 x 1 1/4	155P68304	.45
.1	7/16 x 1 1/4	155P10404	.51
.15	1/2 x 1 1/2	155P15404	.66
.2	1/2 x 1 1/2	155P-.2-400	.69
.22	1/2 x 1 1/2	155P22404	.69
.25	5/8 x 1 7/8	155P-.25-400	.72
.33	5/8 x 1 7/8	155P33404	.72
.47	5/8 x 1 7/8	155P47404	.90
.5	5/8 x 1 7/8	155P-.5-400	.93
.68	3/4 x 2 1/4	156P68404	1.05
400 VOLTS D-C (Cont.)			
1.0	3/4 x 2 1/4	156P10504	$1.29
1.5	7/8 x 2 1/2	156P15504	1.59
2.0	7/8 x 2 1/2	156P20504	1.80
2.5	1 x 2 1/2	156P25504	2.25
600 VOLTS D-C			
.01	5/16 x 1	155P10306	.45
.015	3/8 x 1 1/4	155P15306	.45
.02	3/8 x 1 1/4	155P-.02-600	.45
.022	3/8 x 1 1/4	155P22306	.45
.03	3/8 x 1 1/4	155P-.03-600	.48
.033	3/8 x 1 1/4	155P33306	.48
.04	3/8 x 1 1/4	155P-.04-600	.51
.047	3/8 x 1 1/4	155P47306	.51
.05	7/16 x 1 1/4	155P-.05-600	.51
.06	7/16 x 1 1/4	155P-.06-600	.51
.068	7/16 x 1 1/4	155P68306	.51
.1	1/2 x 1 1/2	155P10406	.57
.15	1/2 x 1 1/2	155P15406	.72
.2	5/8 x 1 7/8	155P-.2-600	.90
.22	5/8 x 1 7/8	155P22406	.90
.25	5/8 x 1 7/8	155P-.25-600	.90
.33	5/8 x 1 7/8	155P33406	.93
.47	3/4 x 2 1/4	156P47406	1.14
.5	3/4 x 2 1/4	156P-.5-600	1.14
.68	3/4 x 2 1/4	156P68406	1.14
1.0	7/8 x 2 1/2	156P10506	1.38
1.5	1 x 2 1/2	156P15506	1.89

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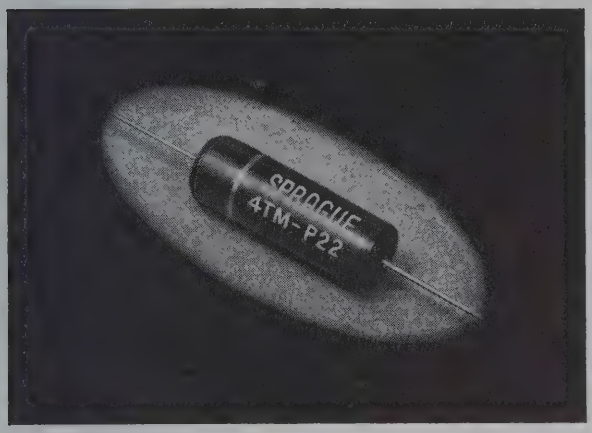
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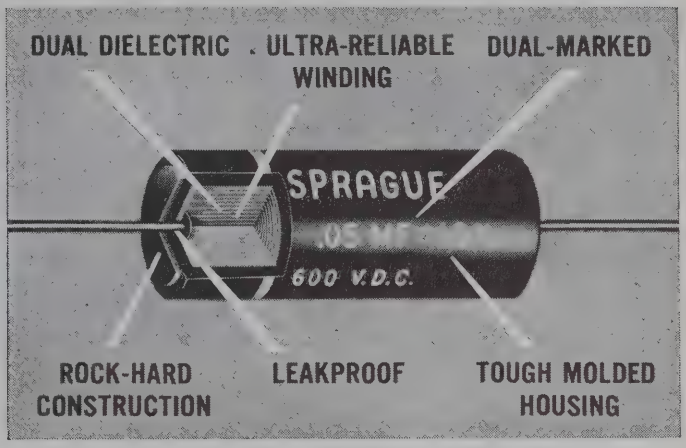
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SPRAGUE CAPACITORS

DIFILM® BLACK BEAUTY® MOLDED TUBULARS





- Developed Especially for Long Life Under High Humidity and Temperature Operating Conditions
- Dual Dielectric (film and paper) Combines Best Features of Both Polyester Film and Paper Capacitors
- Exclusive HCX® Solid Impregnant Construction Results in Rock-hard Capacitor Section
- Won't Leak or Drip

LOOK FOR THE RED MARKINGS ON THE BLACK CASE

- No Derating for 105°C Operation
- Mica-filled, Non-flammable Molded Case. Won't Crack when Dropped; Soldering won't Harm it
- Every Capacitor Marked Twice. No Twisting the Case to Read Ratings
- Also Available in Handy Sprague Kleer-Pak®
- **Capacitance Tolerance:** ±10% from .001 μF up
  Except 2TM-M1 ±20%

For Complete Technical Data, See Latest Sprague Engineering Bulletin 2025

The World's Best Molded Tubular at No Extra Cost!

μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net
200 WVDC				
.01	5/16 x 1	2TM-S10	160P10392	$.15
.02	3/8 x 1 1/4	2TM-S20	.....	.15
.022	3/8 x 1 1/4	2TM-S22	160P22392	.15
.047	7/16 x 1 1/4	2TM-S47	160P47392	.15
.05	7/16 x 1 1/4	2TM-S50	.....	.15
.1	1/2 x 1 1/2	2TM-P10	160P10492	.21
.15	1/2 x 1 1/2	2TM-P15	160P15492	.21
.22	5/8 x 1 7/8	2TM-P22	160P22492	.24
.25	5/8 x 1 7/8	2TM-P25	.....	.24
.47	3/4 x 2 1/4	2TM-P47	160P47492	.36
.5	3/4 x 2 1/4	2TM-P50	.....	.36
1.0	3/4 x 2 1/4	2TM-M1	160P10502	.63
400 WVDC				
.001	5/16 x 1	4TM-D10	160P10294	.15
.005	5/16 x 1	4TM-D50	.....	.15
.01	3/8 x 1 1/4	4TM-S10	160P10394	.15
.015	3/8 x 1 1/4	4TM-S15	160P15394	.15
.02	3/8 x 1 1/4	4TM-S20	.....	.15
.022	3/8 x 1 1/4	4TM-S22	160P22394	.18
.025	7/16 x 1 1/4	4TM-S25	.....	.18
.03	7/16 x 1 1/4	4TM-S30	.....	.18
.04	7/16 x 1 1/4	4TM-S40	.....	$.18
.047	7/16 x 1 1/4	4TM-S47	160P47394	.18
.05	7/16 x 1 1/4	4TM-S50	.....	.18
.068	1/2 x 1 1/2	4TM-S68	160P68394	.21
.1	1/2 x 1 1/2	4TM-P10	160P10494	.21
.15	5/8 x 1 7/8	4TM-P15	160P15494	.24
.2	5/8 x 1 7/8	4TM-P20	.....	.27
.22	5/8 x 1 7/8	4TM-P22	160P22494	.27
.25	3/4 x 2 1/4	4TM-P25	.....	.30
.47	3/4 x 2 1/4	4TM-P47	160P47494	.45
.5	3/4 x 2 1/4	4TM-P50	.....	.45
1.0	1 x 2 1/2	4TM-M1	160P10594	.75
600 WVDC				
.0001	5/16 x 1	6TM-T10	.....	.15
.00025	5/16 x 1	6TM-T25	.....	.15
.0004	5/16 x 1	6TM-T40	.....	.15
.0005	5/16 x 1	6TM-T50	.....	.15
.001	5/16 x 1	6TM-D10	160P10296	.15
.0015	5/16 x 1	6TM-D15	160P15296	.15
.002	5/16 x 1	6TM-D20	.....	.15
.0022	5/16 x 1	6TM-D22	160P22296	$.15
.0025	5/16 x 1	6TM-D25	.....	.15
.003	5/16 x 1	6TM-D30	.....	.15
.0033	5/16 x 1	6TM-D33	160P33296	.15
.004	3/8 x 1 1/4	6TM-D40	.....	.15
.0047	3/8 x 1 1/4	6TM-D47	160P47296	.15
.005	3/8 x 1 1/4	6TM-D50	.....	.15
.006	3/8 x 1 1/4	6TM-D60	.....	.15
.0068	3/8 x 1 1/4	6TM-D68	160P68296	.18
.008	3/8 x 1 1/4	6TM-D80	.....	.18
.01	3/8 x 1 1/4	6TM-S10	160P10396	.18
.015	3/8 x 1 1/4	6TM-S15	160P15396	.18
.02	7/16 x 1 1/4	6TM-S20	.....	.18
.022	7/16 x 1 1/4	6TM-S22	160P22396	.18
.025	7/16 x 1 1/4	6TM-S25	.....	.18
.03	7/16 x 1 1/4	6TM-S30	.....	.21
.033	7/16 x 1 1/4	6TM-S33	160P33396	.21
.035	7/16 x 1 1/4	6TM-S35	.....	.21
.04	1/2 x 1 1/2	6TM-S40	.....	.21
.047	1/2 x 1 1/2	6TM-S47	160P47396	.24

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SPRAGUE CAPACITORS

DIFILM® BLACK BEAUTY® MOLDED TUBULARS, continued

μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net
600 WVDC (Cont.)				
.05	½ x 1½	6TM-S50	.....	$ .24
.06	½ x 1½	6TM-S60	.....	.24
.068	½ x 1½	6TM-S68	160P68396	.27
.1	⅝ x 1⅞	6TM-P10	160P10496	.27
.15	⅝ x 1⅞	6TM-P15	160P15496	.30
.2	¾ x 2¼	6TM-P20	.....	.39
.22	¾ x 2¼	6TM-P22	160P22496	.42
.25	¾ x 2¼	6TM-P25	.....	.45
.47	1 x 2½	6TM-P47	160P47496	.75
.5	1 x 2½	6TM-P50	.....	.75
1.0	1 x 2½	6TM-M1	.....	1.05
1000 WVDC				
.0005	5/16 x 1	10TM-T50	.....	$.30
.001	5/16 x 1	10TM-D10	160P102910	.30
.0015	5/16 x 1	10TM-D15	160P152910	.30
.002	⅜ x 1¼	10TM-D20	.....	.30
.0022	⅜ x 1¼	10TM-D22	160P222910	.30
.003	⅜ x 1¼	10TM-D30	.....	.30
.004	⅜ x 1¼	10TM-D40	.....	.30
.0047	⅜ x 1¼	10TM-D47	160P472910	.30
.005	⅜ x 1¼	10TM-D50	.....	.30
.0068	⅜ x 1¼	10TM-D68	160P682910	.30
1000 WVDC (cont.)				
.01	7/16 x 1¼	10TM-S10	160P103910	$.30
.015	½ x 1½	10TM-S15	160P153910	.30
.02	½ x 1½	10TM-S20	.....	.30
.022	½ x 1½	10TM-S22	160P223910	.30
.03	⅝ x 1⅞	10TM-S30	.....	.30
.035	⅝ x 1⅞	10TM-S35	.....	.30
.047	⅝ x 1⅞	10TM-S47	160P473910	.36
.05	⅝ x 1⅞	10TM-S50	.....	.36
.068	⅝ x 1⅞	10TM-S68	160P683910	.42
.1	¾ x 2¼	10TM-P10	160P104910	.45
.15	¾ x 2¼	10TM-P15	160P154910	.57

1600 WVDC BUFFER CAPACITORS

μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net
.0005	⅜ x 1¼	MB-75	.....	$.39
.001	⅜ x 1¼	MB-D1	190P102916	.39
.0015	⅜ x 1¼	MB-D15	190P152916	.39
.002	⅜ x 1¼	MB-D2	.....	.39
.0022	⅜ x 1¼	MB-D22	190P222916	.39
.003	7/16 x 1¼	MB-D3	.....	.39
.0033	7/16 x 1¼	MB-D13	190P332916	.39
.004	½ x 1½	MB-D4	.....	$.39
.0047	½ x 1½	MB-D47	190P472916	.39
.005	½ x 1½	MB-D5	.....	.39
.006	½ x 1½	MB-D6	.....	.39
.0068	½ x 1½	MB-D68	190P682916	.39
.007	½ x 1½	MB-D7	.....	.39
.0075	½ x 1½	MB-D75	.....	.39
.008	⅝ x 1⅞	MB-D8	.....	.39
.01	⅝ x 1⅞	MB-S1	190P103916	$.42
.015	⅝ x 1⅞	MB-S15	190P153916	.42
.02	⅝ x 1⅞	MB-S2	.....	.42
.022	⅝ x 1⅞	MB-S22	190P223916	.42
.03	¾ x 2¼	MB-S3	.....	.42
.04	¾ x 2¼	MB-S4	.....	.42
.05	¾ x 2⅛	TR-15*	.....	.42

*Waxed paper construction

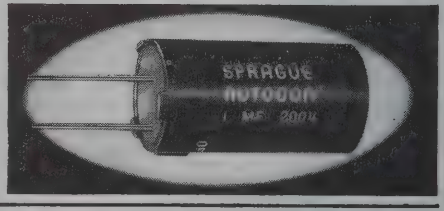
MINERAL-OIL BLACK BEAUTY® MOLDED TUBULARS

● Kraftboard Sleeve and Epoxy End-Seal Gives Added Circuit Protection ● All Paper Dielectric, Impregnated With Mineral Oil For Best High Voltage Performance ● Maximum Operating Temperature: 85°C

μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net
6000 WVDC BUFFER				
.0005	9/16 x 1⅞	TVM-356	.....	$.81
.001	9/16 x 1⅞	TVM-216	184P102060	.81
.005	11/16 x 2¼	TVM-256	.....	.81
10,000 WVDC BUFFER				
.0005	11/16 x 2¼	TVM-351	.....	$.90
12,500 WVDC BUFFER				
.00025	11/16 x 2¼	12TVM-325	.....	$1.02

AUTOCON® MOLDED TUBULAR CAPACITORS

- Generous 1" Lead Lengths Make Autocons Universal Replacements For All Single Ended Original Equipment Types Used on Printed Wiring Boards
- Pre-molded Thermosetting Plastic Shell with Plastic Resin Endseal for Humidity Protection, Outside Foil Identified by Index Key
- Autocons Have High Insulation Resistance, Low Power Factor, and a Flat Temperature-Capacitance Curve
- Impregnated with HCX®, an Exclusive Solid Dielectric Material
- "Standoff" Feet Prevent Dust and Moisture Traps. Also Prevent Printed Wiring Board Shorts



μF	WVDC	Diam.	Length	Cat. No.	Net
.001	200	⅜	1⅜	2SE-D10	$.18
.0015	200	⅜	1⅜	2SE-D15	.18
.0022	200	⅜	1⅜	2SE-D22	.18
.0033	200	⅜	1⅜	2SE-D33	.18
.0047	200	⅜	1⅜	2SE-D47	.18
.0068	200	⅜	1⅜	2SE-D68	.18
.01	200	⅜	1⅜	2SE-S10	.18
.015	200	⅜	1⅜	2SE-S15	.18
.022	200	⅜	1⅜	2SE-S22	.21
.033	200	⅜	1⅜	2SE-S33	.21
.047	200	7/16	1⅜	2SE-S47	.21
.068	200	7/16	1⅜	2SE-S68	.21
.1	200	½	1½	2SE-P10	.24
.15	200	⅝	1⅞	2SE-P15	.27
.22	200	⅝	1⅞	2SE-P22	.30
.33	200	⅝	1⅞	2SE-P33	.33
.47	200	¾	1⅞	2SE-P47	.39
.001	400	⅜	1⅜	4SE-D10	.18
.0015	400	⅜	1⅜	4SE-D15	.18
.0022	400	⅜	1⅜	4SE-D22	.18
.0033	400	⅜	1⅜	4SE-D33	.18
.0047	400	⅜	1⅜	4SE-D47	.18
.0068	400	⅜	1⅜	4SE-D68	.18
.01	400	⅜	1⅜	4SE-S10	.18
.015	400	⅜	1⅜	4SE-S15	$.18
.022	400	7/16	1⅜	4SE-S22	.21
.033	400	7/16	1⅜	4SE-S33	.21
.047	400	½	1½	4SE-S47	.21
.068	400	½	1½	4SE-S68	.24
.1	400	⅝	1⅞	4SE-P10	.27
.15	400	⅝	1⅞	4SE-P15	.30
.22	400	⅝	1⅞	4SE-P22	.33
.33	400	¾	1⅞	4SE-P33	.39
.001	600	⅜	1⅜	6SE-D10	.18
.0015	600	⅜	1⅜	6SE-D15	.18
.0022	600	⅜	1⅜	6SE-D22	.18
.0033	600	⅜	1⅜	6SE-D33	.18
.0047	600	⅜	1⅜	6SE-D47	.18
.0068	600	⅜	1⅜	6SE-D68	.18
.01	600	⅜	1⅜	6SE-S10	.21
.015	600	7/16	1⅜	6SE-S15	.21
.022	600	7/16	1⅜	6SE-S22	.24
.033	600	½	1½	6SE-S33	.24
.047	600	½	1½	6SE-S47	.27
.068	600	⅝	1⅞	6SE-S68	.30
.1	600	⅝	1⅞	6SE-P10	.33
.15	600	¾	1⅞	6SE-P15	.36

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SPRAGUE CAPACITORS

DIFILM® ORANGE DROP® DIPPED TUBULARS



- Especially Made for Exact, Original Replacement
- Dual Dielectric (Film-paper) Solidly Impregnated With Exclusive HCX®—Produces Rock-Hard Capacitor Section
- Outperforms Any Other Dipped Tubular Capacitor
- Crimped Wire Leads for Correct Spacing When Mounted On Printed Wiring Boards.
- Voltage Ratings From 200 VDC to 1000 VDC
- Outside Foil on All Units Identified by Black Striping
- Double Dipped in Bright Orange Epoxy Resin—Beats Heat and Humidity
- Won't Leak or Drip
- Also Available in Handy Sprague Kleer-Pak® Boxes
- Write for Engineering Bulletin No. 2004

μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net
	200 VOLTS D-C			
.02	3/8 x 7/8	2PS-S20	.....	$.15
.022	25/64 x 7/8	2PS-S22	220P22392	.15
.047	29/64 x 7/8	2PS-S47	220P47392	.15
.05	15/32 x 7/8	2PS-S50	.....	.15
.1	31/64 x 1 3/16	2PS-P10	220P10492	.21
.15	9/16 x 1 3/16	2PS-P15	220P15492	.21
.2	19/32 x 1 5/16	2PS-P20	.....	.24
.22	37/64 x 1 5/16	2PS-P22	220P22492	.24
.25	5/8 x 1 5/16	2PS-P25	.....	.24
.33	5/8 x 1 5/8	2PS-P33	220P33492	.30
.47	45/64 x 1 5/8	2PS-P47	220P47492	.36
.5	21/32 x 1 5/8	2PS-P50	.....	.36
	400 VOLTS D-C			
.01	13/32 x 1 1/16	4PS-S10	220P10394	.15
.015	29/64 x 1 1/16	4PS-S15	220P15394	.15
.02	13/32 x 7/8	4PS-S20	.....	.15
.022	27/64 x 7/8	4PS-S22	220P22394	.18
.025	7/16 x 7/8	4PS-S25	.....	.18
.03	29/64 x 7/8	4PS-S30	.....	.18
.033	15/32 x 7/8	4PS-S33	220P33394	.18
.04	27/64 x 1 3/16	4PS-S40	.....	.18
.047	29/64 x 1 3/16	4PS-S47	220P47394	.18
.05	29/64 x 1 3/16	4PS-S50	.....	.18
.056	31/64 x 1 3/16	4PS-S56	220P56394	.21
.068	33/64 x 1 3/16	4PS-S68	220P68394	.21
.075	33/64 x 1 3/16	4PS-S75	.....	.21
.1	37/64 x 1 3/16	4PS-P10	220P10494	.21
.15	39/64 x 1 5/16	4PS-P15	220P15494	.24
.2	19/32 x 1 5/8	4PS-P20	.....	.27
.22	39/64 x 1 5/8	4PS-P22	220P22494	.27
.25	41/64 x 1 5/8	4PS-P25	.....	.30
	600 VOLTS D-C			
.001	21/64 x 1 1/16	6PS-D10	220P10296	.15
.0012	21/64 x 1 1/16	6PS-D12	220P12296	.15
.0015	21/64 x 1 1/16	6PS-D15	220P15296	.15
.0018	21/64 x 1 1/16	6PS-D18	220P18296	.15
.002	21/64 x 1 1/16	6PS-D20	.....	.15
.0022	21/64 x 1 1/16	6PS-D22	220P22296	.15
.0025	21/64 x 1 1/16	6PS-D25	.....	.15
.0027	11/32 x 1 1/16	6PS-D27	220P27296	.15
.003	11/32 x 1 1/16	6PS-D30	.....	.15
.0033	23/64 x 1 1/16	6PS-D33	220P33296	.15
.0039	3/8 x 1 1/16	6PS-D39	220P39296	$.15
.004	3/8 x 1 1/16	6PS-D40	.....	.15
.0047	25/64 x 1 1/16	6PS-D47	220P47296	.15
.005	25/64 x 1 1/16	6PS-D50	.....	.15
.0056	25/64 x 1 1/16	6PS-D56	220P56296	.15
.006	13/32 x 1 1/16	6PS-D60	.....	.15
.0068	13/32 x 1 1/16	6PS-D68	220P68296	.18
.0075	23/64 x 7/8	6PS-D75	.....	.18
.008	23/64 x 7/8	6PS-D80	.....	.18
.0082	3/8 x 7/8	6PS-D82	220P82296	.18
.01	25/64 x 7/8	6PS-S10	220P10396	.18
.012	25/64 x 7/8	6PS-S12	220P12396	.18
.015	27/64 x 7/8	6PS-S15	220P15396	.18
.02	31/64 x 7/8	6PS-S20	.....	.18
.022	31/64 x 7/8	6PS-S22	220P22396	.18
.025	17/32 x 7/8	6PS-S25	.....	.21
.027	7/16 x 1 3/16	6PS-S27	220P27396	.21
.03	7/16 x 1 3/16	6PS-S30	.....	.21
.033	15/32 x 1 3/16	6PS-S33	220P33396	.21
.035	15/32 x 1 3/16	6PS-S35	.....	.21
.039	31/64 x 1 3/16	6PS-S39	220P39396	.21
.04	1/2 x 1 3/16	6PS-S40	.....	.21
.047	17/32 x 1 3/16	6PS-S47	220P47396	.24
.05	17/32 x 1 3/16	6PS-S50	.....	.24
.056	35/64 x 1 3/16	6PS-S56	220P56396	.24
.06	9/16 x 1 3/16	6PS-S60	.....	.24
.068	37/64 x 1 3/16	6PS-S68	220P68396	.27
.075	9/16 x 1 5/16	6PS-S75	.....	.27
.082	37/64 x 1 5/16	6PS-S82	220P82396	.27
.1	5/8 x 1 5/16	6PS-P10	220P10496	.27
.15	43/64 x 1 5/8	6PS-P15	220P15496	.30
.2	3/4 x 1 5/8	6PS-P20	.....	.39
.22	25/32 x 1 5/8	6PS-P22	220P22496	.42
.25	13/16 x 1 5/8	6PS-P25	.....	.45
	1000 VOLTS D-C			
.001	21/64 x 1 1/16	10PS-D10	220P102910	.30
.0015	11/32 x 1 1/16	10PS-D15	220P152910	.30
.002	3/8 x 1 1/16	10PS-D20	.....	.30
.0022	3/8 x 1 1/16	10PS-D22	220P222910	.30
.003	11/32 x 7/8	10PS-D30	.....	.30
.004	3/8 x 7/8	10PS-D40	.....	.30
.0047	13/32 x 7/8	10PS-D47	220P472910	.30
.005	13/32 x 7/8	10PS-D50	.....	.30

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REM-43-6330

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SPRAGUE CAPACITORS

BF ISOFARAD® PLASTIC FILM CAPACITORS

For Applications Where the Best in Tubulars is None Too Good

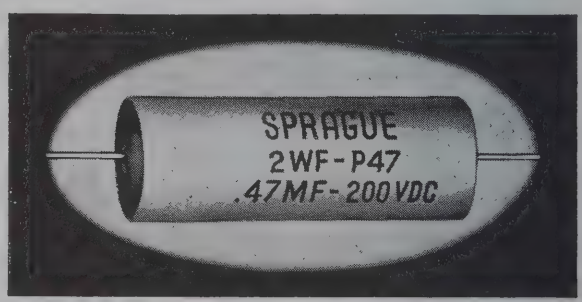


- Isofarad Quality is a Must in Color TV Synchroguide Circuits, Horizontal and Vertical Oscillators, Bridge and Parallel T Circuits and Other Tuned Circuit Applications Requiring Close Tolerance and Zero Temperature Coefficient of Capacitance
- Superior to Silvered Mica Capacitors, Yet Far Less Expensive
- Constant Capacitance—Will Not Change More Than ±0.2% from Room Temperature to +80°C at Maximum Rated Voltage Will Withstand Operating Temperatures to 85°C (185°F)
- **Capacitance Tolerance:** ±5%
- Also Available in Handy Sprague Kleer-Pak® Boxes
- For Complete Technical Data, See Latest Issue of Sprague Engineering Bulletin 2073

μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net
		500 WVDC		
.001	3/8 x 1	5BF-D10	145P10255	$.45
.0012	3/8 x 1	5BF-D12	145P12255	.45
.0015	3/8 x 1	5BF-D15	145P15255	.45
.0018	3/8 x 1	5BF-D18	145P18255	.45
.0022	3/8 x 1	5BF-D22	145P22255	.45
.0027	3/8 x 1	5BF-D27	145P27255	.45
.0033	3/8 x 1	5BF-D33	145P33255	.45
.0039	3/8 x 1	5BF-D39	145P39255	.48
.0047	3/8 x 1	5BF-D47	145P47255	.48
.0056	3/8 x 1 1/4	5BF-D56	145P56255	.48
.0068	3/8 x 1 1/4	5BF-D68	145P68255	.48
.0082	7/16 x 1 1/4	5BF-D82	145P82255	.48
.01	7/16 x 1 1/4	5BF-S10	145P10355	.54
.012	1/2 x 1 1/4	5BF-S12	145P12355	.54
.015	1/2 x 1 1/4	5BF-S15	145P15355	.75
.018	1/2 x 1 1/2	5BF-S18	145P18355	.75
		500 WVDC (cont.)		
.022	1/2 x 1 1/2	5BF-S22	145P22355	$.90
.027	5/8 x 1 7/8	5BF-S27	145P27355	.90
.033	5/8 x 1 7/8	5BF-S33	145P33355	1.08
.039	5/8 x 1 7/8	5BF-S39	145P39355	1.08
.047	5/8 x 1 7/8	5BF-S47	145P47355	1.26
.056	5/8 x 1 7/8	5BF-S56	145P56355	1.26
.068	5/8 x 1 7/8	5BF-S68	145P68355	1.59
.082	3/4 x 1 1/4	5BF-S82	145P82355	2.16
.1	3/4 x 2 1/4	5BF-P10	145P10455	2.16
.12	7/8 x 2 1/2	5BF-P12	145P12455	2.94
.15	7/8 x 2 1/2	5BF-P15	145P15455	2.94
.18	7/8 x 2 1/2	5BF-P18	145P18455	4.05
.22	7/8 x 2 1/2	5BF-P22	145P22455	4.05
.27	1 x 2 1/2	5BF-P27	145P27455	4.95
.33	1 x 2 1/2	5BF-P33	145P33455	4.95

WF YELLOW-JACKET® FILMITE® 'E' CAPACITORS

- Excellent for Use in Transistorized Circuits and Low-Voltage Electron Tube Circuits
- Extended Foil Type Sections, Wound from Selected, Ultra-Thin Polyester Film and Thin Gage Foil
- Outer Plastic Film Wrap and Resin End Seals Protect Against Moisture and Humidity
- "Smaller Than Small" — These Capacitors Will Fit Anywhere
- Rated to **200 WVDC** — Capacitance Tolerance: ±10%
- Designed for Operation to 85°C (185°F)
- Available in Kleer-Pak® Boxes.
- For Technical Data See Latest Issue of Sprague Bulletin 2063



μF	D. x L.	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Net
		200 WVDC		
.01	13/64 x 11/16	2WF-S10	148P10392	$.57
.012	13/64 x 11/16	2WF-S12	148P12392	.57
.015	13/64 x 11/16	2WF-S15	148P15392	.57
.018	13/64 x 11/16	2WF-S18	148P18392	.57
.022	13/64 x 11/16	2WF-S22	148P22392	.57
.027	13/64 x 11/16	2WF-S27	148P27392	.57
.033	13/64 x 11/16	2WF-S33	148P33392	.60
.039	15/64 x 11/16	2WF-S39	148P39392	.60
.047	15/64 x 11/16	2WF-S47	148P47392	.60
.056	1/4 x 13/16	2WF-S56	148P56392	.60
.068	1/4 x 13/16	2WF-S68	148P68392	.60
.082	19/64 x 13/16	2WF-S82	148P82392	.60
.1	19/64 x 13/16	2WF-P10	148P10492	.63
		200 WVDC (cont.)		
.12	11/32 x 13/16	2WF-P12	148P12492	$.63
.15	11/32 x 13/16	2WF-P15	148P15492	.63
.18	11/32 x 1 1/16	2WF-P18	148P18492	.66
.22	11/32 x 1 1/16	2WF-P22	148P22492	.66
.27	15/32 x 13/16	2WF-P27	148P27492	.66
.33	15/32 x 13/16	2WF-P33	148P33492	.66
.39	35/64 x 13/16	2WF-P39	148P39492	.72
.47	35/64 x 13/16	2WF-P47	148P47492	.72
.56	35/64 x 1 1/16	2WF-P56	148P56492	.90
.68	35/64 x 1 1/16	2WF-P68	148P68492	.90
.82	19/32 x 1 13/16	2WF-P82	148P82492	.90
1.0	19/32 x 1 13/16	2WF-M1	148P10592	.90

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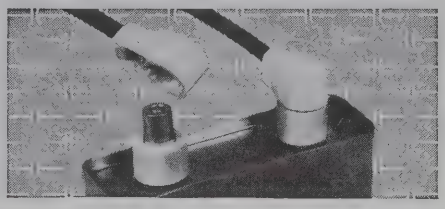
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SPRAGUE CAPACITORS



TYPE CR RECTANGULAR OILS

- Hermetically sealed in Rugged Rectangular Metal Cans
- Oil-Impregnated and Oil-Filled
- Extremely High Insulation Resistance
- Will Withstand High Surge Voltages and High Ambient Temperatures
- Widely Used in Transmitter Power Supplies and Other High-Voltage Applications
- Furnished With Adapters (as shown below) to Fit Standard Transmitting Tube Plate Caps



μF	WVDC	T. x W. x L.	Cat. No.	Net
.5	600	1 1/16 x 1 13/16 x 2 1/4	CR-056	$2.82
1.0	600	1 1/16 x 1 13/16 x 2 1/4	CR-16	3.48
2.0	600	1 1/16 x 1 13/16 x 2 7/8	CR-26	4.29
3.0	600	1 1/16 x 1 13/16 x 3 1/4	CR-36	4.95
4.0	600	1 3/16 x 2 1/2 x 3 1/2	CR-46	5.46
6.0	600	1 3/16 x 2 1/2 x 4 3/4	CR-66	6.78
8.0	600	1 1/4 x 3 3/4 x 3 7/8	CR-86	8.10
10.0	600	1 1/4 x 3 3/4 x 4 3/4	CR-106	9.09
.1	1000	1 1/16 x 1 13/16 x 1 5/8	CR-011	2.49
.25	1000	1 1/16 x 1 13/16 x 2 1/4	CR-0251	2.82
.5	1000	1 1/16 x 1 13/16 x 2 1/4	CR-051	2.97
1.0	1000	1 1/16 x 1 13/16 x 2 1/4	CR-11	3.81
2.0	1000	1 1/16 x 1 13/16 x 3 7/8	CR-21	4.95
4.0	1000	1 3/16 x 2 1/2 x 3 5/8	CR-41	6.27
8.0	1000	1 1/4 x 3 3/4 x 4 3/4	CR-81	9.09
10.0	1000	1 3/4 x 3 3/4 x 4 3/4	CR-101	10.08
12.0	1000	2 1/4 x 3 3/4 x 4 1/2	CR-121	10.89
15.0	1000	2 1/2 x 3 3/4 x 4 3/4	CR-151	12.06
.5	1500	1 1/16 x 1 13/16 x 2 7/8	CR-0515	3.81
1.0	1500	1 1/16 x 1 13/16 x 3 7/8	CR-115	4.47
2.0	1500	1 3/16 x 2 1/2 x 4 1/4	CR-215	6.12
4.0	1500	1 1/4 x 3 3/4 x 4 3/4	CR-415	8.43
5.0	1500	1 1/4 x 3 3/4 x 4 3/4	CR-515	9.09
8.0	1500	2 1/2 x 3 3/4 x 4 3/4	CR-815	12.54
10.0	1500	3 3/16 x 3 3/4 x 4 3/4	CR-1015	15.03
.1	2000	1 3/16 x 2 1/2 x 2 1/2	CR-012	3.96
.25	2000	1 3/16 x 2 1/2 x 2 1/2	CR-0252	4.29
.5	2000	1 3/16 x 2 1/2 x 2 7/8	CR-052	4.47
1.0	2000	1 3/16 x 2 1/2 x 3 1/2	CR-12	5.46
2.0	2000	1 1/4 x 3 3/4 x 4 1/4	CR-22	6.45
3.0	2000	1 1/4 x 3 3/4 x 4 3/4	CR-32	$ 7.92
4.0	2000	2 1/4 x 3 3/4 x 3 7/8	CR-42	9.09
6.0	2000	3 3/16 x 3 3/4 x 4 1/2	CR-62	12.06
10.0	2000	4 9/16 x 3 3/4 x 4 3/4	CR-102	18.33
.1	2500	1 3/16 x 2 1/2 x 2 1/2	CR-0125	6.09
.5	2500	1 1/4 x 3 3/4 x 3 1/4	CR-0525	6.93
1.0	2500	1 3/4 x 3 3/4 x 3 1/4	CR-125	7.92
2.0	2500	1 3/4 x 3 3/4 x 4 3/4	CR-225	12.87
4.0	2500	4 9/16 x 3 3/4 x 4 3/8	CR-425	18.00
.1	3000	1 3/16 x 2 1/2 x 2 1/2	CR-013	8.43
.25	3000	1 3/16 x 2 1/2 x 2 7/8	CR-0253	8.91
.5	3000	1 3/16 x 2 1/2 x 4 1/4	CR-053	10.08
1.0	3000	2 1/4 x 3 3/4 x 3 7/8	CR-13	12.06
2.0	3000	3 3/16 x 3 3/4 x 4 1/2	CR-23	15.03
4.0	3000	4 9/16 x 3 3/4 x 4 3/4	CR-43	22.11
.1	4000	2 1/4 x 3 3/4 x 2 3/4	CR-014	10.80
.25	4000	2 1/4 x 3 3/4 x 2 3/4	CR-0254	12.00
.5	4000	2 1/4 x 3 3/4 x 3 7/8	CR-054	13.80
1.0	4000	2 1/4 x 3 3/4 x 5 1/8	CR-14	17.40
2.0	4000	4 9/16 x 3 3/4 x 5 1/8	CR-24	23.40
.2	5000	1 3/4 x 3 3/4 x 3 7/8	CR-025	12.00
.5	5000	2 1/4 x 3 3/4 x 4 1/2	CR-055	15.00
1.0	5000	4 9/16 x 3 3/4 x 4 3/8	CR-15	20.40
2.0	5000	4 9/16 x 3 3/4 x 6	CR-25	31.20
.1	6000	2 1/4 x 3 3/4 x 3 3/8	CR-0160	16.20
.2	6000	1 3/4 x 3 3/4 x 4 1/4	CR-0260	18.00
1.0	6000	4 9/16 x 3 3/4 x 7 1/2	CR-160	29.40
.1	7500	2 1/4 x 3 3/4 x 3 7/8	CR-0175	17.40
.2	7500	1 3/4 x 3 3/4 x 4 3/4	CR-0275	19.80

SCREWBASE PC OILS

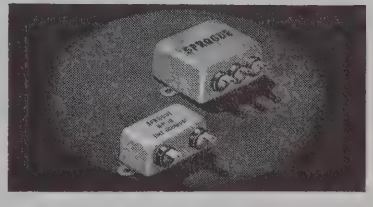


- Oil-Impregnated
- Oil-Filled
- Screwbase Can For Easy Single Hole Mounting
- Small Size — Will Fit Tight Spaces

μF	WVDC	Diam. x Lgth.	Cat. No.	Net
2	600	1 1/2 x 2 7/8	PC-26	$3.24
3	600	1 1/2 x 3 1/2	PC-36	3.69
4	600	1 1/2 x 5 1/4	PC-46	4.26
1	1000	1 1/2 x 2 7/8	PC-11	3.00
2	1000	1 1/2 x 4 1/2	PC-21	3.78
0.5	1500	1 1/2 x 2 3/8	PC-515	3.51
1	1500	1 1/2 x 3 7/8	PC-115	3.78

TYPE BP BATHTUB CAPACITORS

- For Applications Where Severe Operating Conditions Are Encountered
- Hermetically Sealed for Extra Protection
- Seamless Drawn Metal Can
- Oil-Filled and Oil-impregnated for Long, Dependable Service Life
- Convenient Mounting Ears are Integral Part of Metal Container



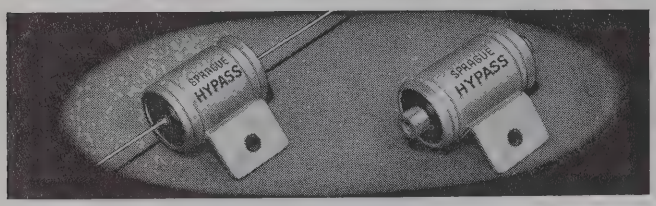
μF	L. x W. x H.	Cat. No.	Net
400 WVDC			
.1	1 13/16 x 1 x 3/4	BP-1	$1.32
.25	1 13/16 x 1 x 3/4	BP-25	1.50
.5	1 13/16 x 1 x 7/8	BP-50	1.59
1.0	2 x 1 3/4 x 7/8	BP-10	1.89
.1 + .1	1 13/16 x 1 x 3/4	BP-21	1.98
.25 + .25	1 13/16 x 1 x 7/8	BP-225	2.16
.5 + .5	2 x 1 3/4 x 7/8	BP-250	2.49
.1 + .1 + .1	1 13/16 x 1 x 3/4	BP-31	2.40
600 WVDC			
.05	1 13/16 x 1 x 3/4	BP-56	1.74
.1	1 13/16 x 1 x 3/4	BP-16	1.77
.25	1 13/16 x 1 x 3/4	BP-256	1.86
.5	1 13/16 x 1 x 7/8	BP-506	1.98
1.0	2 x 1 3/4 x 7/8	BP-106	2.25
2.0	2 x 2 x 1 1/8	BP-206	3.00
.05 + .05	1 13/16 x 1 x 3/4	BP-2056	2.19
.1 + .1	1 13/16 x 1 x 3/4	BP-216	$2.22
.25 + .25	1 13/16 x 1 x 7/8	BP-2256	2.25
.5 + .5	2 x 1 3/4 x 7/8	BP-2506	2.58
1.0 + 1.0	2 x 2 x 1 1/8	BP-116	3.18
.1 + .1 + .1	1 13/16 x 1 x 3/4	BP-316	2.52
.25 + .25 + .25	2 x 1 3/4 x 7/8	B2-3256	2.85
.5 + .5 + .5	2 x 2 x 1 1/8	BP-356	3.45
1000 WVDC			
.05	1 13/16 x 1 x 3/4	BP-51	1.83
.1	1 13/16 x 1 x 3/4	BP-11	1.89
.25	1 13/16 x 1 x 3/4	BP-251	1.95
.5	2 x 1 3/4 x 7/8	BP-501	2.13
1.0	2 x 2 x 1 1/8	BP-101	2.64
.05 + .05	1 13/16 x 1 x 3/4	BP-2051	2.31
.1 + .1	1 13/16 x 1 x 3/4	BP-211	2.40
.25 + .25	2 x 1 3/4 x 7/8	BP-2251	2.52
.5 + .5	2 x 2 x 1 1/8	BP-2501	3.27
.1 + .1 + .1	1 13/16 x 1 x 7/8	BP-311	2.76
.25 + .25 + .25	2 x 2 x 1 1/8	BP-3251	3.30

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SPRAGUE FILTERS

HYPASS® CAPACITORS

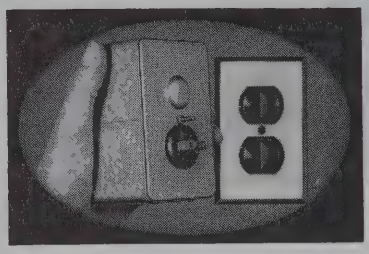


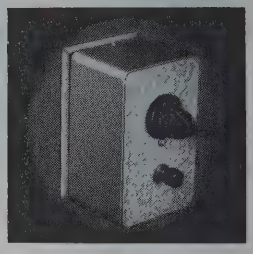
- Exclusive Sprague 3-terminal Network Feed-thru Capacitors
- Bypass V-H-F Currents Where Ordinary Capacitors are Ineffective
- Suppress TVI from Short-wave Transmitters, Diathermy Machines, Electronic Heating Apparatus, etc.
- Eliminate Interference caused by Line-conducted Radiation Between Neighboring TV Sets
- Install Leads in Series with Circuit Being Filtered and Ground the Case

μF	Amps.	WVDC	Dia. x Length	Cat. No.	Net
.5	40	50	1 x 1 3/16	*48P18	$2.28
.5	60	50	1 x 1 3/16	48P100	3.75
.25	20	200	3/4 x 1 3/16	*48P10	1.56
.5	20	200	1 x 1 3/16	*48P14	1.89
.1	20	250(VAC)	1 1/16 x 1 3/16	*48P9	1.56
.1	20	400	1 1/16 x 1 3/16	*48P6	1.53
.1	20	400	1 1/16 x 1 3/16	†80P1	1.74
.002	15	600	1/4 x 1 3/8	46P12	1.29
.005	15	600	1/4 x 1 5/8	46P8	1.29
.01	20	600	7/16 x 1 1/4	47P6	1.41
.02	20	600	7/16 x 1 1/2	47P8	1.44
.1	20	600	1 1/16 x 1 3/16	*48P8	1.56
.1	20	600	1 1/16 x 1 3/16	*†80P3	1.77
.25	20	600	1 x 1 3/16	*48P12	1.65
.5	20	600	1 x 2 1/4	*48P16	2.10
.005	20	1000	7/16 x 1 1/4	47P12	1.44
.01	20	1000	7/16 x 1 1/2	47P13	1.56
.005	20	2500	1 x 1 9/16	47P14	1.74
.01	20	2500	1 x 1 9/16	47P15	1.86
.002	20	5000	1 x 1 9/16	47P16	1.92

*Has female screw terminals †Bulkhead mounting.

TYPE F-400 MIRACLE FILTEROL®



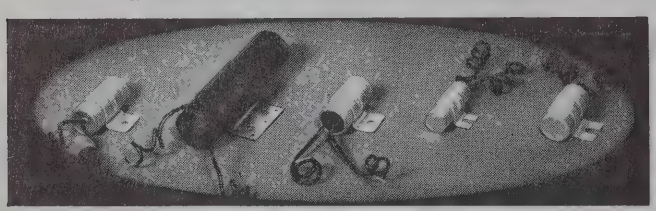


A LINE FILTER THAT REALLY WORKS

- Effectively Suppresses Radio Interference by Filtering Power Lines of Receivers and Appliances
- Maximum Noise Eliminating Efficiency because of Practically Zero Length of Ground Lead
- Plugs into Standard Duplex Wall Outlet — Captive Screw Fastens Filterol F-400 to Outlet for Safe, Secure Mounting
- Direct Wall-Mounting Provides Neat Installation — No Unsightly Cord — Receiver or Appliance Plugs into Standard Outlet on Face of F-400
- Will Also Operate at Slightly Reduced Efficiency in Older Homes where Wiring is of Knob and Tube or 2-Conductor Non-Metallic Sheathed Cable Type by Using the External Grounding Post Provided for this Purpose
- Handsomely Finished in Tan Hammerloid Baked Enamel
- Rated at 5 Amperes, 125 Volts AC or DC

TYPE F-400 FILTEROL.....$7.45 net

TYPE IF FILTERS



IF-15 IF-11 IF-21 IF-S1 IF-37

IF-15 — TRIPLE-SECTION FILTER for small motor-operated devices such as fans, drills, etc. designed to prevent shocks from discharge of filter capacitors.

IF-11 — DUAL HIGH-CAPACITY FILTER designed for use on motors over 1 hp up to 220 volts ac-dc. Also used on high-current arcing devices.

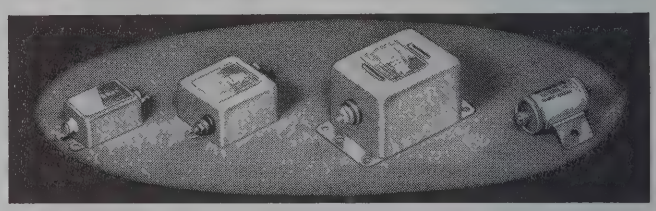
IF-21 — COMPACT DUAL FILTER for use on fractional horsepower motors with case grounded to motor frame. Also used across line terminals of motors.

IF-S1 — SINGLE SECTION 2-LEAD FILTER for use across make-and-break contacts, such as thermostats, circuit breakers, etc.

IF-37 — 3-SECTION DELTA-CONNECTED FILTER especially designed for fluorescent fixtures. Also used on governor-type motors. *UL Approved.*

Cat. No.	Volts AC or DC	Dia. x Length	Net
IF-15	220	1 x 2 3/16	$1.56
IF-11	220	1 3/8 x 5 1/4	4.68
IF-21	220	1 x 2 3/16	1.05
IF-S1	220	3/4 x 2 1/16	.69
IF-37	220	1 x 2"	1.35

FILTEROL® FILTERS



FILTEROL 1 FILTEROL 2 FILTEROL 3 FILTEROL 4

Filterol Types 1, 2, and 3 — Designed for connection in series with power supply lines to interference-producing devices . . . A 3-terminal network with the case as one terminal . . . The selected filter should have a rating higher than the continuous operating current of the offending device . . . A single Filterol connected to the high side of the line is usually sufficient . . . In severe cases a Filterol in each leg of the power line may be necessary . . . For three or four-wire systems, a Filterol in each wire is necessary.

Filterol Type 4 — A new, exclusive Sprague development incorporating a Sprague HYPASS® Capacitor . . . Provides exceptionally high attenuation at frequencies above 5 megacycles . . . Intended for small devices with continuous current ratings up to 20 amperes.

Cat. No.	Amps.	Volts AC or DC	Size	Net
Filterol 1	1	115	7/8 x 1 1/4 x 1 3/4	$ 8.10
Filterol 2	10	115	1 1/8 x 2 x 2	8.88
Filterol 3	35	115	1 7/8 x 2 7/8 x 3 1/8	16.44
Filterol 4	20	115	1" dia. x 1 13/16" long	1.83

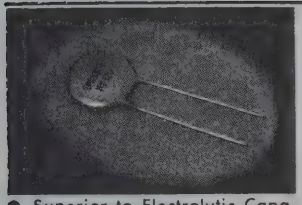
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SPRAGUE CAPACITORS

THIS CATALOG SHOWS ONLY THOSE ITEMS THAT WE STOCK IN DEPTH . . . IF YOU DO NOT FIND WHAT YOU WANT, PLEASE CALL US



- Superior to Electrolytic Capacitors of Similar Capacitance Values because of the Very Low Power Factor of Hypercons
- Ultra-miniature Ceramic Discs Ideal for use in Transistorized Circuitry

HYPERCON® CERAMIC DISCS

- Designed for By-pass and Coupling Applications but Particularly Well-suited for any Low Voltage use Where High Capacitance and Low Power Factor are Important Considerations
- Tolerance: +80—20%

μF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	D. x T.
3 VOLTS D-C			
.1	HY-120	54C23	1/4 x 5/32
.22	HY-125	40C322	9/32 x 5/32
.47	HY-130	20C201	11/16 x 5/32
.68	HY-132	55C601	1/2 x 5/32
1.0	HY-135	44C69	19/32 x 5/32
2.2	HY-150	41C171	27/32 x 5/32
10 VOLTS D-C			
.047	HY-310	40C235	9/32 x 5/32
.068	HY-315	19C603	9/32 x 5/32
.1	HY-320	20C202	13/32 x 5/32
.22	HY-325	29C365	9/16 x 5/32
.33	HY-327	33C151	21/32 x 5/32
.47	HY-330	41C172	27/32 x 5/32
16 VOLTS D-C			
.01	HY-420	53C600	1/4 x 5/32
.022	HY-425	19C605	3/8 x 5/32
.033	HY-430	20C604	7/16 x 5/32
.047	HY-435	55C602	13/32 x 5/32
.068	HY-440	29C602	9/16 x 5/32
.1	HY-450	33C601	11/16 x 5/32
25 VOLTS D-C			
.01	HY-520	19C604	9/32 x 5/32
.022	HY-525	20C603	11/32 x 5/32
.033	HY-530	55C603	13/32 x 5/32
.047	HY-535	29C604	1/2 x 5/32
.068	HY-540	33C602	11/16 x 5/32
.1	HY-550	36C600	21/32 x 5/32

SPECIAL APPLICATION CERA-MITE® DISC CAPACITORS

DISC CERAMICS FOR AC APPLICATIONS

- Rated at 125 VAC
- Standard Tolerance ±20%
- For AC Line Bypass Application—Unlike Standard DC Rated Discs. Type 125L Meets 1500 Volt AC Flash Test— Type 125M Meets UL 10KV Discharge Test.
- Call Your Sprague Industrial Distributor for Current Prices

μF	Sprague Products Catalog No.	Sprague O.E.M. Part No.	D. x L.
.001	125L-D10	19C251	3/8 x 7/32
.0015	125L-D15	19C252	3/8 x 7/32
.002	125L-D20	19C253	3/8 x 7/32
.0047	125L-D47	29C145	9/16 x 7/32
.005	125L-D50	29C145A	9/16 x 7/32
.01	125L-S10	36C218	3/4 x 7/32
.02	125L-S20	36C220	3/4 x 1/4
2 x .005	125L-2D50	29C147	9/16 x 1/4
2 x .01	125L-2S10	36C219	3/4 x 1/4
470μμF	125M-T47	20C235	7/16 x 1/4
.001	125M-D10	20C186	7/16 x 1/4
.0015	125M-D15	55C45	1/2 x 1/4
.002	125M-D20	29C304	9/16 x 1/4
.0047	125M-D47	33C114	11/16 x 1/4
.005	125M-D50	33C115	11/16 x 1/4
.01	125M-S10	41C157	7/8 x 1/4
.02	125M-S20	41C160	7/8 x 1/4

MINIATURIZED DISC CERAMIC CAPACITORS FOR TRANSISTORIZED CIRCUITRY

- For Coupling and By-Pass Applications

Type TG Standard Tolerance ±20%

μF	Volts	Sprague Products Catalog Number	Sprague O.E.M. Part Number	T x D
.005	50	TG-D50	40C172A5	1/8 x 9/32
.01	50	TG-S10	19C214A6	1/8 x 11/32
.02	50	TG-S20	55C21A2	1/8 x 15/32
.025	50	TG-S25	55C22A2	1/8 x 15/32
.03	50	TG-S30	29C229A	1/8 x 9/16
.05	50	TG-S50	55C23A1	1/8 x 1/2
.1	50	TG-P10	33C41A3	1/8 x 11/16
HIGH K TYPE				
.005	200	TH-D50	19C384	5/32 x 3/8
.01	200	TH-S10	19C385	5/32 x 3/8
.02	200	TH-S20	29C371	5/32 x 9/16
.025	200	TH-S25	44C85	5/32 x 5/8
.03	200	TH-S30	33C159	5/32 x 11/16
.05	200	TH-S50	33C160	5/32 x 11/16
.1	200	TH-P10	41C208	5/32 x 7/8

Call Your Sprague Industrial Distributor For Current Prices

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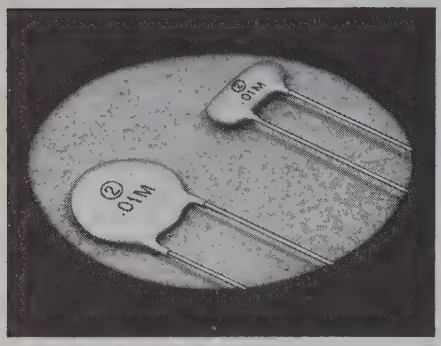
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SPRAGUE CAPACITORS

CERA-MITE® CERAMIC CAPACITORS



- Tiny, Tough, Dependable In Every Application
- Low Self-Inductance Of Silvered Flat-plate Design Means Very High By-pass Efficiency In All TV Circuits
- Flat-plate Construction Permits Higher Self-resonant Frequency Than Tubular Ceramic Or Molded Mica Capacitors
- Tough Moisture-proof Coating Protects Against Short-circuiting And Assures Good Performance Under Severe Conditions Of Humidity And Vibration
- Cera-mite Capacitors Easily Fit Into Tight Spaces, Even Across Subminiature Tube Sockets
- Designed For 85°C (185°F) Continuous Operation
- **Call your Sprague Industrial Distributor for Current Quantity Prices**
- **NOTE: For a Complete Selection of Sprague PRINTED CIRCUITS, see Catalog C-616.**

GENERAL APPLICATION TYPES

- Excellent Where Temperature Coefficient Is Not Important, Such As By-pass and Coupling Applications
- Ideal For Replacing Older Types Of General Application Capacitors Such as Molded Micas, Tubular Ceramics, etc.

μμF	Sprague Products Cat. No.	Sprague O.E.M. Part No	Size T. x W. x L.
500 WVDC (plates) ±20% Tol.			
470	5GAB-T47*	35C11A1	5/32 x 9/32 x 11/32
.001μF	5GAB-D10*	35C35	5/32 x 9/32 x 11/32
.0022	5GAB-D22*	35C34	5/32 x 9/32 x 11/32
.0047	5GAB-D47*	25C166	5/32 x 9/32 x 9/16
.01	5GAB-S10	25C167	7/32 x 9/32 x 9/16
.022	5GAB-S22	38C32	5/32 x 9/16 x 13/16
.047	5GAB-S47	42C8A	5/32 x 27/32 x 1 1/8
.1	5GAB-P10	42C9A	7/32 x 27/32 x 1 1/8
.15	5GAB-P15	112C9	7/32 x 1 1/32 x 1 5/8

*Axial Leads

μμF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
1000 WVDC (discs) ±20% Tol.			
5	5GA-V50	40C32A4	5/16 x 5/32
6	5GA-V60	40C103	5/16 x 5/32
7.5	5GA-V75	40C155	5/16 x 5/32
8	5GA-V80	40C38A	5/16 x 5/32
10	5GA-Q10	40C67A	5/16 x 5/32
12	5GA-Q12	40C138	5/16 x 5/32
15	5GA-Q15	40C65A	5/16 x 5/32
18	5GA-Q18	40C132A	5/16 x 5/32
20	5GA-Q20	40C114	5/16 x 5/32
22	5GA-Q22	40C16A2	5/16 x 5/32
25	5GA-Q25	40C113A1	5/16 x 5/32
27	5GA-Q27	40C153	5/16 x 5/32
30	5GA-Q30	40C111A	5/16 x 5/32
33	5GA-Q33	40C42A	5/16 x 5/32
39	5GA-Q39	40C43A	5/16 x 5/32
47	5GA-Q47	40C44A	5/16 x 5/32
50	5GA-Q50	40C89	5/16 x 5/32
56	5GA-Q56	40C130A3	5/16 x 5/32
68	5GA-Q68	40C45A	5/16 x 5/32
75	5GA-Q75	40C46A	5/16 x 5/32
82	5GA-Q82	40C47A	5/16 x 5/32
91	5GA-Q91	40C112	5/16 x 5/32
100	5GA-T10	40C200	5/16 x 5/32
120	5GA-T12	40C91	5/16 x 5/32
130	5GA-T13	40C147	5/16 x 5/32
150	5GA-T15	40C202	5/16 x 5/32
180	5GA-T18	40C99	5/16 x 5/32
200	5GA-T20	40C102	5/16 x 5/32
220	5GA-T22	40C204	5/16 x 5/32
240	5GA-T24	40C167	5/16 x 5/32
250	5GA-T25	40C101	5/16 x 5/32
270	5GA-T27	40C93	5/16 x 5/32
300	5GA-T30	40C100	5/16 x 5/32
330	5GA-T33	40C207	5/16 x 5/32
350	5GA-T35	40C146	5/16 x 5/32
360	5GA-T36	40C154	5/16 x 5/32
390	5GA-T39	40C95	5/16 x 5/32
400	5GA-T40	40C104	5/16 x 5/32
470	5GA-T47	40C209A	5/16 x 5/32
500	5GA-T50	40C232A	5/16 x 5/32
560	5GA-T56	40C233A	5/16 x 5/32
600	5GA-T60	40C305	5/16 x 5/32
680	5GA-T68	40C212A	5/16 x 5/32
750	5GA-T75	40C235A	5/16 x 5/32
800	5GA-T80	40C213A	5/16 x 5/32
820	5GA-T82	40C237A	5/16 x 5/32
.001μF	5GA-D10	40C214A	5/16 x 5/32
.0012	5GA-D12	40C239A	5/16 x 5/32
.0013	5GA-D13	40C261	5/16 x 5/32
.0015	5GA-D15	40C215A	5/16 x 5/32
.0016	5GA-D16	19C301	3/8 x 5/32
.0018	5GA-D18	19C217A	3/8 x 5/32
.002	5GA-D20	19C203A	3/8 x 5/32
.0022	5GA-D22	19C219A	3/8 x 5/32
.0025	5GA-D25	20C179	7/16 x 5/32
.0027	5GA-D27	20C143A	7/16 x 5/32
.003	5GA-D30	20C101A1	7/16 x 5/32
.0033	5GA-D33	20C124A	7/16 x 5/32
.0039	5GA-D39	20C126A	7/16 x 5/32
.004	5GA-D40	29C192A	9/16 x 5/32
.0043	5GA-D43	29C292	9/16 x 5/32
.0047	5GA-D47	29C203A	9/16 x 5/32
.005	5GA-D50	29C204A	9/16 x 5/32
.01	5GA-S10	33C29A	11/16 x 5/32
.015	5GA-S15	36C263	3/4 x 5/32
.02	5GA-S20	41C135A1	7/8 x 5/32

μF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
500 WVDC (discs) ±20% Tol.			
.025	5GA-S25	33C57A	11/16 x 7/32
.04	5GA-S40	33C24A	11/16 x 7/32
.05	5GA-S50	33C17A	11/16 x 7/32
.1	5GA-P10	41C92A10	7/8 x 7/32
3000 WVDC (discs) ±20% Tol.			
1.5μμF	30GA-V15	19C306	3/8 x 1/4
3.3	30GA-V33	19C307	3/8 x 1/4
4.7	30GA-V47	19C308	3/8 x 1/4
5.0	30GA-V50	19C309	3/8 x 1/4
6.0	30GA-V60	19C310	3/8 x 1/4
6.8	30GA-V68	19C311	3/8 x 1/4
7.5	30GA-V75	19C291	3/8 x 1/4
8.2	30GA-V82	19C290	3/8 x 1/4
10	30GA-Q10	19C312	3/8 x 1/4
12	30GA-Q12	19C313	3/8 x 1/4
15	30GA-Q15	19C314	3/8 x 1/4
18	30GA-Q18	19C292	3/8 x 1/4
20	30GA-Q20	19C315	3/8 x 1/4
22	30GA-Q22	19C316	3/8 x 1/4
25	30GA-Q25	19C317	3/8 x 1/4
27	30GA-Q27	19C318	3/8 x 1/4
30	30GA-Q30	19C319	3/8 x 1/4
33	30GA-Q33	19C320	3/8 x 1/4
39	30GA-Q39	19C321	3/8 x 1/4
47	30GA-Q47	19C322	3/8 x 1/4
50	30GA-Q50	19C323	3/8 x 1/4
56	30GA-Q56	19C324	3/8 x 1/4
60	30GA-Q60	19C325	3/8 x 1/4
62	30GA-Q62	19C326	3/8 x 1/4
68	30GA-Q68	19C327	3/8 x 1/4
75	30GA-Q75	19C328	3/8 x 1/4
82	30GA-Q82	20C184	7/16 x 1/4
100	30GA-T10	20C43	7/16 x 1/4
120	30GA-T12	20C44	7/16 x 1/4
150	30GA-T15	20C45	7/16 x 1/4
180	30GA-T18	20C46	7/16 x 1/4
200	30GA-T20	20C47	7/16 x 1/4

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SPRAGUE CAPACITORS

CERA-MITE CERAMIC CAPACITORS, continued

μμF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
3000 WVDC (cont.)			
220	30GA-T22	20C48	7/16 x 1/4
250	30GA-T25	20C49	7/16 x 1/4
270	30GA-T27	20C50	7/16 x 1/4
300	30GA-T30	20C51	7/16 x 1/4
330	30GA-T33	20C28A	7/16 x 1/4
390	30GA-T39	20C176	7/16 x 1/4
400	30GA-T40	20C175	7/16 x 1/4
470	30GA-T47	29C289	19/32 x 1/4
500	30GA-T50	29C90	19/32 x 1/4
560	30GA-T56	29C290	19/32 x 1/4
680	30GA-T68	29C288	19/32 x 1/4
750	30GA-T75	29C298	19/32 x 1/4
820	30GA-T82	29C299	19/32 x 1/4
.001 μF	30GA-D10	29C300	19/32 x 1/4
.0012	30GA-D12	29C301	19/32 x 1/4
.0015	30GA-D15	29C302	19/32 x 1/4
.002	30GA-D20	29C303	19/32 x 1/4
.0022	30GA-D22	29C255A	19/32 x 1/4
.0025	30GA-D25	44C63	21/32 x 1/4
.0027	30GA-D27	44C65	21/32 x 1/4
.003	30GA-D30	33C31A1	11/16 x 1/4
.0033	30GA-D33	33C32A2	11/16 x 1/4
.0039	30GA-D39	36C155A	25/32 x 1/4
.004	30GA-D40	36C78A	25/32 x 1/4
.0047	30GA-D47	36C339	25/32 x 1/4
.005	30GA-D50	36C124A	25/32 x 1/4
.006	30GA-D60	41C34A	29/32 x 1/4
.0068	30GA-D68	41C153	29/32 x 1/4
.008	30GA-D80	41C151	29/32 x 1/4
.0082	30GA-D82	41C150	29/32 x 1/4
.01	30GA-S10	41C121A2	29/32 x 1/4
6000 WVDC (discs) ±20% Tol.			
1.5	60GA-V15	29C406	9/16 x 5/16
4.7	60GA-V47	29C407	9/16 x 5/16
6.8	60GA-V68	29C408	9/16 x 5/16
8.2	60GA-V82	29C409	9/16 x 5/16
10	60GA-Q10	29C410	9/16 x 5/16
12	60GA-Q12	29C411	9/16 x 5/16
15	60GA-Q15	29C412	9/16 x 5/16
18	60GA-Q18	29C413	9/16 x 5/16
20	60GA-Q20	29C414	9/16 x 5/16
22	60GA-Q22	29C415	9/16 x 5/16
25	60GA-Q25	29C416	9/16 x 5/16
27	60GA-Q27	29C417	9/16 x 5/16
30	60GA-Q30	29C418	9/16 x 5/16
33	60GA-Q33	29C419	9/16 x 5/16
39	60GA-Q39	29C420	9/16 x 5/16
47	60GA-Q47	29C421	9/16 x 5/16
50	60GA-Q50	29C422	9/16 x 5/16
56	60GA-Q56	29C423	9/16 x 5/16
60	60GA-Q60	29C424	9/16 x 5/16
68	60GA-Q68	29C425	9/16 x 5/16
75	60GA-Q75	29C426	9/16 x 5/16
82	60GA-Q82	29C427	9/16 x 5/16
100	60GA-T10	29C428	9/16 x 5/16
120	60GA-T12	29C429	9/16 x 5/16
150	60GA-T15	33C187	11/16 x 5/16
180	60GA-T18	33C188	11/16 x 5/16
200	60GA-T20	33C189	11/16 x 5/16
220	60GA-T22	33C190	11/16 x 5/16

μμF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
6000 WVDC (cont.)			
250	60GA-T25	33C191	11/16 x 5/16
270	60GA-T27	33C192	11/16 x 5/16
300	60GA-T30	36C265	3/4 x 5/16
330	60GA-T33	36C266	3/4 x 5/16
390	60GA-T39	41C9A1	7/8 x 5/16
400	60GA-T40	41C142	7/8 x 5/16
470	60GA-T47	41C80A1	7/8 x 5/16
500	60GA-T50	33C185	11/16 x 5/16
560	60GA-T56	33C186	11/16 x 5/16
680	60GA-T68	33C107	11/16 x 5/16
750	60GA-T75	33C108	11/16 x 5/16
820	60GA-T82	33C109	11/16 x 5/16
.001 μF	60GA-D10	33C90A	11/16 x 5/16
.0012	60GA-D12	33C101	11/16 x 5/16
.0015	60GA-D15	36C253A	3/4 x 5/16
.0022	60GA-D22	41C152	7/8 x 5/16
.0025	60GA-D25	41C250	7/8 x 5/16
.0027	60GA-D27	41C251	7/8 x 5/16
.003	60GA-D30	41C252	7/8 x 5/16
.0033	60GA-D33	41C253	7/8 x 5/16
.0039	60GA-D39	41C254	7/8 x 5/16
.0047	60GA-D47	41C255	7/8 x 5/16

μμF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
7500 WVDC (discs ±20% Tol.			
4.7	75GA-V47	29C387	9/16 x 5/16
8.2	75GA-V82	29C380	9/16 x 5/16
10	75GA-Q10	29C382	9/16 x 5/16
12	75GA-Q12	29C383	9/16 x 5/16
15	75GA-Q15	29C378	9/16 x 5/16
18	75GA-Q18	29C379	9/16 x 5/16
20	75GA-Q20	29C405	9/16 x 5/16
22	75GA-Q22	29C118A	9/16 x 5/16
30	75GA-Q30	29C418A	9/16 x 5/16
33	75GA-Q33	29C419A	9/16 x 5/16
47	75GA-Q47	29C381	9/16 x 5/16
56	75GA-Q56	29C30A	9/16 x 5/16
100	75GA-T10	33C56A2	11/16 x 5/16
220	75GA-T22	33C224	11/16 x 5/16
470	75GA-T47	33C169	11/16 x 5/16
500	75GA-T50	44C89	21/32 x 5/16
560	75GA-T56	44C90	21/32 x 5/16
680	75GA-T68	44C92	21/32 x 5/16
750	75GA-T75	33C175	11/16 x 5/16
820	75GA-T82	33C177	11/16 x 5/16
.001 μF	75GA-D10	33C178	11/16 x 5/16
.0012	75GA-D12	36C334	3/4 x 5/16
.0015	75GA-D15	41C221	7/8 x 5/16
.0018	75GA-D18	41C223	7/8 x 5/16
.002	75GA-D20	41C224	7/8 x 5/16
.0022	75GA-D22	41C225	7/8 x 5/16
.0025	75GA-D25	41C226	7/8 x 5/16

NPO TYPES

- Zero Temperature-coefficient Capacitors Used Where Capacitance Change with Temperature is Undesirable
- Superior to Silvered-mica Types in Stability, High "Q," and Insulation Resistance
- Rated at **1000 WVDC**
- Standard Capacitance Tolerance of ±5%
- Units listed below are discs

μμF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
1.0	10TCC-V10	40C436	5/16 x 5/32
1.2	10TCC-V12	40C437	5/16 x 5/32
1.5	10TCC-V15	40C438	5/16 x 5/32
1.8	10TCC-V18	40C439	5/16 x 5/32
2.2	10TCC-V22	40C311	5/16 x 5/32
2.7	10TCC-V27	40C309	5/16 x 5/32
3.0	10TCC-V30	40C460	5/16 x 5/32
3.3	10TCC-V33	40C478	5/16 x 5/32
3.9	10TCC-V39	40C310	5/16 x 5/32
4.7	10TCC-V47	40C298	5/16 x 5/32
5.0	10TCC-V50	40C479	5/16 x 5/32
5.6	10TCC-V56	40C297	5/16 x 5/32
6.8	10TCC-V68	40C487	5/16 x 5/32
8.2	10TCC-V82	40C492	5/16 x 5/32
10	10TCC-Q10	40C497	5/16 x 5/32
12	10TCC-Q12	40C502	5/16 x 5/32
15	10TCC-Q15	40C507	5/16 x 5/32
18	10TCC-Q18	19C407	3/8 x 5/32
20	10TCC-Q20	19C57	3/8 x 5/32
22	10TCC-Q22	19C411	3/8 x 5/32
25	10TCC-Q25	19C412	3/8 x 5/32
27	10TCC-Q27	20C257	7/16 x 5/32

μμF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
30	10TCC-Q30	20C258	7/16 x 5/32
33	10TCC-Q33	20C263	7/16 x 5/32
39	10TCC-Q39	20C265	7/16 x 5/32
47	10TCC-Q47	29C14	9/16 x 5/32
50	10TCC-Q50	29C47	9/16 x 5/32
56	10TCC-Q56	29C437	9/16 x 5/32
68	10TCC-Q68	29C439	9/16 x 5/32
75	10TCC-Q75	29C469	9/16 x 5/32
82	10TCC-Q82	33C94	11/16 x 5/32
100	10TCC-T10	33C208	11/16 x 5/32
120	10TCC-T12	33C194	11/16 x 5/32
150	10TCC-T15	36C336	3/4 x 5/32
175	10TCC-T175	41C258	7/8 x 7/32
180	10TCC-T18	41C259	7/8 x 7/32
200	10TCC-T20	41C260	7/8 x 7/32
220	10TCC-T22	33C182	11/16 x 5/32
270	10TCC-T27	36C27A2	3/4 x 5/32
300	10TCC-T30	36C337	3/4 x 5/32
330	10TCC-T33	41C145	7/8 x 7/32
390	10TCC-T39	41C272	7/8 x 7/32

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SPRAGUE CAPACITORS

CERA-MITE CERAMIC CAPACITORS, continued

TEMPERATURE-COMPENSATING TYPES

- Eliminate oscillator drift in TV, f-m, v-h-f, and a-m receivers
- Negative Temperature Coefficient is 30 ppm/°C for N030 types, 80 ppm/°C for N080 types, 150 ppm/°C for N150 types, 220 ppm/°C for N220 types, 330 ppm/°C for N330 types, 470 ppm/°C for N470 types, and 750 ppm/°C for N750 types
- Rated at **1000 WVDC**
- Standard Capacitance Tolerance ±5%

μμF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
N030			
1.0	10TCM-V10	40C440	5/16 x 5/32
1.2	10TCM-V12	40C441	5/16 x 5/32
1.5	10TCM-V15	40C442	5/16 x 5/32
1.8	10TCM-V18	40C443	5/16 x 5/32
2.2	10TCM-V22	40C444	5/16 x 5/32
2.7	10TCM-V27	40C445	5/16 x 5/32
3.0	10TCM-V30	40C446	5/16 x 5/32
3.3	10TCM-V33	40C447	5/16 x 5/32
3.9	10TCM-V39	40C448	5/16 x 5/32
4.7	10TCM-V47	40C412	5/16 x 5/32
5.0	10TCM-V50	40C413	5/16 x 5/32
5.6	10TCM-V56	40C414	5/16 x 5/32
6.8	10TCM-V68	40C415	5/16 x 5/32
8.2	10TCM-V82	40C416	5/16 x 5/32
10	10TCM-Q10	40C417	5/16 x 5/32
12	10TCM-Q12	40C418	5/16 x 5/32
15	10TCM-Q15	40C508	5/16 x 5/32
18	10TCM-Q18	19C394	3/8 x 5/32
20	10TCM-Q20	19C408	3/8 x 5/32
22	10TCM-Q22	19C395	3/8 x 5/32
25	10TCM-Q25	19C413	3/8 x 5/32
27	10TCM-Q27	20C240	7/16 x 5/32
30	10TCM-Q30	20C259	7/16 x 5/32
33	10TCM-Q33	20C241	7/16 x 5/32
39	10TCM-Q39	20C266	7/16 x 5/32
47	10TCM-Q47	29C395	9/16 x 5/32
50	10TCM-Q50	29C456	9/16 x 5/32
56	10TCM-Q56	29C396	9/16 x 5/32
68	10TCM-Q68	29C397	9/16 x 5/32
75	10TCM-Q75	29C444	9/16 x 5/32
82	10TCM-Q82	33C180	11/16 x 5/32
100	10TCM-T10	33C181	11/16 x 5/32
120	10TCM-T12	33C211	11/16 x 5/32
150	10TCM-T15	36C327	3/4 x 5/32
175	10TCM-T175	41C247	3/4 x 5/32
180	10TCM-T18	41C263	3/4 x 5/32
200	10TCM-T20	41C264	3/4 x 5/32
220	10TCM-T22	41C243	3/4 x 5/32
270	10TCM-T27	33C196	11/16 x 5/32
300	10TCM-T30	36C308	3/4 x 5/32
330	10TCM-T33	41C244	7/8 x 7/32
390	10TCM-T39	41C273	7/8 x 7/32
N080			
2.2	10TCN-V22	40C457	5/16 x 5/32
2.7	10TCN-V27	40C459	5/16 x 5/32
3.0	10TCN-V30	40C461	5/16 x 5/32
3.3	10TCN-V33	40C464	5/16 x 5/32
3.9	10TCN-V39	40C468	5/16 x 5/32
4.7	10TCN-V47	40C404	5/16 x 5/32
5.0	10TCN-V50	40C405	5/16 x 5/32
5.6	10TCN-V56	40C406	5/16 x 5/32
6.8	10TCN-V68	40C407	5/16 x 5/32
8.2	10TCN-V82	40C408	5/16 x 5/32
10	10TCN-Q10	40C409	5/16 x 5/32
12	10TCN-Q12	40C411	5/16 x 5/32
15	10TCN-Q15	40C509	5/16 x 5/32
18	10TCN-Q18	19C391	3/8 x 5/32
20	10TCN-Q20	19C409	3/8 x 5/32
22	10TCN-Q22	19C392	3/8 x 5/32
25	10TCN-Q25	19C390	3/8 x 5/32
27	10TCN-Q27	19C416	3/8 x 5/32
30	10TCN-Q30	20C261	7/16 x 5/32
33	10TCN-Q33	20C239	7/16 x 5/32
39	10TCN-Q39	20C267	7/16 x 5/32
47	10TCN-Q47	29C390	9/16 x 5/32
50	10TCN-Q50	29C457	9/16 x 5/32
56	10TCN-Q56	29C391	9/16 x 5/32
68	10TCN-Q68	29C392	9/16 x 5/32
75	10TCN-Q75	29C445	9/16 x 5/32
82	10TCN-Q82	29C393	9/16 x 5/32
100	10TCN-T10	33C179	11/16 x 5/32
120	10TCN-T12	33C212	11/16 x 5/32
150	10TCN-T15	33C195	11/16 x 5/32
175	10TCN-T175	41C242	7/8 x 7/32
180	10TCN-T18	41C239	7/8 x 7/32
200	10TCN-T20	41C265	7/8 x 7/32
220	10TCN-T22	41C240	7/8 x 7/32
270	10TCN-T27	33C219	11/16 x 5/32
300	10TCN-T30	33C197	11/16 x 5/32
330	10TCN-T33	36C325	3/4 x 5/32
390	10TCN-T39	41C274	7/8 x 7/32
470	10TCN-T47	41C222	7/8 x 7/32
N150			
2.2	10TCP-V22	40C458	5/16 x 5/32
2.7	10TCP-V27	40C450	5/16 x 5/32
3.0	10TCP-V30	40C451	5/16 x 5/32
3.3	10TCP-V33	40C452	5/16 x 5/32
3.9	10TCP-V39	40C453	5/16 x 5/32
4.7	10TCP-V47	40C454	5/16 x 5/32
5.0	10TCP-V50	40C480	5/16 x 5/32
5.6	10TCP-V56	40C483	5/16 x 5/32
6.8	10TCP-V68	40C488	5/16 x 5/32
8.2	10TCP-V82	40C493	5/16 x 5/32
10	10TCP-Q10	40C498	5/16 x 5/32
12	10TCP-Q12	40C503	5/16 x 5/32
15	10TCP-Q15	40C510	5/16 x 5/32
18	10TCP-Q18	40C514	5/16 x 5/32
20	10TCP-Q20	19C410	3/8 x 5/32
22	10TCP-Q22	19C245A	3/8 x 5/32
25	10TCP-Q25	19C414	3/8 x 5/32
27	10TCP-Q27	19C417	3/8 x 5/32
30	10TCP-Q30	19C345	3/8 x 5/32
33	10TCP-Q33	20C264	7/16 x 5/32
39	10TCP-Q39	20C268	7/16 x 5/32
47	10TCP-Q47	20C271	7/16 x 5/32
50	10TCP-Q50	20C273	7/16 x 5/32
56	10TCP-Q56	29C438	9/16 x 5/32
68	10TCP-Q68	29C440	9/16 x 5/32
75	10TCP-Q75	29C446	9/16 x 5/32
82	10TCP-Q82	29C449	9/16 x 5/32
100	10TCP-T10	33C59A	11/16 x 5/32
120	10TCP-T12	33C213	11/16 x 5/32
150	10TCP-T15	33C215	11/16 x 5/32
175	10TCP-T175	36C322	3/4 x 5/32
180	10TCP-T18	36C314	3/4 x 5/32
200	10TCP-T20	41C266	7/8 x 7/32
220	10TCP-T22	41C229	7/8 x 7/32
270	10TCP-T27	33C220	11/16 x 5/32
300	10TCP-T30	33C221	11/16 x 5/32
330	10TCP-T33	36C315	3/4 x 5/32
390	10TCP-T39	41C231	7/8 x 7/32
470	10TCP-T47	41C275	7/8 x 7/32

μμF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
N220			
3	10TCR-V30	40C462	5/16 x 5/32
3.3	10TCR-V33	40C465	5/16 x 5/32
3.9	10TCR-V39	40C469	5/16 x 5/32
4.7	10TCR-V47	40C475	5/16 x 5/32
5	10TCR-V50	40C455	5/16 x 5/32
5.6	10TCR-V56	40C484	5/16 x 5/32
6.8	10TCR-V68	40C489	5/16 x 5/32
8.2	10TCR-V82	40C494	5/16 x 5/32
10	10TCR-Q10	40C499	5/16 x 5/32
12	10TCR-Q12	40C504	5/16 x 5/32
15	10TCR-Q15	40C511	5/16 x 5/32
18	10TCR-Q18	40C515	5/16 x 5/32
20	10TCR-Q20	40C449	5/16 x 5/32
22	10TCR-Q22	19C256A1	3/8 x 5/32
25	10TCR-Q25	19C393	3/8 x 5/32
27	10TCR-Q27	19C418	3/8 x 5/32
30	10TCR-Q30	19C421	3/8 x 5/32
33	10TCR-Q33	19C424	3/8 x 5/32
39	10TCR-Q39	20C269	7/16 x 5/32
47	10TCR-Q47	20C249	7/16 x 5/32
50	10TCR-Q50	20C251	7/16 x 5/32
56	10TCR-Q56	20C279	7/16 x 5/32
68	10TCR-Q68	29C441	9/16 x 5/32
75	10TCR-Q75	29C394	9/16 x 5/32
82	10TCR-Q82	29C398	9/16 x 5/32
100	10TCR-T10	29C401	9/16 x 5/32
120	10TCR-T12	33C214	11/16 x 5/32
150	10TCR-T15	33C198	11/16 x 5/32
175	10TCR-T175	36C324	3/4 x 5/32
180	10TCR-T18	36C319	3/4 x 5/32
200	10TCR-T20	36C323	3/4 x 5/32
220	10TCR-T22	41C236	7/8 x 7/32
270	10TCR-T27	41C237	7/8 x 7/32
300	10TCR-T30	41C230	7/8 x 7/32
330	10TCR-T33	33C199	11/16 x 5/32
390	10TCR-T39	36C321	3/4 x 5/32
470	10TCR-T47	41C235	7/8 x 7/32
560	10TCR-T56	41C277	7/8 x 7/32
N330			
3.0	10TCS-V30	40C456	5/16 x 5/32
3.3	10TCS-V33	40C466	5/16 x 5/32
3.9	10TCS-V39	40C470	5/16 x 5/32
4.7	10TCS-V47	40C476	5/16 x 5/32
5.0	10TCS-V50	40C481	5/16 x 5/32
5.6	10TCS-V56	40C485	5/16 x 5/32
6.8	10TCS-V68	40C490	5/16 x 5/32
8.2	10TCS-V82	40C495	5/16 x 5/32
10	10TCS-Q10	40C500	5/16 x 5/32
12	10TCS-Q12	40C505	5/16 x 5/32
15	10TCS-Q15	40C512	5/16 x 5/32
18	10TCS-Q18	40C516	5/16 x 5/32
20	10TCS-Q20	40C518	5/16 x 5/32
22	10TCS-Q22	40C522	5/16 x 5/32
25	10TCS-Q25	19C415	3/8 x 5/32
27	10TCS-Q27	19C419	3/8 x 5/32
30	10TCS-Q30	19C422	3/8 x 5/32
33	10TCS-Q33	19C425	3/8 x 5/32
39	10TCS-Q39	20C270	7/16 x 5/32
47	10TCS-Q47	20C252	7/16 x 5/32
50	10TCS-Q50	20C274	7/16 x 5/32
56	10TCS-Q56	20C277	7/16 x 5/32
68	10TCS-Q68	29C442	9/16 x 5/32
75	10TCS-Q75	29C447	9/16 x 5/32
82	10TCS-Q82	29C450	9/16 x 5/32
100	10TCS-T10	29C451	9/16 x 5/32
120	10TCS-T12	33C92..	11/16 x 5/32
150	10TCS-T15	33C201	11/16 x 5/32
175	10TCS-T175	33C217	11/16 x 5/32
180	10TCS-T18	36C316	3/4 x 5/32
200	10TCS-T20	36C326	3/4 x 5/32
220	10TCS-T22	41C233	7/8 x 7/32
270	10TCS-T27	41C234	7/8 x 7/32

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Sizes subject to change without notice.

SPRAGUE CAPACITORS

CERA-MITE CERAMIC CAPACITORS, continued

μμF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
	N330 (cont.)		
300	10TCS-T30	41C261	7/8 x 7/32
330	10TCS-T33	33C241	11/16 x 5/32
390	10TCS-T39	36C318	3/4 x 5/32
470	10TCS-T47	41C276	7/8 x 7/32
560	10TCS-T56	41C278	7/8 x 7/32
	N470		
3.0	10TCT-V30	40C463	5/16 x 5/32
3.3	10TCT-V33	40C467	5/16 x 5/32
3.9	10TCT-V39	40C474	5/16 x 5/32
4.7	10TCT-V47	40C419	5/16 x 5/32
5.0	10TCT-V50	40C420	5/16 x 5/32
5.6	10TCT-V56	40C421	5/16 x 5/32
6.8	10TCT-V68	40C422	5/16 x 5/32
8.2	10TCT-V82	40C423	5/16 x 5/32
10	10TCT-Q10	40C424	5/16 x 5/32
12	10TCT-Q12	40C425	5/16 x 5/32
15	10TCT-Q15	40C426	5/16 x 5/32
18	10TCT-Q18	40C427	5/16 x 5/32
20	10TCT-Q20	40C519	5/16 x 5/32
22	10TCT-Q22	40C428	5/16 x 5/32
25	10TCT-Q25	40C352	5/16 x 5/32
27	10TCT-Q27	19C420	3/8 x 5/32
30	10TCT-Q30	19C423	3/8 x 5/32
33	10TCT-Q33	19C397	3/8 x 5/32
39	10TCT-Q39	19C436	3/8 x 5/32
47	10TCT-Q47	19C437	3/8 x 5/32
50	10TCT-Q50	20C275	7/16 x 5/32
56	10TCT-Q56	20C286	7/16 x 5/32
68	10TCT-Q68	20C287	7/16 x 5/32
75	10TCT-Q75	20C288	7/16 x 5/32
82	10TCT-Q82	29C399	9/16 x 5/32
100	10TCT-T10	29C463	9/16 x 5/32
120	10TCT-T12	29C464	9/16 x 5/32
150	10TCT-T15	33C183	11/16 x 5/32
175	10TCT-T175	33C232	11/16 x 5/32
180	10TCT-T18	33C233	11/16 x 5/32
200	10TCT-T20	33C234	11/16 x 5/32
220	10TCT-T22	33C335	11/16 x 5/32
270	10TCT-T27	36C343	3/4 x 5/32
300	10TCT-T30	41C286	7/8 x 7/32
330	10TCT-T33	41C287	7/8 x 7/32
390	10TCT-T39	41C288	7/8 x 7/32
470	10TCT-T47	36C344	3/4 x 5/32
560	10TCT-T56	41C248	7/8 x 7/32
	N750		
4.7	10TCU-V47	40C477	5/16 x 5/32
5.0	10TCU-V50	40C482	5/16 x 5/32
5.6	10TCU-V56	40C486	5/16 x 5/32
6.8	10TCU-V68	40C491	5/16 x 5/32
8.2	10TCU-V82	40C496	5/16 x 5/32
10	10TCU-Q10	40C501	5/16 x 5/32
12	10TCU-Q12	40C506	5/16 x 5/32
15	10TCU-Q15	40C513	5/16 x 5/32
18	10TCU-Q18	40C517	5/16 x 5/32
20	10TCU-Q20	40C520	5/16 x 5/32
22	10TCU-Q22	40C523	5/16 x 5/32
25	10TCU-Q25	40C524	5/16 x 5/32
27	10TCU-Q27	40C287	5/16 x 5/32
30	10TCU-Q30	40C533	5/16 x 5/32
33	10TCU-Q33	40C534	5/16 x 5/32
39	10TCU-Q39	19C427	3/8 x 5/32
47	10TCU-Q47	19C438	3/8 x 5/32
50	10TCU-Q50	19C39	3/8 x 5/32
56	10TCU-Q56	19C40	3/8 x 5/32
68	10TCU-Q68	20C289	7/16 x 5/32
75	10TCU-Q75	20C290	7/16 x 5/32
82	10TCU-Q82	20C291	7/16 x 5/32
100	10TCU-T10	29C454	9/16 x 5/32
120	10TCU-T12	29C455	9/16 x 5/32
150	10TCU-T15	29C465	9/16 x 5/32
175	10TCU-T175	29C466	9/16 x 5/32
180	10TCU-T18	33C88	11/16 x 5/32
200	10TCU-T20	33C105	11/16 x 5/32
220	10TCU-T22	33C236	11/16 x 5/32
270	10TCU-T27	33C237	11/16 x 5/32
300	10TCU-T30	33C346	11/16 x 5/32
330	10TCU-T33	33C347	11/16 x 5/32
390	10TCU-T39	41C289	7/8 x 7/32
470	10TCU-T47	41C290	7/8 x 7/32
560	10TCU-T56	33C238	11/16 x 5/32
680	10TCU-T68	36C348	3/4 x 5/32

TEMPERATURE-STABLE TYPES

- Used where minimum capacitance change with temperature is an important consideration
- Standard capacitance tolerance: ±10% except 10TS-S15 10TS-S20, 10TS-S30 ±15%
- Rated at **1000 WVDC**

μμF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
3.3	10TS-V33	40C300A	5/16 x 5/16
5.0	10TS-V50	40C49A1	5/16 x 5/16
6.0	10TS-V60	40C299A	5/16 x 5/16
6.8	10TS-V68	40C97A2	5/16 x 5/16
7.5	10TS-V75	40C133A	5/16 x 5/16
8.0	10TS-V80	40C38A2	5/16 x 5/16
10	10TS-Q10	40C219A3	5/16 x 5/16
12	10TS-Q12	40C252A	5/16 x 5/16
15	10TS-Q15	40C65A2	5/16 x 5/16
18	10TS-Q18	40C139A3	5/16 x 5/16
20	10TS-Q20	40C265A	5/16 x 5/16
22	10TS-Q22	40C56A	5/16 x 5/16
25	10TS-Q25	40C113A	5/16 x 5/16
27	10TS-Q27	40C287A	5/16 x 5/16
30	10TS-Q30	40C303	5/16 x 5/16
33	10TS-Q33	40C57A	5/16 x 5/16
39	10TS-Q39	40C58A	5/16 x 5/16
47	10TS-Q47	40C135A	5/16 x 5/16
50	10TS-Q50	40C157A	5/16 x 5/16
56	10TS-Q56	40C130A2	5/16 x 5/16
68	10TS-Q68	40C270A	5/16 x 5/16
75	10TS-Q75	40C46A1	5/16 x 5/16
82	10TS-Q82	40C281A	5/16 x 5/16
91	10TS-Q91	40C302	5/16 x 5/16
100	10TS-T10	40C200A	5/16 x 5/16
120	10TS-T12	40C60A	5/16 x 5/16
130	10TS-T13	40C147A	5/16 x 5/16
150	10TS-T15	40C202A	5/16 x 5/16
180	10TS-T18	40C99A1	5/16 x 5/16
200	10TS-T20	40C81A	5/16 x 5/16
220	10TS-T22	40C204A	5/16 x 5/16
240	10TS-T24	40C167A	5/16 x 5/16
250	10TS-T25	40C101A2	5/16 x 5/16
270	10TS-T27	40C301	5/16 x 5/16
300	10TS-T30	40C106A	5/16 x 5/16
330	10TS-T35	40C207A	5/16 x 5/16
350	10TS-T35	19C105A	3/8 x 5/16
360	10TS-T36	19C106A	3/8 x 5/16
390	10TS-T39	19C131A1	3/8 x 5/16
400	10TS-T40	19C294	3/8 x 5/16
470	10TS-T47	19C160A1	3/8 x 5/16
500	10TS-T50	19C161A	3/8 x 5/16
560	10TS-T56	19C231A	3/8 x 5/16
600	10TS-T60	19C108A	3/8 x 5/16
680	10TS-T68	20C133A	7/16 x 5/16
750	10TS-T75	20C135A	7/16 x 5/16
800	10TS-T80	20C137A	7/16 x 5/16
820	10TS-T82	20C139A	7/16 x 5/16
.001 μF	10TS-D10	29C151A1	9/16 x 5/16
.0012	10TS-D12	29C239A	9/16 x 5/16
.0013	10TS-D13	29C84A	9/16 x 5/16
.0015	10TS-D15	29C155A3	9/16 x 5/16
.0016	10TS-D16	29C85A	9/16 x 5/16
.0018	10TS-D18	33C45A	11/16 x 5/16
.0020	10TS-D20	33C12A2	11/16 x 5/16
.0022	10TS-D22	33C12A1	11/16 x 5/16
.0025	10TS-D25	33C98	11/16 x 5/16
.0027	10TS-D27	33C99	11/16 x 5/16
.0030	10TS-D30	36C246A	3/4 x 5/16
.0033	10TS-D33	36C143A	3/4 x 5/16
.0039	10TS-D39	41C91A	7/8 x 5/16
.0040	10TS-D40	41C56A	7/8 x 5/16
.0043	10TS-D43	41C146	7/8 x 5/16
.0047	10TS-D47	41C72A1	7/8 x 5/16
.0050	10TS-D50	41C89A1	7/8 x 5/16
.0056	10TS-D56	33C100	11/16 x 7/16
.0068	10TS-D68	36C108A	3/4 x 7/16
.0075	10TS-D75	41C148	7/8 x 7/16
.01	10TS-S10	41C121A1	7/8 x 7/16
.015	10TS-S15	41C123A1	7/8 x 5/16
.02	10TS-S20	36C340A	3/4 x 7/16
.03	10TS-S30	41C284A	7/8 x 7/16

HIGH-K TYPES

- Designed for By-Pass and Coupling Applications Where Additional Capacitance Will Not Affect Circuit Operaton
- Smallest Physical Size
- 5HK-S15 thru 5HK-P10, **500 WVDC,** Capacitance Tolerance: +80 −20%
- All Other 5HK are **1000 WVDC,** Capacitance Tolerance: GMV

μF	Sprague Products Cat. No.	Sprague O.E.M. Part No.	Size D. x T.
	SINGLE UNITS		
.001	5HK-D10	40C214	5/16 x 5/32
.0015	5HK-D15	19C237	3/8 x 5/32
.002	5HK-D20	19C203	3/8 x 5/32
.0022	5HK-D22*	20C254	7/16 x 5/32
.0025	5HK-D25	20C179A	7/16 x 5/32
.0033	5HK-D33	20C124	7/16 x 5/32
.004	5HK-D40	29C192	9/16 x 5/32
.0047	5HK-D47	29C203	9/16 x 5/32
.005	5HK-D50	29C204	9/16 x 5/32
.0068	5HK-D68	33C49	11/16 x 5/32
.01	5HK-S10	33C29	11/16 x 5/32
.015	5HK-S15	29C388A	9/16 x 5/32
.02	5HK-S20	33C60A	11/16 x 5/32
.025	5HK-S25	33C57	11/16 x 5/32
.04	5HK-S40	33C24	11/16 x 7/32
.05	5HK-S50	33C58	11/16 x 7/32
.1	5HK-P10	41C92	7/8 x 7/32
	DUAL UNITS		
2 x 470μμF	5HK-2T47	19C166	3/8 x 5/32
2 x 800	5HK-2T80	19C167	3/8 x 5/32
2 x .001μF	5HK-2D10	20C253	7/16 x 5/32
2 x .0015	5HK-2D15	55C67	1/2 x 5/32
2 x .002	5HK-2D20	29C175	9/16 x 5/32
2 x .0022	5HK-2D22	29C27	9/16 x 5/32
2 x .004	5HK-2D40	33C111	11/16 x 5/32
2 x .0047	5HK-2D47	36C330	3/4 x 5/32
2 x .01	5HK-2S10	41C238	7/8 x 5/32
2 x .02	5HK-2S20	41C219	7/8 x 7/32

*Available until present stock is exhausted

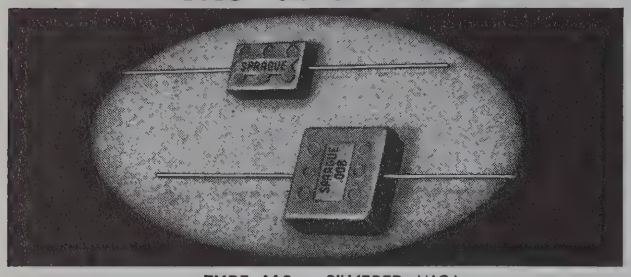
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SPRAGUE CAPACITORS

MICA CAPACITORS

TYPE MS and 1FM MICAS



- Each Mica Capacitor Section Receives a Radio Frequency Test Before Molding
- Careful Selection and Electrical Grading of Raw Mica Assures Maximum Quality
- Section Foils on Foil Micas are Connected to Terminals through Special Low-resistance R-F Bonds
- R-F Current Tested for Peak Ratings After Impregnation and Molding

TYPE MS — SILVERED MICA
(Standard Capacitance Tolerance ±5%)

MF	Cat. No.	Net Ea.
500WVDC, 1000 V Test		
.000005	MS-55	$.27
.000010	MS-41	.24
.000012	MS-412	.24
.000015	MS-415	.24
.000018	MS-418	.24
.000020	MS-42	.24
.000022	MS-422	.24
.000024	MS-424	.24
.000025	MS-425	.24
.000027	MS-427	.24
.000030	MS-43	.24
.000033	MS-433	.24
.000036	MS-436	.24
.000039	MS-439	.24
.000040	MS-44	.24
.000043	MS-443	.24
.000047	MS-447	.24
.000050	MS-45	.24
.000051	MS-451	.24
.000056	MS-456	.24
.000060	MS-46	.24
.000062	MS-462	.24
.000068	MS-468	.24
.000070	MS-47	.24
.000075	MS-475	.24
.000082	MS-482	.24
.000091	MS-491	.24
.000100	MS-31	.24
.000110	MS-311	.27
.000120	MS-312	$.27
.000130	MS-313	.27
.000150	MS-315	.27
.000160	MS-316	.27
.000180	MS-318	.27
.000200	MS-32	.27
.000220	MS-322	.27
.000240	MS-324	.33
.000250	MS-325	.33
.000270	MS-327	.33
.000300	MS-33	.33
.000330	MS-333	.33
.000360	MS-336	.33
.000390	MS-339	.39
.000400	MS-34	.39
.000430	MS-343	.39
.000470	MS 347	.42
.000500	MS-35	.42
.000510	MS-351	.42
.000560	MS-356	.45
.000600	MS-36	.48
.000620	MS-362	.48
.000680	MS-368	.51
.000700	MS-37	.51
.000750	MS-375	.54
.000800	MS-38	.57
.000820	MS-382	.57
.000900	MS-39	.60
.000910	MS-391	.60
.001000	MS-21	.66
.001100	MS-211	.72
.001200	MS-212	.78
.001300	MS-213	$.75
.001500	MS-215	.81
.001600	MS-216	.81
.001800	MS-218	.81
.002000	MS-22	.81
.002200	MS-222	.90
.002400	MS-224	1.08
.002500	MS-225	1.08
.002700	MS-227	1.14
.003000	MS-23	1.23
.003300	MS-233	1.23
.003600	MS-236	1.26
.003900	MS-239	1.29
.004000	MS-24	1.29
.004300	MS-243	1.29
.004700	MS-247	1.29
.005000	MS-25	1.35
.005100	MS-251	1.35
.005600	MS-256	1.50
.006000	MS-26	1.44
.006200	MS-262	1.56
300 WVDC, 600 V Test		
.006800	MS-268	1.56
.007000	MS 27	1.56
.007500	MS-275	1.68
.008000	MS-28	1.68
.008200	MS-282	1.68
.009000	MS-29	1.86
.009100	MS-291	1.86
.010000	MS-11	2.04

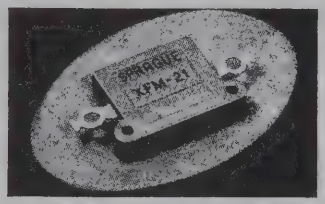
TYPE 1FM
(Standard Capacitance Tolerance ±20%)

MF	Cat. No.	Net Ea.
500 WVDC, 1000 V Test		
.000010	1FM-41	$.15
.000012	1FM-412	.15
.000015	1FM-415	.15
.000018	1FM-418	.15
.000020	1FM-42	.15
.000022	1FM-422	.15
.000024	1FM-424	.15
.000027	1FM-427	.15
.000030	1FM-43	.15
.000033	1FM-433	.15
.000036	1FM-436	.15
.000039	1FM 439	.15
.000040	1FM-44	.15
.000043	1FM-443	.12
.000047	1FM-447	.12
.000050	1FM-45	.12
.000051	1FM-451	.12
.000056	1FM-456	.12
.000062	1FM 462	.12
.000068	1FM-468	.12
.000075	1FM-475	.12
.000082	1FM-482	.12
.000091	1FM-491	.12
.000100	1FM-31	.12
.000110	1FM-311	.12
.000120	1FM-312	.12
.000130	1FM-313	.12
.000150	1FM-315	$.12
.000160	1FM-316	.12
.000180	1FM-318	.12
.000200	1FM-32	.12
.000220	1FM-322	.15
.000240	1FM-324	.15
.000250	1FM-325	.15
.000270	1FM-327	.15
.000300	1FM-33	.15
.000330	1FM-333	.15
.000350	1FM-335	.15
.000360	1FM-336	.15
.000390	1FM-339	.15
.000400	1FM-34	.15
.000430	1FM-343	.15
.000470	1FM-347	.15
.000500	1FM-35	.15
.000510	1FM-351	.15
.000560	1FM-356	.15
.000620	1FM-362	.15
.000680	1FM-368	.15
.000700	1FM-37	.15
.000750	1FM-375	.18
.000820	1FM-382	.18
.000910	1FM-391	.18
.001000	1FM-21	.18
.001100	1FM 211	.18
.001200	1FM-212	.18
.001300	1FM-213	.18
.001500	1FM-215	$.18
.001600	1FM-216	.18
.001800	1FM-218	.24
.002000	1FM-22	.24
.002200	1FM-222	.24
.002400	1FM-224	.30
.002500	1FM-225	.30
.002700	1FM-227	.30
.003000	1FM-23	.30
.003300	1FM-233	.36
.003600	1FM-236	.36
.003900	1FM-239	.36
.004000	1FM-24	.33
.004300	1FM-243	.36
.004700	1FM-247	.36
.005000	1FM-25	.36
.005100	1FM-251	.36
.005600	1FM-256	.39
.006000	1FM-26	.39
.006200	1FM-262	.39
300 WVDC, 600 V Test		
.006800	1FM-268	.51
.007000	1FM-27	.51
.007500	1FM-275	.51
.008000	1FM-28	.60
.008200	1FM-282	.60
.009000	1FM-29	.60
.009100	1FM-291	.60
.010000	1FM-11	.72

MS and 1FM Dimensions

Catalog Nos.	L x W x T	Catalog Nos.	L x W x T
MS-55 thru MS-35	51/64 x 15/32 x 7/32	MS-29 thru MS-11	1 x 5/8 x 5/16
MS-351 thru MS-222	53/64 x 53/64 x 9/32	1FM-41 thru 1FM-462	51/64 x 15/32 x 7/32
MS-224	53/64 x 53/64 x 11/32	1FM-468 thru 1FM-475	53/64 x 53/64 x 9/32
MS-225 thru MS-227	53/64 x 53/64 x 9/32	1FM-482 thru 1FM-356	51/64 x 15/32 x 7/32
MS-23	53/64 x 53/64 x 11/32	1FM-362 thru 1FM-233	53/64 x 53/64 x 9/32
MS-233	53/64 x 53/64 x 9/32	1FM-236 thru 1FM-282	53/64 x 53/64 x 11/32
MS-236 thru MS-282	53/64 x 53/64 x 11/32	1FM-29 thru 1FM-11	1 x 5/8 x 5/16

TYPES XFM, YFM and ZFM



(Standard Capacitance Tolerance ±10%)

MF	Cat. No.	Net Ea.
XFM — 600 WVDC, 1200 V TEST		
.00005	XFM-45	$ .72
.0001	XFM-31	.72
.0002	XFM-32	.72
.00025	XFM-325	.72
.0003	XFM-33	.72
.0004	XFM-34	.72
.0005	XFM-35	.72
.001	XFM-21	.72
.0015	XFM-215	.72
.002	XFM-22	.78
.0025	XFM-225	.78
.003	XFM-23	.87
.004	XFM-24	.90
.005	XFM-25	.93
.006	XFM-26	1.08
.007	XFM-27	1.11
.008	XFM-28	1.14
.01	XFM-11	1.29
.02	XFM-12	1.83
.03	XFM-13	2.67

Catalog Numbers	L x W x T
XFM-45 thru XFM-11	1 5/8 x 1 1/8 x 11/32
XFM-12 thru XFM-13	1 5/8 x 1 1/8 x 7/16

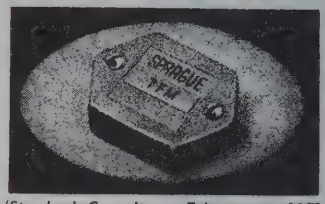
YFM — 1200 WVDC, 2500 V TEST		
.00005	YFM-45	.96
.0001	YFM-31	.96
.0002	YFM-32	.96
.00025	YFM-325	.96
.0003	YFM-33	.96
.0004	YFM-34	.96
.0005	YFM-35	.96
.001	YFM-21	1.08
.0015	YFM-215	1.38
.002	YFM-22	1.44
.0025	YFM-225	1.68
.003	YFM-23	1.83
.004	YFM-24	1.83
.005	YFM-25	1.98
.006	YFM-26	1.98
.007	YFM-27	2.07
.008	YFM-28	2.31
.01	YFM-11	3.06

Catalog Numbers	L x W x T
YFM-45 thru YFM-24	1 5/8 x 1 1/8 x 11/32
YFM-25 thru YFM-11	1 5/8 x 1 1/8 x 7/16

ZFM — 2500 WDVC, 5000 V TEST		
.00005	ZFM-45	1.14
.0001	ZFM-31	1.14
.0002	ZFM-32	1.14
.00025	ZFM-325	1.32
.0003	ZFM-33	1.35
.0004	ZFM-34	1.38
.0005	ZFM-35	1.44
.001	ZFM-21	1.68
.0015	ZFM-215	2.13
.002	ZFM-22	2.49
.003	ZFM-23	2.94
.004	ZFM-24	3.39
.005	ZFM-25	3.84

Catalog Numbers	L x W x T
ZFM-45 thru ZFM-22	1 5/8 x 1 1/8 x 11/32
ZFM-23 thru ZFM-25	1 5/8 x 1 1/8 x 7/16

TYPES 7FM, 8FM and 9FM



(Standard Capacitance Tolerance ±10%

MF	Cat. No.	Net Ea.
7FM — 600 WVDC, 1200 V TEST		
.00005	7FM-45	$ .87
.0001	7FM-31	.87
.00015	7FM-315	.87
.0002	7FM-32	.87
.00025	7FM-325	.87
.0005	7FM-35	.87
.001	7FM-21	.87
.002	7FM-22	.99
.0025	7FM-225	1.02
.003	7FM-23	1.11
.004	7FM-24	1.20
.005	7FM-25	1.26
.006	7FM-26	1.32
.008	7FM-28	1.47
.01	7FM-11	1.68
.015	7FM-115	1.83
.02	7FM-12	2.13
.03	7FM-13	2.73
.04	7FM-14	3.51
.05	7FM-15	4.26
.06	7FM-16	4.83

Catalog Numbers	L x W x T
7FM-45 thru 7FM-13	1 3/4 x 1 5/16 x 7/16
7FM-14 thru 7FM-16	1 3/4 x 1 5/16 x 3/4

8FM — 1200 WVDC, 2500 V TEST		
.00005	8FM-45	.96
.0001	8FM-31	.96
.00015	8FM-315	.96
.0002	8FM-32	.96
.00025	8FM-325	.96
.0005	8FM-35	.96
.001	8FM-21	1.14
.002	8FM-22	1.50
.0025	8FM-225	1.68
.003	8FM-23	1.77
.004	8FM-24	1.86
.005	8FM-25	1.98
.006	8FM-26	2.07
.008	8FM-28	2.46
.01	8FM-11	2.82
.015	8FM-115	3.48
.02	8FM-12	4.23
.025	8FM-125	4.74
.03	8FM-13	4.86

Catalog Numbers	L x W x T
8FM-45 thru 8FM-115	1 3/4 x 1 5/16 x 7/16
8FM-12 thru 8FM-13	1 3/4 x 1 5/16 x 3/4

9FM — 2500 WVDC, 5000 V TEST		
.00005	9FM-45	1.14
.0001	9FM-31	1.14
.00025	9FM-325	1.29
.0005	9FM-35	1.53
.001	9FM-21	1.74
.002	9FM-22	2.55
.0025	9FM-225	2.76
.003	9FM-23	3.06
.004	9FM-24	3.39
.005	9FM-25	3.72
.006	9FM-26	3.81
.008	9FM-28	4.11
.01	9FM-11	4.28
.015	9FM-115	4.83

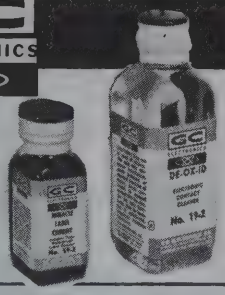
Catalog Numbers	L x W x T
9FM-45 thru 9FM-26	1 3/4 x 1 5/16 x 7/16
9FM-28 thru 9FM-115	1 3/4 x 1 5/16 x 3/4

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All prices and sizes subject to change without notice.

GC ELECTRONICS

CHEMICALS AND KITS



GC Chemicals (Cements, Thinners, Paints, Oils, Varnishes, etc.), are available in handy 2 oz. bottles with brush-in-cap. Also supplied in larger sizes.

G-C RADIO-TELEVISION SERVICE CEMENT—This high grade cement is specially prepared for Radio, Television and Speaker Work. Unexcelled for cementing and replacing cones on dynamic speakers, repairing rattling or torn cones, cementing voice coils, spiders, etc.
Cat. No. 30-2 2-oz. Net $ .48

G-C PLASTIC CEMENT—Excellent for cementing broken plastic cabinets, cementing grille cloth in place, cementing dial and glass crystal assemblies, cementing knots in dial, cords, etc.
Cat. No. 32-2A 2-oz. Net $ .48

G-C "BAKELITE" CEMENT—This cement is especially made for cementing "BAKELITE" to "BAKELITE" and to other materials.
Cat. No. 32-2 2-oz. Net $ .80

G-C "VINYLITE" CEMENT—This new G-C Cement based upon "VINYLITE" vinyl resins, has great adhesion, high tackiness and extreme flexibility.
Cat. No. 58-2 2-oz. Net $ .48

G-C HOUSEHOLD and MODEL CEMENT—Fast-drying cement, suitable for many uses. Excellent "Household Cement"; will cement wood, paper, plastics, metal, china, crockery, ceramics, etc.
Cat. No. 45-2 2-oz. Net $ .55

G-C FABRIC AND GRILLE CLOTH CEMENT—For cementing grille cloth and fabrics to either metal, plastic or wood cabinets.
Cat. No. 22-2 2-oz. Net $ .63

G-C WOOD CABINET GLUE—This is the ordinary well-known wood glue that is used in repair of furniture, chairs, radio cabinets, etc.
Cat. No. 39-2 2-oz. Net $ .48

G-C No. 28 CEMENT THINNER— This thinner is made of same solvents as G-C Service Cement and makes the best thinner for G-C Service Cement.
Cat. No. 28-2 2-oz. Net $ .45

G-C RADIO SERVICE SOLVENT—The best solvent for loosening cement on speaker cones, frames, etc., made to dissolve all types of cements. Can also be used as a thinner for G-C Cement and other cements.
Cat. No. 31-2 2-oz. Net $ .45

G-C No. 29 LACQUER THINNER—Solvent for thinning all lacquers, lacquer enamels, telephone black and gray, touch-up lacquers.
Cat. No. 29-2 2-oz. Net $ .45

G-C No. 67 PAINT THINNER—Excellent for Ruf-Koat, Krome-Koat, B-K Cement, Insulating Varnish and Rubber Cements.
Cat. No. 67-2 2-oz. Net $ .45

G-C No. 41 Q-DOPE THINNER—Excellent solvent for Polystyrene, Q-Dope and any other Polystyrene Coil Dopes and Cements. Will soften and disolve polystyrene rods, sheets, etc. Clear water-white solvent will not change characteristics of original materials.
Cat. No. 41-2 2-oz. Net $ .45

G-C RUBBER-TO-METAL & PHONO DRIVE CEMENT Specially prepared for cementing ruber phono and dial drives to shafts and pulleys.
Cat. No. 35-2 2-oz. Net $ .53

G-C PLIOBOND CEMENT—Bonds anything to anything—iron, steel, plastic, glass, aluminum, cotton, vinyl sheets, stainless steel, etc. A truly universal cement.
Cat. No. 43-2 2-oz. Net $ .53

G-C ACRYLIC-PLEXIGLASS CEMENT — Specially prepared for cementing Lucite, Plexiglass and other arcylic materials.
Cat. No. 40-2 2-oz. Net $ .53

G-C NE-O-PRENE CEMENT—For cementing neoprene rubber to neoprene or neoprene to other products, such as metal, wood, paper, etc.
Cat. No. 52-2 2-oz. Net $ .67

G-C LABEL CEMENT—Here's a label cement that will make labels stick to anything—metal, glass, wood, tin, etc.
Cat. No. 46-2 2-oz. Net $ .55

G-C TV HIGH VOLTAGE CORONA DOPE—Prevents corona shorts on high voltage circuits in Television sets.
Cat. No. 47-2 2-oz. Net $ .72

G-C RED-X TV CORONA DOPE—Prevents corona shorts in high voltage circuits in TV sets. Coat surfaces and sharp corners to stop corona effect.
Cat. No. 50-2 2-oz. Net $ .72

G-C TV TUBE KOAT—For recoating the outside of TV picture tubes that have become scratched or the surface is peeling.
Cat. No. 49-2 2-oz. Net $ .72

G-C TV LINE SEAL FOR UHF AND VHF—Outdoor special acrylic sealer for sealing TV wires, terminals, screws, antennas, junction boxes.
Cat. No. 17-2 2-oz. Net $ .53

G-C PHONO NON-SLIP COMPOUND—Prevents slippage of phono drives on changers, tape recorders, and all types of recorder drives.
Cat. No. 86-2-S 2-oz. NET $ .96

G-C RED GLYPTAL INSULATING VARNISH—Most common of all protective insulating coatings, used on all solder connections, high voltage points, anti-corona.
Cat. No. 90-2 2-oz. Net $ .57

NON-SLIP COMPOUND FOR RADIO DIALS—Powder Compound for treating friction type dial drives such as cords, cabels and belts.
Cat. No. 1210 Non-Slip, 2-oz. Net $ .45

LIQUID NON-SLIP—Penetrating and fast-drying liquid dressing. Shrinks fibres, prolongs life of cables and belts and prevents slipping.
Cat. No. 1211 ½-oz. Net $ .33

G-C DE-OX-ID—Cleans and prevents oxidation on sensitive circuit contacts. Use in Television, Radio, Telephone, Relays, Instruments, etc.
Cat. No. 19-1 1-oz. Net $ .67
19-2 2-oz. Net $ .97

G-C CONTACT AND CRYSTAL CLEANER—A fast-evaporating cleaner specially prepared for cleaning contacts and crystals. Cleans easily and will not injure delicate parts, crystals, etc.
Cat. No. 127-2 2-oz. Net $ .45

NEW G-C ELECTRONIC CONTACT CLEANER—Most popular all-purpose contact cleaner on the market. Fast drying and fast acting. Leaves a non-corrosive film on the contacts that insures long, trouble-free action.
Cat. No. 210-2 2-oz. Net $ .53

G-C DE-NOIZ ELECTRONIC TV CONTACT AND DETENT CLEANER—Stops Noise on all types of contacts, volume controls, tuners, detents, switches, relays, etc.
Cat. No. 51-2 2-oz. Net $ .97

G-C CARBON CONTROL CLEANER—Makes it easy to repair most noisy volume controls, tone controls, switches, band switches, push-buttons—in fact, most all types of moving contacts. A special chemical that both removes oxidation and minimizes future trouble by coating the contacts.
Cat. No. 212-2 2-oz. Net $ .45

G-C CARBON TETRA-CHLORIDE—100% pure Carbon Tetra-Chloride, non-explosive and non-inflammable. For cleaning electrical controls and contacts.
Cat. No. 211-2 2-oz. Net $ .45

G-C GRAFOLINE—Insures proper and lasting repairs for all air-exposed contacts, switches, and wire-wound volume controls—wherever dust and dirt affect the quiet action of adjustable radio parts or controls.
Cat. No. 120-2 2-oz. Net $ .53

G-C CARBON-X—A practical method to touch up those worn and noisy spots on carbon volume controls.
Cat. No. 1205 2-oz. Net $ .80

G-C CONTACT DOPE—Ideal contact cleaner for electronic switches, controls and contacts. Specially prepared to resist corrosion and oxidation on contacts.
Cat. No. 1214 2-oz. Net $ .48

G-C NON-CORROSIVE LIQUID SOLDERING FLUX—Best quality non-corrosive flux for all types of radio and electrical soldering, for copper, brass, steel, nickel, etc.
Cat. No. 42-2 2-oz. Net $ .48

G-C Q-DOPE (COIL DOPE)—Specially prepared for coating, doping, sealing, cementing and impregnating coils and paints in "Very High" and "Ultra High" frequency ranges.
Cat. No. 37-2 2-oz. Net $ .55

G-C LIQUIDOPE—Gives coils a tough protective film that insures firmness and prevents characteristic changes due to weather.
Cat. No. 36-2 2-oz. Net $ .58

G-C INSULATING & DIPPING VARNISH—Produces a smooth, tough film that is water-proof, oil-proof and non-corrosive. Recommended for treating field coils, noisy or buzzing transformers and choke coils.
Cat. No. 56-2 2-oz. Net $ .60

G-C FUNGUS VARNISH—Used on all types of Radio, Electronics and Communication equipment to prevent moisture absorption and fungus growth, when equipment is used in hot and humid climates.
Cat. No. 57-2 2-oz. Net $ .67

G-C STRIP-X—Removes insulating enamel from wires for easy soldering. Use on magnet wire, etc.
Cat. No. 26-2 2-oz. Net $ .73

G-C RECO-STATIC CHASER—Minimize dust accumulation on records and picture tube. Reduces dust attracting static electricity.
Cat. No. 48-2 2-oz. Net $ .45

G-C MAG-NETIK RECORDING HEAD CLEANER—Cleans without injury to the recording head that gradually lose their sensitivity if oxide accumulates.
Cat. No. 53-1 1-oz. Net $ .57
53-2 2-oz. $ .97

G-C RUF-KOAT—The only finish that will air dry and give you a professional wrinkle job without baking. Colors: Black, Gray and Brown (Specify Color).
Cat. No. 60-2 2-oz. Net $ .67

G-C No. 14-2 PRINT-KOTE SILICONE RESIN—After repairing or replacing parts in printed circuits, protect the panel joints and parts. Fast air drying.
Cat. No. 14-2 2-oz. Net $1.30

G-C No. 13-2 PRINT-KOTE SOLVENT FOR SILICONE RESIN—The only solvent for G-C 14-2 Silicone Resin. Will dissolve and remove silicone resin from printed circuits.
Cat. No. 13-2 2-oz. Net $ .37

G-C PRINT-KOTE SOLDERING FLUX—Non-corrosive liquid flux for easy soldering and repairing of printed circuits.
Cat. No. 12-2 2-oz. Net $ .50

G-C CEMENT KIT—A kit containing a complete selection for every application. Kit includes 2-oz. samples of Service, Pli-O-Bond, Acrylic, Plastic, Bakelite, Vinylite, Grille Cloth, Model, Wood, Rubber-to-Metal, Electrical and Resistor, Neoprene, Label and Vinyl Cements. Ideal for research and development.
Cat. No. 345 Net $5.97



G-C RADIO AND TELEVISION CEMENT—High grade speaker cement in a handy tube for those who prefer to use a tube. Cement can be applied directly from tube on the parts to be cemented without the use of a brush. Also used for television work, sealing nuts, bolts, etc., on antennas, rotators, etc.
Cat. No. 34-2
2-oz. tube Net $ .55

GC SPRAY CANS



NEW, ALL-PURPOSE SPRA-KLEEN-cleaner, lubricant. Excellent for business and industrial machines; motors, relays, switches, adding machines, comptometers, etc.
Cat. No. 32-8666 . 6 oz...Net $ .99



SPRA-KLEEN - eliminates noise due to dust, dirt and corrosion on contacts. Just spray, and work controls.
Cat. No. 8666...6 oz....Net $ .99
Cat. No. 8666-16.....Net $ 1.95
16 oz (sprays upside-down)



RELAY-KLEEN - contact cleaner; excellent for cleaning relays and contacts in switchboards, automatic pinball or bowling machines, rocket or satellite circuitry.
Cat. No. 8682....6 oz...Net $ 1.89



JIF - contact and control cleaner will not harm plastics. Contains no harsh solvents. Cleans, lubricates, long-lasting protection.
Cat. No. 8670-6...6 oz..Net $ 1.79



MP-5 outdoor metal protectant; provides chemisorption type bond to metal surfaces. Superior to other organic compounds. Contains - UCARSIL* silicones.
*Trademark of Union Carbide Corp.
Cat. No. 8681 ...6 oz..... Net $1.79



ZERO-MIST SPRA KOAT - instantly locates defective(intermittent) circuit components due to temperature change. Circuits cooled instantly. Components isolated.
Cat. No. 8667...16 oz... Net $ 2.42



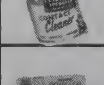
REK-O-MAGIC ANTI-STATIC SPRAY eliminates abrasive dust that ruins records. Cleans, easy to use.
Cat. No. 98-12..12 oz.. Net $ 1.98



RUF-KOAT WRINKLE VARNISH hard, durable finish.
Cat. No. 60-12.....Net $ 2.25
12 oz. Black
Cat. No. 60-13.....Net $ 2.25
12 oz. Gray



GC DE-OX-ID - electrical contact cleaner for silver, detent and radar contacts. For TV, radio, telephone, relays, contacts, etc.
Cat. No. 19-6...6 oz.... Net $ 2.33



GC STANDARD PRINTED CIRCUIT KIT - contains foil, solder washers, solder wire, solder probe tool and brush, silcone resin lacquer and solvent, tweezers and instructions.
Cat. No. 682.....Net $ 5.33

PRINTED CIRCUIT SERVICE AIDS



GC MASTER PRINTED CIRCUIT KIT includes all items in standard kit plus one Ungar Soldering iron with special tip and 6-ounce spray can of 14-6 Silicone Resin spray and instructions.
Cat. No. 683.....Net $10.58



GC PRINTED CIRCUIT SILICONE RESIN SERVICE KIT - used by leading TV set manufacturers. Everything necessary for printed circuit repairs.
Cat. No. 680.....Net $ 5.95



GC PRINT-KOTE SOLDER AID PROBE
Cat. No. 9093.....Net $ 1.00



GC PRINT-KOTE BRUSH & SCRAPER
Cat. No. 9094.....Net $ .98



GC PRINT-KOTE HEAVY DUTY SOLDERING AID TOOL
Cat. No. 9088.....Net $ 1.00



K-27 PRINT-KOTE - TV silicone resin for printed circuits. Insulates, protects, prevents shorts. As used by the original manufacturer.
Cat. No. 14-6...6 oz.....Net $ 2.42



GC PRINT-KOTE SOLDER - special non-corrosive flux and low-melting solder combined with Pure Silver.
Cat. No. 9131 11-foot coil Net $ .52



GC SILVER PRINT - for printed circuit repairs Same Pure Silver as used by original printed circuit manufacturers
Cat No. 21-1 ½ troy oz Net $ 3.30
Cat No. 21 2 1 troy oz. Net $ 5.75



GC COPPERPRINT - for repairing printed circuits High conductive; fast drying. 2 oz bottle
Cat. No 20-2 Net $ 2.17



GC SOLDERING PASTE - high quality, non-corrosive soldering paste for TV, Radio and Electrical repairs
Cat No. 1207 . 2 oz....Net $ .42

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CRYSTAL-CLEAR Acrylic Spray coating goes on clear, stays clear. Dry in minutes, tough, pliable, lasting. Preserves, protects, weather-proofs, prevents deterioration.



SILICONE SPRAY stops friction squeaks, sticking, repels water, makes everything slide easier. Also automotive lubricant. Keeps rubber mountings, gaskets, soft and flexible.



INSULATING VARNISH won't crack, char or deteriorate. Forms tough, flexible film. Oil, water, acid and alkali resistant. Dry, tack free in 15 minutes. Excellent adhesion.



ELECTRIC MOTOR CLEANER instantly penetrates, dissolves and cleans grease and dirt from motors, etc., and electronic-automotive equipment. No carbon tetrachloride.



SPRAY PAINT for fast, easy painting of small jobs and touch-ups. DRY IN MINUTES. Excellent adhesion, uniform coverage. 27 standard enamel colors and 7 fluorescent.



LET-GO super penetrant and rust solvent, lubricates as it penetrates, frees "frozen" parts. Protects against corrosion. Spray reaches inaccessible areas. Easy to apply.



TUNER CLEANER and lubricant for volume controls, tuners, switches, relays, etc. Non-flammable, non-corrosive, non-toxic. No carbon tetrachloride. Won't harm known plastics.

IF YOU PRIZE IT...*KRYLON-IZE* IT!

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QUIETROLE

the original LUBRICANT CLEANER

SPRAY IT OR DROP IT . . .

the NEW

BIG THREE AEROSOLS

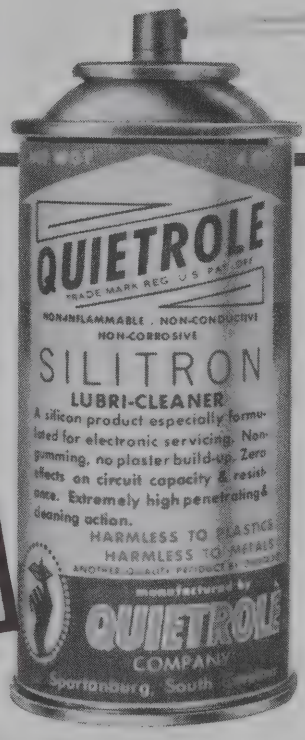
for Electronic Servicing



MARK-II FOR TUNERS



SPRAY-PACK FOR CONTROLS & SWITCHES



SILITRON FOR GENERAL USE

"HARMLESS TO PLASTICS"
"HARMLESS TO METAL"

"QUIETROLE" is the preferred, standard product of the industry! Your guarantee for quieting noisy television and radio controls, switches and other moving parts is QUIETROLE. Here is the original, non-inflammable, most reliable lubricant-cleaner on the market today — developed through years of factual and authentic research.

OR

QUIETROLE

BOTTLE with the Eye Dropper



NON-INFLAMMABLE — NON-CONDUCTIVE — NON-CORROSIVE

There is no substitute for QUALITY . . . get QUIETROLE TODAY

A First of the Industry . . . An 18 Year Plus Record of Proven Superiority. Built to Meet a Demand, Not a Price.

QUIETROLE BOTTLE

Cat. No.	Size	Min. Order	Min. Re-order	Distr. Net Resale price
10-2	2 oz.	24	24	$1.69
10-3	4 oz.	16	8	2.54
10-4	8 oz.	8	6	5.07
QUIETROLE BOTTLE WITH BRUSH-N-CAP				
10-3A	4 oz.	16	8	2.64

QUIETROLE AEROSOLS

All include free plastic extender . . . HARMLESS TO PLASTICS . . . ZERO EFFECTS ON CAPACITY & RESISTANCE . . . Non-Inflammable . . . Non-Conductive . . . Non-Corrosive.

Cat. No.	Size	Order Min.	Min. Re-order	Distr. Net Resale price
10-5	6 oz.	12	12	2.89 Spray-Pack
10-7	6 oz.	12	12	2.89 Mark II
10-8	6 oz.	12	12	1.98 Silitron

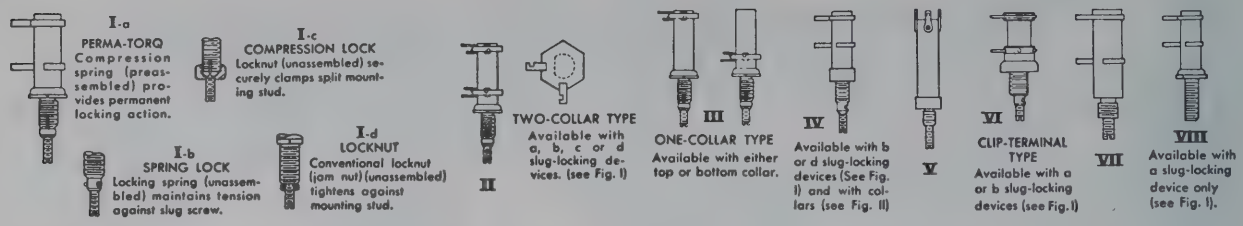
QUIETROLE COMPANY

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CAMBRIDGE THERMIONIC CORPORATION

CAMBION® COIL FORMS — CERAMIC AND PHENOLIC



Standard Numbers: Have silicone fiberglas collars, silver-plated solder terminals, cadmium-plated studs and ceramic body unless otherwise noted. Powdered iron core except 100 mc up (Suffix One, -5), which is brass. **To Order:** Use Model number followed by Suffix One (for frequency range) and Suffix Two (for terminal and collar types). Example: 1465-1-1 for 0.2–1.5 mc with two ring terminals. Types 1996 and 2151 come with clip terminals only, and require no final suffix (Two). **Alternate Numbers:** Identical coil form to standard numbers but have tin-plated terminals, nickel-plated studs and related hardware except for brass tuning slug with rhodium flash over silver-plate. Types 1465 and 1544 employ same slug but with brass load to increase range; no alternate finish available. All units available in same variations (suffixes) at same respective prices for adjacent standard number.

SUFFIX CHART

Suffix One	Freq. Range Mc	Suffix Two	Description
-1	0.2–1.5	-1	2 ring terminals
-2	1–20	-2	2 collars, 4 terminals
-3	20–50	-3	2 collars, 2 terminals
-4	50–200	-4	1 top collar, 2 terminals
-5	100 and up	-5	1 bottom collar, 2 terminals
-6	2–40		
-7	40–300		

See Catalog 700 for Cambion Shielded coil forms and for wound coil series on standard Cambion forms.

Cambion Number & (Alt. No.)	Fig.	Mounting Stud L. x Thread x Base Dia., Inches	Hgt. In. Above Panel	Body O.D. In.	‡	Tuning Tool Req'd.	Net Each, Lots of 1-49	50-249	250-499	500-999	1000-2499
1530-(*)-1 (3607-)	I-b	1/4 x 8-32 x 1/4 hex	19/32	.205	.....	2033-1	$0.54	$0.44	$0.38	$0.35	$0.33
1530-(*)-2, -3 (3607-)	II-b	1/4 x 8-32 x 1/4 hex	19/32	.205	9/32	2033-1	.68	.56	.50	.47	.43
1530-(*)-4, -5 (3607-)	III-b	1/4 x 8-32 x 1/4 hex	19/32	.205	.....	2033-1	.61	.50	.44	.41	.38
1531-(*)-1 (3605-)	I-c	31/64 x 8-32 x 1/4 hex	19/32	.205	.....	2033-1	.56	.46	.40	.37	.35
1531-(*)-2, -3 (3605-)	II-c	31/64 x 8-32 x 1/4 hex	19/32	.205	9/32	2033-1	.70	.58	.52	.49	.45
1531-(*)-4, -5 (3605-)	III-c	31/64 x 8-32 x 1/4 hex	19/32	.205	.....	2033-1	.63	.52	.46	.43	.40
1532-(*)-1 (3606-)	I-a	3/4 x 8-32 x 1/4 hex	19/32	.205	.....	2033-1	.54	.44	.38	.35	.33
1532-(*)-2, -3 (3606-)	II-a	1/4 x 8-32 x 1/4 hex	19/32	.205	9/32	2033-1	.68	.56	.50	.47	.43
1532-(*)-4, -5 (3606-)	III-a	1/4 x 8-32 x 1/4 hex	19/32	.205	.....	2033-1	.61	.50	.44	.41	.38
2020-(*)-1 (3608-)	I-d	1/4 x 8-32 x 1/4 hex	19/32	.205	.....	2033-1	.54	.44	.38	.35	.33
2020-(*)-2, -3 (3608-)	II-d	1/4 x 8-32 x 1/4 hex	19/32	.205	9/32	2033-1	.68	.56	.50	.47	.43
2020-(*)-4, -5 (3608-)	III-d	1/4 x 8-32 x 1/4 hex	19/32	.205	.....	2033-1	.61	.50	.44	.41	.38
1533-(*)-1 (3610-)	I-c	37/64 x 1/4-28 x 1/2 hex	1 1/16	.375	.....	1970-1	.66	.56	.49	.45	.42
1533-(*)-2, -3 (3610-)	II-c	37/64 x 1/4-28 x 1/2 hex	1 1/16	.375	5/8	1970-1	.86	.72	.65	.61	.56
1533-(*)-4, -5 (3610-)	III-c	37/64 x 1/4-28 x 1/2 hex	1 1/16	.375	.....	1970-1	.76	.64	.57	.53	.49
1534-(*)-1 (3611-)	I-a	5/16 x 1/4-28 x 1/2 hex	1 1/16	.375	.....	1970-1	.64	.54	.47	.43	.40
1534-(*)-2, -3 (3611-)	II-a	5/16 x 1/4-28 x 1/2 hex	1 1/16	.375	5/8	1970-1	.84	.70	.63	.59	.54
1534-(*)-4, -5 (3611-)	III-a	5/16 x 1/4-28 x 1/2 hex	1 1/16	.375	.....	1970-1	.74	.62	.55	.51	.47
2024-(*)-1 (3612-)	I-b	9/32 x 1/4-28 x 1/2 hex	1 1/16	.375	.....	1970-1	.64	.54	.47	.43	.40
2024-(*)-2, -3 (3612-)	II-b	9/32 x 1/4-28 x 1/2 hex	1 1/16	.375	5/8	1970-1	.84	.70	.63	.59	.54
2024-(*)-4, -5 (3612-)	III-b	9/32 x 1/4-28 x 1/2 hex	1 1/16	.375	.....	1970-1	.74	.62	.55	.51	.47
1535-(*)-1 (3615-)	I-c	13/32 x 10-32 x 3/8 hex	55/64	.260	.....	1971-1	.61	.48	.42	.39	.37
1535-(*)-2, -3 (3615-)	II-c	13/32 x 10-32 x 3/8 hex	55/64	.260	15/32	1971-1	.77	.62	.56	.53	.49
1535-(*)-4, -5 (3615-)	III-c	13/32 x 10-32 x 3/8 hex	55/64	.260	.....	1971-1	.69	.55	.49	.46	.43
1536-(*)-1 (3616-)	I-a	5/16 x 10-32 x 3/8 hex	55/64	.260	.....	1971-1	.59	.46	.40	.37	.35
1536-(*)-2, -3 (3616-)	II-a	5/16 x 10-32 x 3/8 hex	55/64	.260	15/32	1971-1	.75	.60	.54	.51	.47
1536-(*)-4, -5 (3616-)	III-a	5/16 x 10-32 x 3/8 hex	55/64	.260	.....	1971-1	.67	.53	.47	.44	.41
2022-(*)-1 (3617-)	I-b	9/32 x 10-32 x 3/8 hex	55/64	.260	.....	1971-1	.59	.46	.40	.37	.35
2022-(*)-2, -3 (3617-)	II-b	9/32 x 10-32 x 3/8 hex	55/64	.260	15/32	1971-1	.75	.60	.54	.51	.47
2022-(*)-4, -5 (3617-)	III-b	9/32 x 10-32 x 3/8 hex	55/64	.260	.....	1971-1	.67	.53	.47	.44	.41
1537-(*)-1 (3620-)	I-c	39/64 x 1/4-28 x 5/8 hex	1 45/64	.500	.....	1970-1	.71	.60	.52	.48	.46
1537-(*)-2, -3 (3620-)	II-c	39/64 x 1/4-28 x 5/8 hex	1 45/64	.500	1 1/32	1970-1	.93	.78	.70	.66	.62
1537-(*)-4, -5 (3620-)	III-c	39/64 x 1/4-28 x 5/8 hex	1 45/64	.500	.....	1970-1	.82	.69	.61	.57	.54
1538-(*)-1 (3621-)	I-a	5/16 x 1/4-28 x 5/8 hex	1 45/64	.500	.....	1970-1	.69	.58	.50	.46	.44
1538-(*)-2, -3 (3621-)	II-a	5/16 x 1/4-28 x 5/8 hex	1 45/64	.500	1 1/32	1970-1	.91	.76	.68	.64	.60
1538-(*)-4, -5 (3621-)	III-a	5/16 x 1/4-28 x 5/8 hex	1 45/64	.500	.....	1970-1	.80	.67	.59	.55	.52
2048-(*)-1 (3622-)	I-b	5/16 x 1/4-28 x 5/8 hex	1 45/64	.500	.....	1970-1	.69	.58	.50	.46	.44
2048-(*)-2, -3 (3622-)	II-b	5/16 x 1/4-28 x 5/8 hex	1 45/64	.500	1 1/32	1970-1	.91	.76	.68	.64	.60
2048-(*)-4, -5 (3622-)	III-b	5/16 x 1/4-28 x 5/8 hex	1 45/64	.500	.....	1970-1	.80	.67	.59	.55	.52
3352-(*)-1 (3632-)	I-b	5/16 x 1/4-28 x 5/8 hex	1 1/4	.500	.....	1970-1	.69	.58	.50	.46	.44
3352-(*)-2, -3 (3632-)	II-b	5/16 x 1/4-28 x 5/8 hex	1 1/4	.500	45/64	1970-1	.91	.76	.68	.64	.60
3352-(*)-4, -5 (3632-)	III-b	5/16 x 1/4-28 x 5/8 hex	1 1/4	.500	.....	1970-1	.80	.67	.59	.55	.52
3353-(*)-1 (3630-)	I-c	5/16 x 1/4-28 x 5/8 hex	1 1/4	.500	.....	1970-1	.71	.60	.52	.48	.46
3353-(*)-2, -3 (3630-)	II-c	5/16 x 1/4-28 x 5/8 hex	1 1/4	.500	45/64	1970-1	.93	.78	.70	.66	.62
3353-(*)-4, -5 (3630-)	III-c	5/16 x 1/4-28 x 5/8 hex	1 1/4	.500	.....	1970-1	.82	.69	.61	.57	.54
3354-(*)-1 (3631-)	I-a	5/16 x 1/4-28 x 5/8 hex	1 1/4	.500	.....	1970-1	.69	.58	.50	.46	.44
3354-(*)-2, -3 (3631-)	II-a	5/16 x 1/4-28 x 5/8 hex	1 1/4	.500	45/64	1970-1	.91	.76	.68	.64	.60
3354-(*)-4, -5 (3631-)	III-a	5/16 x 1/4-28 x 5/8 hex	1 1/4	.500	.....	1970-1	.80	.67	.59	.55	.52
2770-(*)-1•	VIII-a	13/32 x 10-32 x 1/4 hex	35/32	.205	.....	2780-1	.80	.68	.59	.54	.52
2770-(*)-2, -3•	VIII-a, II-a	13/32 x 10-32 x 1/4 hex	35/32	.205	9/32	2780-1	.94	.80	.71	.66	.62
2770-(*)-4, -5•	VIII-a, III-a	13/32 x 10-32 x 1/4 hex	35/32	.205	.....	2780-1	.87	.74	.65	.60	.57
2771-(*)-1•	VIII-a	55/64 x 12-28 x 3/8 hex	1 3/32	.260	.....	2780-1	1.23	1.05	.91	.84	.81
2771-(*)-2, -3•	VIII-a, II-a	55/64 x 12-28 x 3/8 hex	1 3/32	.260	15/32	2780-1	1.39	1.19	1.05	1.02	.93
2771-(*)-4, -5•	VIII-a, III-a	55/64 x 12-28 x 3/8 hex	1 3/32	.260	.....	2780-1	1.31	1.12	.98	.91	.87
2689-(*)-1	▲	.140 x 4-40 x 5/32 hex	17/32	.122	§	2375-1	.62	.52	.46	.42	.39
1996-(*) (3627-)	VI-b	3/32 x 1/4-28 x 1/2	35/32	.290	#	1971-1	.85	.73	.63	.58	.55
2151-(*) (3626-)	VI-a	9/32 x 1/4-28 x 1/2	35/32	.290	#	1971-1	.85	.73	.63	.58	.55
1540-(*)-1†	IV-b	1/4 x 10-32 x 5/16	37/32	.250	.....	1971-1	.46	.40	.36	.32	.30
1540-(*)-2, -3†	IV-b, II-b	1/4 x 10-32 x 5/16	37/32	.250	15/32	1971-1	.62	.54	.50	.46	.42
1540-(*)-4, -5†	IV-b, III-b	1/4 x 10-32 x 5/16	37/32	.250	.....	1971-1	.54	.47	.43	.39	.36
1542-(*)-1†	IV-a	.314 x 10-32 x 5/16	37/32	.250	.....	1971-1	.46	.40	.36	.32	.30
1542-(*)-2, -3†	IV-a, II-a	.314 x 10-32 x 5/16	37/32	.250	15/32	1971-1	.62	.54	.50	.46	.42
1542-(*)-4, -5†	IV-a, III-a	.314 x 10-32 x 5/16	37/32	.250	.....	1971-1	.54	.47	.43	.39	.36
1605-(*)-1†	IV-d	1/4 x 8-32 x 5/16	37/32	.250	.....	1971-1	.46	.40	.36	.32	.30
1605-(*)-2, -3†	IV-d, II-d	1/4 x 8-32 x 5/16	37/32	.250	15/32	1971-1	.62	.54	.50	.46	.42
1605-(*)-4, -5†	IV-d, III-d	1/4 x 8-32 x 5/16	37/32	.250	.....	1971-1	.54	.47	.43	.39	.36
1465-(*)-1† (1546-)	VII	1/4 x 1/4-28 x none	1 1/16	.375	.....	1970-1	.46	.40	.36	.32	.30
1465-(*)-2, -3† (1546-)	VII-, II-	1/4 x 1/4-28 x none	1 1/16	.375	.....	1970-1	.66	.56	.52	.48	.44
1465-(*)-4, -5† (1546-)	VII-, III-	1/4 x 1/4-28 x none	1 1/16	.375	.....	1970-1	.56	.48	.44	.40	.37
1544-(*)-1† (3639-)	VII-a	1/4 x 1/4-28 x none	1 1/16	.375	.....	1970-1	.46	.40	.36	.32	.30
1544-(*)-2, -3† (3639-)	VII-a, II-a	1/4 x 1/4-28 x none	1 1/16	.375	.....	1970-1	.66	.56	.52	.48	.44
1544-(*)-4, -5† (3639-)	VII-a, III-a	1/4 x 1/4-28 x none	1 1/16	.375	.....	1970-1	.56	.48	.44	.40	.37
1885-(*)	V	3/8 x 1/4-28 x 9/16	2	.500	§	1970-1	.70	.61	.55	.49	.46

*Insert proper Suffix One, from chart above, to indicate frequency. †Phenolic body. ‡Space between collars, inches. §Ring terminals only. #Clip terminals only. •Gold plated. ▲Friction-lock type, similar to IV-d illustration(s).

For Complete Technical information ask for Cambion Catalog 700 available upon request.

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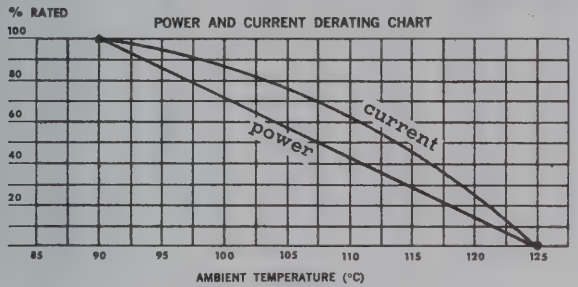
Miller

MIL-SPEC MOLDED CHOKES

MILLER MOLDED COILS CONFORM TO MIL-C-15305



This group of molded chokes affords the design engineer a wide range of inductance values, current ratings, and sizes which will fulfill most normal design requirements. Manufactured under strict Quality Control supervision and tested in accordance with MIL Standard 105 the user is guaranteed uniformity and reliability in every coil. This series conforms to MIL-C-15305, Grade and Class 7.



Tabulated currents in milliamperes are maximum values based on a temperature rise not to exceed 35° C., nor wattage dissipation in excess of listed values.

"MICRO MITE" SERIES 9210

MOLDED R. F. CHOKES

Mold Size: .155 ±.010 diameter; .375 ±.010 length. Leads: AWG #22 TCW; 1.44 ±.125 length. Power Rating: .22 Watt Max. at 90° C. *Current based on (1) Temperature rise not to exceed 35° C at 90° ambient. (2) Overload not to exceed 1½ times rated current.

PART No.	L uh.	Q MIN.	TEST FREQ. (Mc.)	Fo. MIN. (Mc.)	Rdc. MAX.	*Ma. MAX.	CORE MTL.	NET PRICE
9210-54	36 ± 5%	60	2.5	16.0	2.50	250	IRON	$ .90
9210-56	39 ± 5%	60	2.5	15.0	2.60	245	IRON	.90
9210-58	43 ± 5%	60	2.5	13.7	2.70	242	IRON	.90
9210-60	47 ± 5%	55	2.5	13.0	2.75	240	IRON	.90
9210-62	51 ± 5%	55	2.5	12.7	2.85	235	IRON	.90
9210-64	56 ± 5%	55	2.5	12.0	3.00	230	IRON	.90
9210-66	62 ± 5%	55	2.5	11.0	3.15	225	IRON	.90
9210-68	68 ± 5%	55	2.5	11.0	3.30	220	IRON	.90
9210-70	75 ± 5%	55	2.5	10.5	3.70	205	IRON	.90
9210-72	82 ± 5%	50	2.5	10.3	3.90	200	IRON	.90
9210-74	91 ± 5%	50	2.5	10.0	4.30	190	IRON	.90
9210-76	100 ± 5%	50	2.5	9.5	4.50	185	IRON	.96
9210-78	110 ± 5%	60	.790	8.5	4.90	180	IRON	.96
9210-80	120 ± 5%	65	.790	8.5	5.20	175	IRON	.96
9210-82	130 ± 5%	65	.790	8.5	5.45	170	IRON	.96
9210-84	150 ± 5%	65	.790	8.0	6.05	165	IRON	.96
9210-86	160 ± 5%	65	.790	8.0	6.40	160	IRON	.99
9210-88	180 ± 5%	65	.790	7.0	6.50	155	IRON	.99
9210-90	200 ± 5%	65	.790	6.5	6.90	150	IRON	.99
9210-92	220 ± 5%	65	.790	6.0	7.20	145	IRON	.99
9210-94	240 ± 5%	65	.790	6.0	7.40	140	IRON	.99

"MICRO MITE" SERIES 9220

MOLDED R. F. CHOKES

*Current based on (1) Temperature rise not to exceed 35° C at 90° ambient. (2) Overload not to exceed 1½ times rated current.

MOLD SIZE	MOLD DIAMETER	MOLD LENGTH	LEAD SIZE	LEAD LENGTH	MAX. WATT AT 90° C.
A	.190 ± .010	.440 ± .010	AWG #22	1.44 ± .125	.25
B	.215 ± .010	.560 ± .010	AWG #21	1.44 ± .125	.40
C	.240 ± .010	.740 ± .010	AWG #20	1.44 ± .125	.45

PART No.	L uh	Q MIN.	TEST FREQ. (Mc.)	Fo. MIN. (Mc.)	Rdc. MAX.	*Ma. MAX.	MOLD SIZE	CORE MTL.	NET PRICE
9220-00	270 ± 5%	65	.790	5.3	8.0	150	A	IRON	$1.05
9220-02	300 ± 5%	65	.790	5.0	8.6	145	A	IRON	1.05
9220-04	330 ± 5%	65	.790	5.0	8.9	142	A	IRON	1.05
9220-06	360 ± 5%	65	.790	4.7	9.6	137	A	IRON	1.14
9220-08	390 ± 5%	65	.790	4.5	9.9	135	A	IRON	1.14
9220-10	430 ± 5%	65	.790	4.3	10.4	131	A	IRON	1.14
9220-12	470 ± 5%	65	.790	4.0	10.9	128	A	IRON	1.14
9220-14	500 ± 5%	65	.790	3.7	11.3	126	A	IRON	1.20
9220-16	560 ± 5%	65	.790	3.5	11.8	123	A	IRON	1.20
9220-18	620 ± 5%	60	.790	3.5	12.5	120	A	IRON	1.20
9220-20	680 ± 5%	60	.790	3.3	13.5	115	A	IRON	1.20
9220-22	750 ± 5%	60	.790	3.3	14.0	113	A	IRON	1.20
9220-24	820 ± 5%	60	.790	3.0	15.0	110	A	IRON	1.26
9220-26	910 ± 5%	60	.790	3.0	15.5	107	A	IRON	1.26
9220-28	1000 ± 5%	60	.790	2.8	16.5	104	A	IRON	1.26
9220-30	1100 ± 5%	60	.250	2.7	21.0	117	B	IRON	1.35
9220-32	1200 ± 5%	60	.250	2.7	22.0	114	B	IRON	1.35
9220-34	1300 ± 5%	60	.250	2.6	22.5	113	B	IRON	1.35
9220-36	1500 ± 5%	65	.250	2.3	24.5	108	B	IRON	1.35
9220-38	1600 ± 5%	65	.250	2.2	25.7	106	B	IRON	1.35
9220-40	1800 ± 5%	65	.250	2.2	27.3	102	B	IRON	1.35
9220-42	2000 ± 5%	65	.250	2.0	29.0	99	B	IRON	1.35
9220-44	2200 ± 5%	70	.250	2.0	30.0	98	B	IRON	1.35
9220-46	2400 ± 5%	70	.250	1.9	31.5	96	B	IRON	1.35
9220-48	2700 ± 5%	70	.250	1.9	33.0	93	B	IRON	1.35
9220-50	3000 ± 5%	70	.250	1.8	35.0	91	B	IRON	1.35
9220-52	3300 ± 5%	70	.250	1.6	37.8	87	B	IRON	1.35
9220-54	3600 ± 5%	70	.250	1.5	39.3	85	B	IRON	1.35
9220-56	3900 ± 5%	80	.250	1.5	43.0	86	C	IRON	1.41
9220-58	4300 ± 5%	80	.250	1.5	45.0	85	C	IRON	1.41
9220-60	4700 ± 5%	80	.250	1.4	47.0	83	C	IRON	1.41
9220-62	5000 ± 5%	80	.250	1.3	48.3	82	C	IRON	1.41
9220-64	5600 ± 5%	80	.250	1.3	52.0	79	C	IRON	1.50
9220-66	6200 ± 5%	80	.250	1.2	54.0	77	C	IRON	1.50
9220-68	6800 ± 5%	80	.250	1.2	56.5	75	C	IRON	1.50
9220-70	7500 ± 5%	80	.250	1.2	59.5	73	C	IRON	1.50
9220-72	8200 ± 5%	80	.250	1.1	62.5	72	C	IRON	1.59
9220-74	9100 ± 5%	80	.250	1.0	66.5	69	C	IRON	1.59
9220-76	10000 ± 5%	80	.250	1.0	70.0	68	C	IRON	1.59

MILLER SERIES 9230

Mold Size: .095 ±.010 Diameter; .250 ±.010 Length. Leads AWG #24 TCW; 1.500 ±.125 Length. Power Rating: .17 Watt Max. at 90° C. For −00 thru −70 .15 Watt Max. at 90° C. For −72 thru −92. *Current based on (1) Temperature rise not to exceed 35° C at 90° C ambient. (2) Overload not to exceed 1½ times rated current.

PART No.	L uh.	Q MIN.	TEST FREQ. L&Q (Mc.)	Fo. MIN. (Mc.)	Rdc. MAX.	*Ma. MAX.	CORE MTL.	NET PRICE
9230-00	.15 ± 10%	38	25.0	600	.10	1100	PHENOLIC	$1.02
9230-02	.18 ± 10%	35	25.0	550	.12	1010	PHENOLIC	1.02
9230-04	.22 ± 10%	33	25.0	510	.14	935	PHENOLIC	1.02
9230-06	.27 ± 10%	33	25.0	430	.16	875	PHENOLIC	1.02
9230-08	.33 ± 10%	30	25.0	410	.20	780	PHENOLIC	1.02
9230-10	.39 ± 10%	30	25.0	380	.30	640	PHENOLIC	1.02
9230-12	.47 ± 10%	30	25.0	340	.35	590	PHENOLIC	1.02
9230-14	.56 ± 10%	30	25.0	300	.50	495	PHENOLIC	1.02
9230-16	.68 ± 10%	28	25.0	275	.60	450	PHENOLIC	1.02
9230-18	.82 ± 10%	28	25.0	250	.85	380	PHENOLIC	1.02
9230-20	1.00 ± 10%	25	25.0	230	1.00	350	PHENOLIC	1.02
9230-22	1.20 ± 10%	25	7.9	150	.18	825	IRON	1.08
9230-24	1.50 ± 10%	28	7.9	140	.22	745	IRON	1.08
9230-26	1.80 ± 10%	30	7.9	125	.30	640	IRON	1.08
9230-28	2.20 ± 10%	30	7.9	120	.40	550	IRON	1.08
9230-30	2.70 ± 10%	37	7.9	100	.50	495	IRON	1.08
9230-32	3.30 ± 10%	45	7.9	90	.85	380	IRON	1.08
9230-34	3.90 ± 10%	45	7.9	85	1.00	350	IRON	1.08
9230-36	4.70 ± 10%	45	7.9	75	1.20	320	IRON	1.08
9230-38	5.60 ± 10%	50	7.9	70	1.80	260	IRON	1.23
9230-40	6.80 ± 10%	50	7.9	60	2.00	245	IRON	1.23
9230-42	8.20 ± 10%	55	7.9	60	2.70	210	IRON	1.23
9230-44	10.0 ± 10%	55	7.9	50	3.70	180	IRON	1.23
9230-46	12.0 ± 10%	45	2.5	40	2.70	210	IRON	1.23
9230-48	15.0 ± 10%	45	2.5	40	2.80	205	IRON	1.23
9230-50	18.0 ± 10%	50	2.5	32	3.10	195	IRON	1.23
9230-52	22.0 ± 10%	50	2.5	25	3.30	190	IRON	1.23
9230-54	27.0 ± 10%	50	2.5	22	3.50	185	IRON	1.23
9230-56	33.0 ± 10%	45	2.5	28	3.40	187	FERRITE	1.35
9230-58	39.0 ± 10%	45	2.5	25	3.60	180	FERRITE	1.35
9230-60	47.0 ± 10%	45	2.5	20	4.50	165	FERRITE	1.35
9230-62	56.0 ± 10%	45	2.5	18	5.70	145	FERRITE	1.35
9230-64	68.0 ± 10%	50	2.5	15	6.70	135	FERRITE	1.35
9230-66	82.0 ± 10%	50	2.5	14	7.30	130	FERRITE	1.35
9230-68	100.0 ± 10%	50	2.5	13	8.00	125	FERRITE	1.35
9230-70	120.0 ± 10%	30	.79	12	13.00	97	FERRITE	2.25
9230-72	150.0 ± 10%	30	.79	11	15.00	85	FERRITE	2.25
9230-74	180.0 ± 10%	30	.79	10	17.00	79	FERRITE	2.25
9230-76	220.0 ± 10%	30	.79	9	21.00	73	FERRITE	2.25
9230-78	270.0 ± 10%	30	.79	8	25.00	65	FERRITE	2.25
9230-80	330.0 ± 10%	30	.79	7	28.00	62	FERRITE	2.25
9230-82	390.0 ± 10%	30	.79	6.5	35.00	55	FERRITE	2.25
9230-84	470.0 ± 10%	30	.79	6	42.00	50	FERRITE	2.25
9230-86	560.0 ± 10%	30	.79	5	46.00	48	FERRITE	2.25
9230-88	680.0 ± 10%	30	.79	4.2	60.00	42	FERRITE	2.25
9230-90	820.0 ± 10%	30	.79	3.8	65.00	40	FERRITE	2.25
9230-92	1000.0 ± 10%	30	.79	3.4	72.00	38	FERRITE	2.25

MILLER SERIES 9240

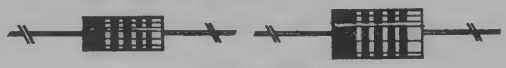
Size: 0.157" Diameter, 0.375" Length. Inductance: 0.1 uh thru 10,000 uh (61) values.
Shielding: Less than 2% coupling. Environment: Grade 1, Class B, MIL-C-15305.
Power Rating: .20 watts @ 90° ambient and rated current flow.
*Current Based on (1) Temperature rise not to exceed 35° C at 90° C ambient.
(2) Overload not to exceed 1½ times rated current.
**Current required to decrease inductance 5%.

PART No.	L ±10%	Q MIN.	TEST FREQ. (Mc.)	Fo. MIN. (Mc.)	Rdc. MAX.	*Ma. MAX.	**Ma. APPROX.	NET PRICE
9240-770	.10 uh.	50	25	250	.015	3100	3100	$1.65
9240-771	.12 uh.	50	25	250	.020	2650	2650	1.65
9240-701	.15 uh.	50	25	250	.025	2400	2400	1.65
9240-772	.18 uh.	50	25	250	.030	2190	2190	1.65
9240-702	.22 uh.	50	25	250	.035	2030	2030	1.65
9240-773	.27 uh.	50	25	250	.045	1790	1790	1.65
9240-703	.33 uh.	45	25	250	.075	1380	1380	1.65
9240-774	.39 uh.	45	25	250	.085	1300	1300	1.65
9240-704	.47 uh.	45	25	235	.100	1200	1200	1.65
9240-705	.56 uh.	45	25	210	.180	890	890	1.65
9240-706	.68 uh.	45	25	190	.200	850	850	1.65
9240-707	.82 uh.	45	25	180	.280	710	710	1.65
9240-708	1.0 uh.	45	25	150	.070	1430	1430	1.77
9240-709	1.2 uh.	45	7.9	145	.080	1340	1340	1.77
9240-710	1.5 uh.	45	7.9	130	.100	1200	1200	1.77
9240-711	1.8 uh.	50	7.9	120	.120	1090	1090	1.77
9240-712	2.2 uh.	50	7.9	110	.150	980	980	1.77
9240-713	2.7 uh.	50	7.9	105	.220	800	800	1.77
9240-714	3.3 uh.	50	7.9	90	.270	730	730	1.77
9240-715	3.9 uh.	50	7.9	85	.290	700	700	1.77
9240-716	4.7 uh.	55	7.9	82	.320	670	670	1.77
9240-717	5.6 uh.	55	7.9	80	.560	500	500	1.77
9240-718	6.8 uh.	55	7.9	75	.700	450	450	1.77
9240-719	8.2 uh.	55	7.9	70	.820	410	410	1.77
9240-720	10.0 uh.	50	7.9	60	.900	400	400	1.77
9240-721	12 uh.	55	2.5	50	.950	380	380	1.77
9240-722	15 uh.	45	2.5	45	.750	430	225	1.77
9240-723	18 uh.	45	2.5	42	.850	410	190	1.77
9240-724	22 uh.	50	2.5	40	.950	380	170	1.77
9240-725	27 uh.	50	2.5	35	1.10	360	150	1.77
9240-726	33 uh.	45	2.5	33	1.30	330	130	1.77
9240-727	39 uh.	50	2.5	29	1.80	280	115	1.77
9240-728	47 uh.	50	2.5	27	2.00	260	110	1.77
9240-729	56 uh.	50	2.5	25	2.20	250	100	1.77
9240-730	68 uh.	50	2.5	20	2.50	240	87	1.77
9240-731	82 uh.	50	2.5	15	3.50	215	85	1.77
9240-732	100 uh.	50	2.5	11	2.20	200	80	1.77
9240-733	120 uh.	60	.79	10	2.50	265	74	1.77
9240-734	150 uh.	60	.79	9	2.80	240	68	2.25
9240-735	180 uh.	60	.79	9	3.20	215	50	2.25
9240-736	220 uh.	60	.79	8	3.70	205	46	2.25
9240-737	270 uh.	60	.79	7	4.60	200	40	2.25
9240-738	330 uh.	60	.79	7	5.00	195	37	2.25
9240-739	390 uh.	60	.79	6	5.50	190	34	2.25
9240-740	470 uh.	60	.79	5.8	6.00	180	32	2.25
9240-741	560 uh.	60	.79	5.5	7.50	160	32	2.25
9240-742	680 uh.	60	.79	5	8.50	145	30	2.37
9240-743	820 uh.	60	.79	4.3	12.00	135	26	2.37
9240-744	1000 uh.	65	.79	4.2	13.00	105	24	2.37
9240-745	1.2 mh.	50	.25	4	16.50	100	22	2.37
9240-746	1.5 mh.	50	.25	3.8	20	90	20	2.37
9240-747	1.8 mh.	50	.25	3.2	25	80	18	2.37
9240-748	2.2 mh.	50	.25	2.6	27	75	15	2.37
9240-749	2.7 mh.	50	.25	2.1	35	65	13	2.85
9240-750	3.3 mh.	45	.25	2	40	60	13	2.85
9240-751	3.9 mh.	45	.25	1.8	44	55	12	2.85
9240-752	4.7 mh.	45	.25	1.4	58	50	11	2.85
9240-753	5.6 mh.	45	.25	2.1	72	45	10	2.85
9240-754	6.8 mh.	45	.25	1.5	80	42	8.0	2.85
9240-755	8.2 mh.	40	.25	1.4	107	40	7.0	2.85
9240-756	10.0 mh.	40	.25	1.3	137	38	6.5	2.85

Miller

MIL-SPEC MOLDED CHOKES

MILLER MOLDED COILS CONFORM TO MIL-C-15305



MILLER SERIES 9310

(MS 16225)

Mold Size: .155 ±.010 diameter; .375 ±.010 length. Leads: AWG #22 TCW; 1.437 ±.125 length. Power Rating: ¼ Watt Max. at 90° C. *Current based on (1) Temperature rise not to exceed 35°C at 90° ambient. (2) Overload not to exceed 1½ times rated current.

PART No.	MS TYPE	L uh	Q MIN.	TEST FREQ. (Mc.)	Fo. MIN. (Mc.)	Rdc. MAX.	*Ma. MAX.	CORE MTL.	NET PRICE
9310-00	18130- 1	.15 ± 20%	50	25	525	.03	2450	PHENOLIC	$ .60
9310-02	18130- 2	.22 ± 20%	50	25	450	.055	1900	PHENOLIC	.60
9310-04	18130- 3	.33 ± 20%	45	25	370	.09	1400	PHENOLIC	.60
9310-06	18130- 4	.47 ± 20%	45	25	310	.12	1225	PHENOLIC	.60
9310-07	18130- 5	.56 ± 10%	50	25	280	.135	1220	PHENOLIC	.60
9310-08	18130- 6	.68 ± 10%	50	25	250	.15	1100	PHENOLIC	.60
9310-10	18130- 7	.82 ± 10%	50	25	220	.22	900	PHENOLIC	.60
9310-12	18130- 8	1.00 ± 10%	50	25	200	.29	830	PHENOLIC	.60
9310-14	18130- 9	1.20 ± 10%	33	7.9	180	.42	650	PHENOLIC	.60
9310-16	18130-10	1.50 ± 10%	33	7.9	160	.50	600	PHENOLIC	.60
9310-18	18130-11	1.80 ± 10%	33	7.9	150	.65	525	PHENOLIC	.60
9310-20	18130-12	2.20 ± 10%	33	7.9	135	.95	435	PHENOLIC	.60
9310-22	18130-13	2.70 ± 10%	33	7.9	120	1.20	385	PHENOLIC	.60
9310-24	18130-14	3.30 ± 10%	33	7.9	110	2.00	300	PHENOLIC	.66
9310-26	18130-15	3.90 ± 10%	33	7.9	100	2.30	280	PHENOLIC	.66
9310-28	18130-16	4.70 ± 10%	33	7.9	90	2.60	260	PHENOLIC	.66
9310-30	18130-17	5.60 ± 10%	45	7.9	60	.32	750	IRON	.66
9310-32	18130-18	6.80 ± 10%	50	7.9	55	.50	600	IRON	.66
9310-34	18130-19	8.20 ± 10%	50	7.9	50	.60	545	IRON	.66
9310-36	18130-20	10.0 ± 10%	55	7.9	45	.90	445	IRON	.66
9310-38	18130-21	12.0 ± 10%	65	2.5	42	1.10	404	IRON	.66
9310-40	18130-22	15.0 ± 10%	65	2.5	40	1.40	370	IRON	.66
9310-42	18130-23	18.0 ± 10%	75	2.5	34	2.25	300	IRON	.66
9310-44	18130-24	22.0 ± 10%	75	2.5	30	2.50	265	IRON	.66
9310-46	------	24.0 ± 5%	60	2.5	26	2.50	265	IRON	.75
9310-48	18130-25	27.0 ± 5%	60	2.5	25	2.60	260	IRON	.75
9310-50	------	30.0 ± 5%	65	2.5	19	2.80	255	IRON	.75
9310-52	18130-26	33.0 ± 5%	65	2.5	19	3.00	250	IRON	.75

MILLER SERIES 9320

Mold Size: 0.185 ±.010 diameter; 0.437 ±.010 length. Leads: AWG #22 TCW; 1.437 ±.125 length. Power Rating: .25 Watt Max. at 90° C. *Current based on (1) Temperature rise not to exceed 35° C. at 90° ambient. (2) Overload not to exceed 1½ times rated current.

PART No.	MS TYPE	L uh	Q MIN.	TEST FREQ. (Mc.)	Fo. MIN. (Mc.)	Rdc. MAX.	*Ma. MAX.	CORE MTL.	NET PRICE
9320-00	75008-21	.15 ± 20%	55	25	510	.03	3000	PHENOLIC	$ .60
9320-02	75008-22	.22 ± 20%	55	25	415	.035	2800	PHENOLIC	.60
9320-04	75008-23	.33 ± 20%	55	25	350	.05	2000	PHENOLIC	.60
9320-06	75008-24	.47 ± 20%	55	25	300	.08	1700	PHENOLIC	.60
9320-07	75008-25	.56 ± 10%	55	25	270	.100	1450	PHENOLIC	.60
9320-08	75008-26	.68 ± 10%	55	25	250	.12	1300	PHENOLIC	.60
9320-09	75008-27	.82 ± 10%	55	25	220	.180	1100	PHENOLIC	.60
9320-10	75008-28	1.00 ± 10%	55	25	200	.25	930	PHENOLIC	.60
9320-11	75008-29	1.20 ± 10%	35	7.9	180	.400	785	PHENOLIC	.60
9320-12	75008-30	1.50 ± 10%	35	7.9	170	.485	700	PHENOLIC	.60
9320-13	75008-31	1.80 ± 10%	35	7.9	150	.740	580	PHENOLIC	.60
9320-14	75008-32	2.20 ± 10%	35	7.9	140	.90	505	PHENOLIC	.60
9320-16	75008-33	2.70 ± 10%	35	7.9	120	1.10	460	PHENOLIC	.60
9320-18	75008-34	3.30 ± 10%	35	7.9	70	.12	1350	IRON	.66
9320-20	75008-35	3.90 ± 10%	35	7.9	65	.155	1250	IRON	.66
9320-22	75008-36	4.70 ± 10%	35	7.9	60	.210	1100	IRON	.66
9320-24	75008-37	5.60 ± 10%	35	7.9	50	.280	935	IRON	.66
9320-26	75008-38	6.80 ± 10%	35	7.9	50	.375	810	IRON	.66
9320-28	75008-39	8.20 ± 10%	35	7.9	48	.400	750	IRON	.66
9320-30	75008-40	10.0 ± 10%	35	7.9	42	.60	640	IRON	.66
9320-32	75008-41	12.0 ± 10%	50	2.5	36	.85	490	IRON	.66
9320-34	75008-42	15.0 ± 10%	55	2.5	30	1.20	460	IRON	.66
9320-35	75008-43	18.0 ± 10%	60	2.5	30	1.80	360	IRON	.66
9320-36	75008-44	22.0 ± 10%	60	2.5	24	2.00	335	IRON	.66
9320-38	75008-45	27.0 ± 10%	65	2.5	22	2.750	300	IRON	.66

MILLER SERIES 9330

Mold Size: 0.215 ±.010 diameter; 0.560 ±.010 length. Leads: AWG #22 TCW; 1.437 ±.125 length. Power Rating: .33 Watt max. at 90° C. *Current based on (1) Temperature rise not to exceed 35° C at 90° ambient. (2) Overload not to exceed 1½ times rated current.

PART No.	MS TYPE	L uh	Q MIN.	TEST FREQ. (Mc.)	Fo. MIN. (Mc.)	Rdc. MAX.	*Ma. MAX.	CORE MTL.	NET PRICE
9330-00	16222- 1	.47 ± 20%	65	25	300	.06	1970	PHENOLIC	$ .66
9330-02	16222- 2	.68 ± 20%	65	25	240	.08	1700	PHENOLIC	.66
9330-04	16222- 3	1.00 ± 10%	65	25	200	.14	1290	PHENOLIC	.66
9330-06	16222- 4	1.50 ± 10%	40	7.9	160	.28	925	PHENOLIC	.66
9330-08	16222- 5	2.20 ± 10%	40	7.9	135	.50	680	PHENOLIC	.66
9330-10	16222- 6	2.70 ± 10%	40	7.9	120	.65	600	PHENOLIC	.66
9330-12	16222- 7	3.30 ± 10%	40	7.9	105	1.00	480	PHENOLIC	.66
9330-14	16222- 8	3.90 ± 10%	40	7.9	100	1.20	440	PHENOLIC	.66
9330-16	16222- 9	4.70 ± 10%	40	7.9	90	1.80	360	PHENOLIC	.66
9330-18	16222-10	5.60 ± 10%	35	7.9	55	.13	1340	IRON	.75
9330-20	16222-11	6.80 ± 10%	35	7.9	50	.20	1080	IRON	.75
9330-22	16222-12	8.20 ± 10%	35	7.9	44	.22	1030	IRON	.75
9330-24	16222-13	10.0 ± 10%	35	7.9	42	.26	950	IRON	.75
9330-26	16222-14	12.0 ± 10%	45	2.5	34	.45	720	IRON	.75
9330-28	16222-15	15.0 ± 10%	45	2.5	32	.52	670	IRON	.75
9330-30	16222-16	18.0 ± 10%	50	2.5	28	.70	580	IRON	.75
9330-32	16222-17	22.0 ± 10%	60	2.5	24	1.00	480	IRON	.75
9330-34	16222-18	27.0 ± 10%	60	2.5	22	1.30	420	IRON	.75
9330-36	16222-19	33.0 ± 10%	60	2.5	20	1.50	390	IRON	.75
9330-38	16222-20	39.0 ± 10%	70	2.5	18	2.00	340	IRON	.75

MILLER SERIES 9340

Mold Size: 0.280 ±.010 diameter; 0.900 ±.010 length. Leads: AWG #21 TCW; 1.437 ±.125 length. Power rating: ⅜ Watt Max. at 90° C. *Current based on (1) Temperature rise not to exceed 25° C at 90° ambient. (2) Overload not to exceed 1½ times rated current.

PART No.	MS TYPE	L uh	Q MIN.	TEST FREQ. (Mc.)	Fo. MIN. (Mc.)	Rdc. MAX.	*Ma. MAX.	CORE MTL.	NET PRICE
9340-00	91189-14	1.2 ± 10%	60	7.9	170	.075	2400	PHENOLIC	$ .78
9340-02	91189-15	1.5 ± 10%	60	7.9	160	.090	2150	PHENOLIC	.78
9340-03	91189-16	1.8 ± 10%	60	7.9	140	.135	1750	PHENOLIC	.78
9340-04	91189-17	2.2 ± 10%	60	7.9	125	.160	1600	PHENOLIC	.78
9340-06	91189-18	2.7 ± 10%	60	7.9	115	.220	1350	PHENOLIC	.78
9340-08	91189-19	3.3 ± 10%	60	7.9	100	.305	1150	PHENOLIC	.75
9340-10	91189-20	3.9 ± 10%	60	7.9	95	.45	955	PHENOLIC	.75
9340-12	91189-21	4.7 ± 10%	60	7.9	90	.560	860	PHENOLIC	.75
9340-14	91189-22	5.6 ± 10%	60	7.9	80	.745	745	PHENOLIC	.75
9340-16	91189-23	6.8 ± 10%	60	7.9	75	1.05	635	PHENOLIC	.75
9340-18	91189-24	8.2 ± 10%	60	7.9	68	1.4	550	PHENOLIC	.75
9340-20	91189-25	10.0 ± 10%	60	7.9	60	1.9	460	PHENOLIC	.75
9340-22	91189-26	12.0 ± 10%	40	2.5	53	2.65	395	PHENOLIC	.75
9340-24	91189-27	15.0 ± 10%	40	2.5	50	3.25	355	PHENOLIC	.75
9340-26	91189-28	18.0 ± 10%	40	2.5	45	4.15	315	PHENOLIC	.75
9340-28	91189-29	22.0 ± 10%	50	2.5	25	.295	1150	IRON	.84
9340-30	91189-30	27.0 ± 10%	45	2.5	22	.350	1050	IRON	.84
9340-32	91189-31	33.0 ± 10%	60	2.5	20	.550	865	IRON	.84
9340-34	91189-32	39.0 ± 10%	55	2.5	18	.65	810	IRON	.84
9340-36	91189-33	47.0 ± 10%	65	2.5	16	1.0	640	IRON	.84
9340-38	91189-34	56.0 ± 10%	65	2.5	14	1.15	620	IRON	.84
9340-39	91189-35	68.0 ± 10%	75	2.5	13	1.85	470	IRON	.84
9340-40	91189-36	82.0 ± 10%	75	2.5	13	2.10	440	IRON	.84
9340-42	91189-37	100.0 ± 10%	75	2.5	12	2.50	405	IRON	.84
9340-44	91189-38	120.0 ± 10%	95	.790	10	4.00	315	IRON	.84

MILLER SERIES 9350

*Current based on (1) Temperature rise not to exceed 35° C at 90° ambient. (2) Overload not to exceed 1½ times rated current.

COIL DIMENSIONS	A	B	C	D	LEAD DIMENSIONS
DIAMETER ± .010	.250	.310	.375	.468	AWG 20, 21, 22 TCW
LENGTH ± .010	.560	.560	.625	.687	1.437 ± .125
MAX. WATT. AT 90° C	.30	.40	.45	.55	

PART No.	MS TYPE	L uh	Q MIN.	TEST FREQ. (Mc.)	Fo. MIN. (Mc.)	Rdc. MAX.	*Ma. MAX.	MOLD SIZE	CORE MTL.	NET PRICE
9350-00	75052- 1	47 ± 10%	18	2.5	13.5	5.9	195	A	PHENOLIC	$1.02
9350-02	75052- 2	56 ± 10%	18	2.5	13	6.4	185	A	PHENOLIC	1.02
9350-04	75052- 3	68 ± 10%	70	2.5	13	3.3	255	A	IRON	1.08
9350-06	75052- 4	82 ± 10%	65	2.5	11.7	3.5	245	A	IRON	1.08
9350-08	75052- 5	100 ± 10%	65	2.5	10.7	3.8	235	A	IRON	1.08
9350-10	75052- 6	120 ± 10%	75	.790	9.3	4.7	215	A	IRON	1.08
9350-12	75052- 7	150 ± 10%	75	.790	8.3	5.3	200	A	IRON	1.08
9350-14	75053- 1	180 ± 10%	80	.790	6.0	5.5	225	B	IRON	1.11
9350-16	75053- 2	220 ± 10%	80	.790	5.5	5.9	220	B	IRON	1.11
9350-18	75053- 3	270 ± 10%	80	.790	5.1	6.6	210	B	IRON	1.11
9350-20	75053- 4	330 ± 10%	75	.790	4.2	7.8	185	B	IRON	1.11
9350-22	75053- 5	390 ± 10%	75	.790	3.9	8.7	180	B	IRON	1.11
9350-24	75054- 1	470 ± 10%	80	.790	3.7	9.0	190	C	IRON	1.11
9350-26	75054- 2	560 ± 10%	80	.790	3.5	10.0	180	C	IRON	1.11
9350-28	75054- 3	680 ± 10%	75	.790	3.2	11.2	170	C	IRON	1.11
9350-30	75054- 4	820 ± 10%	75	.790	3.0	13.0	155	C	IRON	1.11
9350-32	75054- 5	1000 ± 10%	70	.790	2.7	14.5	145	C	IRON	1.11
9350-34	75055- 1	1500 ± 10%	85	.250	2.2	22.0	127	D	IRON	1.14
9350-36	------	2000 ± 10%	85	.250	1.9	26.0	125	D	IRON	1.14
9350-37	75055- 2	2200 ± 10%	85	.250	1.8	27.0	115	D	IRON	1.14
9350-38	------	2500 ± 10%	85	.250	1.7	30.0	115	D	IRON	1.14
9350-39	75055- 3	2700 ± 10%	85	.250	1.6	32.0	105	D	IRON	1.14
9350-40	------	5000 ± 10%	70	.250	1.2	65.0	78	D	IRON	1.20
9350-41	75055- 4	5100 ± 10%	70	.250	1.0	66.0	73	D	IRON	1.20
9350-44	75055- 5	10000 ± 10%	70	.250	.8	70.0	75	D	FERRITE	1.50

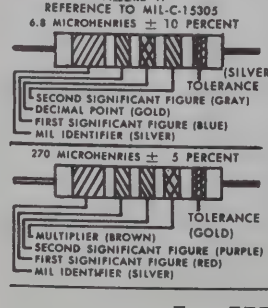
MILLER SERIES 9360

This series of molded chokes conforms to the requirements of Mil type LT8K. Mold Size: 0.300 ±.010 Diameter; .968 ±.010 Length. Leads: 1.400 ±.125.

PART No.	MS TYPE	L uh	Q MIN.	TEST FREQ. (Mc.)	Fo. ±10% (Mc.)	Rdc. MAX.	Ma. MAX.	CORE MTL.	NET PRICE
9360-01	91189- 1	1.1 ± 20%	60	10.0	200	0.09	2800	PHENOLIC	$1.26
9360-02	91189- 2	2.2 ± 20%	65	10.0	165	.20	1800	PHENOLIC	1.26
9360-03	91189- 3	3.3 ± 10%	50	6.0	130	.32	1500	PHENOLIC	1.26
9360-04	91189- 4	4.7 ± 10%	45	5.0	100	.60	1100	PHENOLIC	1.26
9360-05	91189- 5	6.8 ± 10%	40	4.0	90	1.10	800	PHENOLIC	1.26
9360-06	91189- 6	10.0 ± 10%	40	3.5	70	1.80	600	PHENOLIC	1.26
9360-07	91189- 7	15.0 ± 10%	40	3.0	55	3.00	500	PHENOLIC	1.26
9360-08	91189- 8	22.0 ± 10%	30	2.5	27	.30	1500	IRON	1.35
9360-09	91189- 9	33.0 ± 10%	45	2.0	21	.60	1100	IRON	1.35
9360-10	91189-10	47.0 ± 10%	70	1.5	16	1.20	700	IRON	1.35
9360-11	91189-11	82.0 ± 10%	85	1.2	14	2.20	600	IRON	1.35
9360-12	91189-12	100.0 ± 10%	85	1.0	14	2.80	500	IRON	1.35
9360-13	91189-13	120.0 ± 10%	85	1.0	13	4.00	400	IRON	1.35

For a Complete Listing of MILLER PRODUCTS ask for a copy of our Latest General Catalog at your Local Parts Distributor.

FIGURE 1.
REFERENCE TO MIL-C-15305



Color	Significant Figure	(1) Multiplier	Inductance Tolerance (Percent)
BLACK	0	1	
BROWN	1	10	
RED	2	100	
ORANGE	3	1,000	
YELLOW	4		
GREEN	5		
BLUE	6		
VIOLET	7		
GRAY	8		
WHITE	9		
NONE (2)			± 20
SILVER			± 10
GOLD	DECIMAL POINT		± 5

(1) The multiplier is the factor by which the two significant figures are multiplied to yield the nominal inductance value.
(2) Indicates body color.

MOLDED CHOKE COILS COLOR CODING

For cylindrical choke coils. Cylindrical choke coils shall be marked with five colored bands. A silver band MIL identifier of double the width of the other four bands, located near one end of the coil, identifies military radio-frequency coils; four other bands of equal width, three indicating the inductance in microhenries and the fourth band indicating the tolerance in percent. Color coding shall be in accordance with the color code of table. When either the first or second band of the three bands is gold, this band shall represent the decimal point for inductance values less than 10, and the other two bands shall represent significant figures. For inductance values of 10 or more, the first two bands shall represent significant figures, and the third band shall represent the multiplier. For small units, dots may be used instead of bands, when specified. The diameter of the MIL-identifier dot shall be larger than the other dots. The colors used shall be in accordance with MIL-STD-174. Typical color coding for units with inductance values less than 10 and for 10 or greater is shown on figure 1.

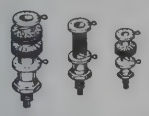
J. W. MILLER COMPANY

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Miller

Industrial Adjustable R.F. Coils

Ceramic Adjustable R.F. Coils



The forms used in this series feature terminal rings machined from the ceramic form material. Coils wound on these forms exhibit high Q and good stability. The adjusting core is held rigidly at any setting through the use of a newly designed tension device on the bushing.

Sub Miniature Adjustable R.F. Coils

Dimensions (form) 7/32" dia. x 19/32" long

Part No.	L Max. ± 5%	L Min. ± 10%	Net Price
40A000CBI	Coil Form w/hdw. and Core	$	1.44
40A107CBI	.125 uh	.091 uh	1.98
40A157CBI	.188 uh	.124 uh	1.98
40A227CBI	.275 uh	.184 uh	1.98
40A337CBI	.413 uh	.265 uh	1.98
40A477CBI	.587 uh	.327 uh	2.01
40A687CBI	.850 uh	.482 uh	2.01
40A827CBI	1.02 uh	.630 uh	2.10
40A106CBI	1.25 uh	.730 uh	2.10
40A156CBI	1.88 uh	1.06 uh	2.10
40A226CBI	2.75 uh	1.50 uh	2.13
40A336CBI	4.13 uh	2.15 uh	2.13
40A476CBI	5.87 uh	3.00 uh	2.22
40A686CBI	8.50 uh	4.40 uh	2.22
40A826CBI	10.2 uh	5.25 uh	2.22
40A105CBI	12.5 uh	8.06 uh	2.28
40A155CBI	18.8 uh	11.9 uh	2.28
40A225CBI	27.5 uh	17.1 uh	2.34
40A335CBI	41.3 uh	26.6 uh	2.34
40A475CBI	58.7 uh	39.0 uh	2.43
40A685CBI	85.0 uh	58.0 uh	2.43
40A825CBI	102 uh	69.0 uh	2.61
40A104CBI	125 uh	84.0 uh	2.61
40A000CBI	Bulk pack per 100		129.00

Miniature Adjustable R.F. Coils

Dimensions (form) ¼" dia. x 13/16" long

Part No.	L Max. ± 5%	L Min. ± 10%	Net Price
41A000CBI	Coil Form w/hdw. and Core	$	1.50
41A106CBI	1.25 uh	.69 uh	2.10
41A156CBI	1.87 uh	1.20 uh	2.10
41A226CBI	2.75 uh	1.42 uh	2.10
41A336CBI	4.10 uh	2.00 uh	2.13
41A476CBI	5.80 uh	2.80 uh	2.13
41A686CBI	8.50 uh	4.00 uh	2.13
41A826CBI	10.0 uh	4.50 uh	2.16
41A105CBI	12.5 uh	6.50 uh	2.16
41A155CBI	18.7 uh	10.8 uh	2.16
41A225CBI	27.5 uh	15.2 uh	2.16
41A335CBI	41.0 uh	26.0 uh	2.22
41A475CBI	58.0 uh	32.5 uh	2.22
41A685CBI	85.0 uh	48.5 uh	2.28
41A825CBI	100 uh	61.0 uh	2.28
41A104CBI	125 uh	75.0 uh	2.34
41A154CBI	187 uh	110 uh	2.34
41A224CBI	275 uh	160 uh	2.43
41A334CBI	410 uh	253 uh	2.43
41A474CBI	580 uh	390 uh	2.55
41A684CBI	850 uh	560 uh	2.61
41A824CBI	1.00 mh	670 uh	2.67
41A103CBI	1.25 mh	700 uh	2.76
41A000CBI	Bulk pack per 100		135.00

Standard Adjustable R.F. Coils

Dimensions (form) ⅜" dia. x 1" long

Part No.	L Max. ± 5%	L Min. ± 10%	Net Price
42A000CBI	Coil Form w/hdw. and Core		$1.56
42A106CBI	1.25 uh	.68 uh	2.10
42A156CBI	1.87 uh	1.00 uh	2.10
42A226CBI	2.75 uh	1.35 uh	2.10
42A336CBI	4.10 uh	2.12 uh	2.13
42A476CBI	5.80 uh	2.40 uh	2.13
42A686CBI	8.50 uh	3.60 uh	2.16
42A826CBI	10.0 uh	4.45 uh	2.16
42A105CBI	12.5 uh	6.05 uh	2.28
42A155CBI	18.7 uh	9.40 uh	2.28
42A225CBI	27.5 uh	12.9 uh	2.31
42A335CBI	41.0 uh	18.8 uh	2.31
42A475CBI	58.0 uh	27.5 uh	2.46
42A685CBI	85.0 uh	37.5 uh	2.49
42A825CBI	100 uh	45.0 uh	2.55
42A104CBI	125 uh	54.0 uh	2.64
42A154CBI	187 uh	92.0 uh	2.64
42A224CBI	275 uh	123 uh	2.64
42A334CBI	410 uh	200 uh	2.67
42A474CBI	580 uh	300 uh	2.67
42A684CBI	850 uh	430 uh	2.67
42A824CBI	1.00 mh	510 uh	2.73
42A103CBI	1.25 mh	780 uh	2.73
42A153CBI	1.87 mh	1.10 mh	2.76
42A223CBI	2.90 mh	1.66 mh	2.76
42A333CBI	4.10 mh	2.40 mh	2.76
42A473CBI	5.80 mh	3.46 mh	2.82
42A683CBI	8.50 mh	5.25 mh	2.82
42A823CBI	10.0 mh	6.00 mh	2.91
42A102CBI	12.5 mh	9.20 mh	2.91
42A000CBI	Bulk pack per 100		140.40

Jumbo Adjustable R.F. Coils

Dimensions (form) ½" dia. x 1-½" long

Part No.	L Max. ± 5%	L Min. ± 10%	Net Price
43A000CBI	Coil Form w/hdw. and Core	$	1.62
43A105CBI	12.5 uh	5.70 uh	2.25
43A155CBI	18.7 uh	9.00 uh	2.25
43A225CBI	27.5 uh	12.0 uh	2.25
43A335CBI	41.0 uh	17.0 uh	2.28
43A475CBI	58.0 uh	25.0 uh	2.28
43A685CBI	85.0 uh	38.0 uh	2.55
43A825CBI	100 uh	42.0 uh	2.55
43A104CBI	125 uh	65.0 uh	2.55
43A154CBI	187 uh	95.0 uh	2.67
43A224CBI	275 uh	138 uh	2.67
43A334CBI	410 uh	205 uh	2.67
43A474CBI	580 uh	240 uh	2.70
43A684CBI	850 uh	370 uh	2.70
43A824CBI	1.00 mh	450 uh	2.70
43A103CBI	1.25 mh	600 uh	2.70
43A153CBI	1.87 mh	900 uh	2.76
43A223CBI	2.75 mh	1.30 mh	2.76
43A333CBI	4.10 mh	1.95 mh	2.79
43A473CBI	5.80 mh	2.90 mh	2.79
43A683CBI	8.50 mh	4.30 mh	2.85
43A823CBI	10.0 mh	5.10 mh	2.85
43A102CBI	12.5 mh	6.50 mh	2.88
43A152CBI	18.7 mh	9.80 mh	2.88
43A222CBI	27.5 mh	13.0 mh	2.91
43A332CBI	41.0 mh	20.0 mh	2.91
43A472CBI	58.0 mh	29.0 mh	2.94
43A682CBI	85.0 mh	42.0 mh	3.00
43A822CBI	100 mh	50.0 mh	3.06
43A101CBI	125 mh	66.0 mh	3.27
43A000CBI	Bulk pack per 100		145.80



Ceramic Adjustable Printed Circuit R.F. Coils

The following adjustable printed circuit coils are constructed with three soldering terminals. To hold the core stationary is a locking insert that can be tightened against the core.

Form Dimensions: .260 x .625 long.

Part No.	L Min. uh.	L Max. uh.	Net Price
46A000CPC	Coil Form w/core and Locking Insert		$1.05
46A107CPC	.095	105	1.59
46A127CPC	.114	.126	1.59
46A157CPC	.142	.158	1.59
46A187CPC	.171	.189	1.59
46A227CPC	.209	.231	1.62
46A277CPC	.256	.284	1.62
46A337CPC	.314	.347	1.62
46A397CPC	.370	.410	1.62
46A477CPC	.446	.495	1.62
46A567CPC	.532	.590	1.62
46A687CPC	.645	.715	1.62
46A827CPC	.770	.850	1.62
46A106CPC	.950	1.05	1.62
46A126CPC	1.14	1.26	1.62
46A156CPC	1.42	1.58	1.65
46A186CPC	1.62	1.98	1.65
46A226CPC	1.99	2.42	1.65
46A276CPC	2.42	2.96	1.65
46A336CPC	2.96	3.64	1.65
46A396CPC	3.50	4.27	1.65
46A476CPC	4.24	5.20	1.68
46A566CPC	5.00	6.30	1.68
46A686CPC	6.10	7.50	1.68
46A826CPC	7.30	8.90	1.68
46A105CPC	8.50	11.5	1.68
46A125CPC	10.8	13.2	1.68
46A155CPC	13.2	16.5	1.68
46A185CPC	16.2	19.5	1.68
46A225CPC	19.5	24.3	1.68
46A275CPC	24.2	29.5	1.71
46A335CPC	29.5	36.5	1.71
46A395CPC	35.0	43.0	1.71
46A475CPC	42.0	51.5	1.71
46A565CPC	50.0	62.0	1.71
46A685CPC	61.0	75.0	1.71
46A825CPC	74.0	90.0	1.71
46A104CPC	90.0	110.0	1.74
46A124CPC	108.0	132.0	1.74
46A154CPC	132.0	165.0	1.74
46A184CPC	162.0	198.0	1.74
46A224CPC	197.0	243.0	1.74
46A274CPC	242.0	295.0	1.74
46A334CPC	295.0	365.0	1.77
46A394CPC	350.0	430.0	1.77
46A474CPC	420.0	515.0	1.77
46A564CPC	500.0	620.0	1.77
46A684CPC	610.0	750.0	1.80
46A824CPC	740.0	900.0	1.80
46A103CPC	900.0	1100.0	1.80



Ceramic Adjustable Printed Circuit R.F. Coils

These adjustable printed circuit coils are constructed with four soldering terminals in which two of them may be used for auxiliary impedance windings. To hold the core stationary is a locking insert that can be tightened against the core. Form Dimensions: .430 x .563 x .625 long.

Part No.	L Min. uh.	L Max. uh.	Net Price
47A000CPC	Coil Form w/Core and Locking Insert		1.77
47A107CPC	.095	.105	2.37
47A127CPC	.114	.126	2.37
47A157CPC	.142	.158	2.37
47A187CPC	.171	.189	2.37
47A227CPC	.209	.231	2.40
47A277CPC	.256	.284	2.40
47A337CPC	.314	.347	2.40
47A397CPC	.370	.410	2.40
47A477CPC	.446	.495	2.40
47A567CPC	.532	.590	2.40
47A687CPC	.645	.715	2.40
47A827CPC	.770	.850	2.40
47A106CPC	.950	1.05	2.40
47A126CPC	1.14	1.26	2.40
47A156CPC	1.42	1.58	2.43
47A186CPC	1.62	1.98	2.43
47A226CPC	1.99	2.42	2.43
47A276CPC	2.42	2.96	2.43
47A336CPC	2.96	3.64	2.43
47A396CPC	3.50	4.27	2.43
47A476CPC	4.24	5.20	2.46
47A566CPC	5.00	6.30	2.46
47A686CPC	6.10	7.50	2.46
47A826CPC	7.30	8.90	2.46
47A105CPC	8.50	11.5	2.46
47A125CPC	10.8	13.2	2.46
47A155CPC	13.2	16.5	2.46
47A185CPC	16.2	19.5	2.46
47A225CPC	19.5	24.3	2.46
47A275CPC	24.2	29.5	2.49
47A335CPC	29.5	36.5	2.49
47A395CPC	35.0	43.0	2.49
47A475CPC	42.0	51.5	2.49
47A565CPC	50.0	62.0	2.49
47A685CPC	61.0	75.0	2.49
47A825CPC	74.0	90.0	2.49
47A104CPC	90.0	110.0	2.55
47A124CPC	108.0	132.0	2.55
47A154CPC	132.0	165.0	2.55
47A184CPC	162.0	198.0	2.55
47A224CPC	197.0	243.0	2.55
47A274CPC	242.0	295.0	2.55
47A334CPC	295.0	365.0	2.61
47A394CPC	350.0	430.0	2.61
47A474CPC	420.0	515.0	2.61
47A564CPC	500.0	620.0	2.61
47A684CPC	610.0	750.0	2.64
47A824CPC	740.0	900.0	2.64
47A103CPC	900.0	1100.0	2.64

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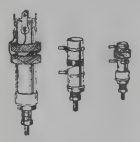
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Miller

Industrial Adjustable R.F. Coils

Resinite Adjustable R.F. Coils



Resinite is a phenolic impregnated tubing which can be certified to MIL-P-79B type PBG. This material combines good mechanical and electrical characteristics along with the noncorrosive properties of cellulose acetate.

Miniature Adjustable R.F. Coils

Dimensions (form) ¼" dia. x 13/16" long

Part No.	L Max. ± 5%	L Min. ± 10%	Net Price
20A000RBI	Coil Form w/hdw. and Core		$ .63
20A107RBI	.125 uh	.079 uh	.87
20A157RBI	.187 uh	.119 uh	.87
20A227RBI	.275 uh	.170 uh	.87
20A337RBI	.410 uh	.240 uh	.90
20A477RBI	.580 uh	.310 uh	.90
20A687RBI	.850 uh	.430 uh	.90
20A827RBI	1.00 uh	.580 uh	.90
20A106RBI	1.25 uh	.670 uh	.90
20A156RBI	1.87 uh	.900 uh	.90
20A226RBI	2.75 uh	1.60 uh	.90
20A336RBI	4.10 uh	2.00 uh	.90
20A476RBI	5.80 uh	2.80 uh	.93
20A686RBI	8.50 uh	3.80 uh	.93
20A826RBI	10.0 uh	4.70 uh	.93
20A105RBI	12.5 uh	6.40 uh	.93
20A155RBI	18.7 uh	9.20 uh	.93
20A225RBI	27.5 uh	12.0 uh	.93
20A335RBI	41.0 uh	19.0 uh	.93
20A475RBI	58.0 uh	27.0 uh	.93
20A685RBI	85.0 uh	37.0 uh	.93
20A825RBI	100 uh	53.0 uh	.93
20A104RBI	125 uh	65.0 uh	.93
20A154RBI	187 uh	92.0 uh	.93
20A224RBI	275 uh	140 uh	.96
20A334RBI	410 uh	215 uh	.96
20A474RBI	580 uh	310 uh	.96
20A684RBI	850 uh	450 uh	.96
20A824RBI	1.00 mh	620 uh	.96
20A103RBI	1.25 mh	830 uh	.96

Standard Adjustable R.F. Coils

Dimensions (form) ⅜" dia. x 1⅛" long

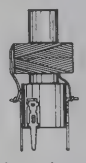
Part No.	L Max. ± 5%	L Min. ± 10%	Net Price
21A000RBI	Coil Form w/hdw. and Core		$ .66
21A106RBI	1.25 uh	0.68 uh	.90
21A156RBI	1.87 uh	1.00 uh	.90
21A226RBI	2.75 uh	1.35 uh	.90
21A336RBI	4.10 uh	2.12 uh	.90
21A476RBI	5.80 uh	2.40 uh	.90
21A686RBI	8.50 uh	3.60 uh	.93
21A826RBI	10.0 uh	4.45 uh	.93
21A105RBI	12.5 uh	6.05 uh	.93
21A155RBI	18.7 uh	9.40 uh	.93
21A225RBI	27.5 uh	12.9 uh	.93
21A335RBI	41.0 uh	18.8 uh	.93
21A475RBI	58.0 uh	27.5 uh	.96
21A685RBI	85.0 uh	37.5 uh	.96
21A825RBI	100 uh	45.0 uh	.96
21A104RBI	125 uh	54.0 uh	.96
21A154RBI	187 uh	92.0 uh	.99
21A224RBI	275 uh	123 uh	.99
21A334RBI	410 uh	200 uh	1.02
21A474RBI	580 uh	300 uh	1.02
21A684RBI	850 uh	430 uh	1.05
21A824RBI	1.00 mh	510 uh	1.05
21A103RBI	1.25 mh	780 uh	1.08
21A153RBI	1.87 mh	1.10 mh	1.08
21A223RBI	2.75 mh	1.66 mh	1.11
21A333RBI	4.10 mh	2.40 mh	1.11
21A473RBI	5.80 mh	3.46 mh	1.23
21A683RBI	8.50 mh	5.25 mh	1.32
21A823RBI	10.0 mh	6.00 mh	1.41
21A102RBI	12.5 mh	9.20 mh	1.50

Jumbo Adjustable R.F. Coils

Dimensions (form) ½" dia. x 1⅞" long

Part No.	L Max. ± 5%	L Min. ± 10%	Net Price
22A000RBI	Coil Form w/hdw. and Core		$ .81
22A105RBI	12.5 uh	5.70 uh	1.23
22A155RBI	18.7 uh	9.0 uh	1.23
22A225RBI	27.5 uh	12.0 uh	1.26
22A335RBI	41.0 uh	17.0 uh	1.26
22A475RBI	58.0 uh	24.5 uh	1.29
22A685RBI	85.0 uh	38.0 uh	1.29
22A825RBI	100 uh	41.0 uh	1.32
22A104RBI	125 uh	65.0 uh	1.32
22A154RBI	187 uh	94.0 uh	1.35
22A224RBI	275 uh	138 uh	1.35
22A334RBI	410 uh	205 uh	1.38
22A474RBI	580 uh	290 uh	1.38
22A684RBI	850 uh	430 uh	1.41
22A824RBI	1.00 mh	595 uh	1.41
22A103RBI	1.25 mh	760 uh	1.44
22A153RBI	1.87 mh	1.04 mh	1.44
22A223RBI	2.75 mh	1.56 mh	1.44
22A333RBI	4.10 mh	2.30 mh	1.47
22A473RBI	5.80 mh	3.40 mh	1.47
22A683RBI	8.50 mh	5.00 mh	1.47
22A823RBI	10.0 mh	4.20 mh	1.50
22A102RBI	12.5 mh	5.30 mh	1.50
22A152RBI	18.7 mh	8.20 mh	1.62
22A222RBI	27.5 mh	12.7 mh	1.62
22A332RBI	41.0 mh	17.8 mh	1.65
22A472RBI	58.0 mh	27.5 mh	1.68
22A682RBI	85.0 mh	42.0 mh	1.71
22A822RBI	100 mh	51.0 mh	1.80
22A101RBI	125 mh	64.0 mh	1.95

Resinite Adjustable Printed Circuit R.F. Coils



This series of printed circuit coils are wound on a phenolic impregnated tubing which combines the mechanical and dielectric advantages. Dimensions: Form length ¾", Collar ⅜" Dia.

Part No.	L Min.	L Max.	Net Price
23A000RPC	Coil form with core		.48
23A107RPC	.095 uh	.125 uh	.99
23A157RPC	.130 uh	.170 uh	.99
23A227RPC	.185 uh	.265 uh	.99
23A337RPC	.285 uh	.410 uh	.99
23A477RPC	.380 uh	.580 uh	.99
23A687RPC	.490 uh	.850 uh	.99
23A827RPC	.580 uh	1.00 uh	.99
23A106RPC	.690 uh	1.25 uh	.99
23A156RPC	1.10 uh	1.87 uh	.99
23A226RPC	1.50 uh	2.75 uh	.99
23A336RPC	2.20 uh	4.10 uh	.99
23A476RPC	3.10 uh	5.80 uh	.99
23A686RPC	4.20 uh	8.50 uh	.99
23A826RPC	5.10 uh	10.0 uh	.99
23A105RPC	6.50 uh	12.5 uh	.99
23A155RPC	9.00 uh	18.7 uh	1.17
23A225RPC	13.5 uh	27.5 uh	1.17
23A335RPC	20.0 uh	41.0 uh	1.17
23A475RPC	28.5 uh	58.0 uh	1.17
23A685RPC	39.5 uh	85.0 uh	1.17
23A825RPC	56.0 uh	100 uh	1.17
23A104RPC	69.0 uh	125 uh	1.17
23A154RPC	95.0 uh	187 uh	1.17
23A224RPC	145 uh	275 uh	1.17
23A334RPC	220 uh	410 uh	1.17
23A474RPC	330 uh	580 uh	1.17
23A684RPC	480 uh	850 uh	1.17
23A824RPC	640 uh	1.00 mh	1.26
23A103RPC	830 uh	1.25 mh	1.26
23A153RPC	900 uh	1.87 mh	1.26
23A223RPC	1.45 mh	2.75 mh	1.26
23A333RPC	2.20 mh	4.10 mh	1.26
23A473RPC	3.10 mh	5.80 mh	1.26
23A683RPC	4.70 mh	8.50 mh	1.26
23A823RPC	6.70 mh	10.0 mh	1.26
23A102RPC	8.90 mh	12.5 mh	1.26
23A152RPC	12.2 mh	18.7 mh	1.26
23A222RPC	11.0 mh	27.5 mh	1.32
23A332RPC	16.5 mh	41.0 mh	1.32
23A472RPC	25.0 mh	58.0 mh	1.32
23A682RPC	36.5 mh	85.0 mh	1.32
23A822RPC	45.0 mh	100 mh	1.32
23A101RPC	56.0 mh	125 mh	1.32

Shielded Subminiature Adjustable R.F. Coils

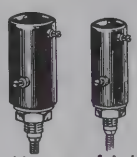


These compact adjustable coils offer a minimum two-to-one inductance range with relatively small changes in Q. The tuning adjustment is accessible from either the top or bottom of the coil assembly. Magnetic shielding is achieved through the use of cup cores while the metal shield offers effective electrostatic shielding. Printed circuit terminals on base and shield.

Dimensions: ½" sq. x ⅝" high.

Part No.	L Min.	L. Max.	Typical Dist. C (pf)	Net Price
9050	1.5 uh	3.0 uh	3.5	$1.80
9051	3.0 uh	7.0 uh	4.3	1.80
9052	7.0 uh	14.0 uh	7.6	1.83
9053	14.0 uh	28.0 uh	10.3	1.83
9054	28.0 uh	60.0 uh	11.0	1.86
9055	60.0 uh	120.0 uh	10.3	1.86
9056	120.0 uh	280.0 uh	9.0	1.86
9057	280.0 uh	650.0 uh	8.0	1.95
9058	650.0 uh	1.3 Mh	8.0	1.95
9059	1.3 Mh	3.0 Mh	16.0	1.95
9060	3.0 Mh	10.0 Mh	7.0	2.10
9061	8.0 Mh	20.0 Mh	7.0	2.10
9062	15.0 Mh	40.0 Mh	7.0	2.10
9063	20.0 Mh	60.0 Mh	10.0	2.16

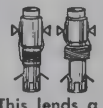
Encapsulated Adjustable R.F. Coils



This series of encapsulated coils offer the maximum possible performance from an adjustable type of inductor. The coil is wound on an epoxy form which is placed inside an epoxy cup and this area filled with epoxy resin. In this manner a complete seal against moisture is achieved and good mechanical stability is assured.

Part No.	L Max. ± 5%	L Min. ± 10%	Net Price
50A106EBI	1.25 uh	0.62 uh	$3.60
50A156EBI	1.87 uh	0.98 uh	3.60
50A226EBI	2.75 uh	1.26 uh	3.60
50A336EBI	4.10 uh	1.82 uh	3.63
50A476EBI	5.87 uh	2.56 uh	3.63
50A686EBI	8.50 uh	3.80 uh	3.63
50A826EBI	10.2 uh	4.40 uh	3.63
50A105EBI	12.5 uh	5.40 uh	3.69
50A155EBI	18.8 uh	7.80 uh	3.69
50A225EBI	27.5 uh	11.7 uh	3.78
50A335EBI	41.3 uh	18.8 uh	3.78
50A475EBI	58.7 uh	26.5 uh	3.81
50A685EBI	85.0 uh	36.0 uh	3.81
50A825EBI	102 uh	44.0 uh	3.84
50A104EBI	125 uh	63.0 uh	4.23
50A154EBI	187 uh	92.0 uh	4.26
50A224EBI	275 uh	130 uh	4.26
50A334EBI	410 uh	200 uh	4.29
50A474EBI	580 uh	280 uh	4.29
50A684EBI	850 uh	400 uh	4.32
50A824EBI	1.00 mh	540 uh	4.32
50A103EBI	1.25 mh	770 uh	4.35
50A153EBI	1.87 mh	950 uh	4.35
50A223EBI	2.75 mh	1.58 mh	4.38
50A333EBI	4.13 mh	2.40 mh	4.38
50A473EBI	5.80 mh	3.35 mh	4.44
50A683EBI	8.50 mh	5.20 mh	4.44
50A823EBI	10.00 mh	6.20 mh	4.44

Economy Adjustable R.F. Chokes



Through the use of a recently developed Nylon molding process we are able to offer an inexpensive line of adjustable chokes. They can be adjusted from either the top or bottom. This lends a degree of flexibility to your design. Mounting is achieved by means of a metal clip in a $\frac{5}{16}$" hole.

Dimensions: ⅜" x 1⅜" long.

Cat. No.	Microhenries	Net Price
4200	Form only	$ .60
4201	.3 - .58	.96
4201A	.55- 1.1	.96
4202	1- 2.5	.96
4203	2- 5.5	.99
4204	5- 12	1.02
4205	10- 25	1.05
4206	20- 55	1.14
4207	50-140	1.17
4208	120-330	1.20
4209	310-860	1.23

#4200 complete with hardware and core

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Miller

Industrial R.F. Chokes and Filters

Sub-Miniature R.F. Chokes



An extremely versatile series of iron core R.F. chokes designed to meet the industries' demand for high reliability, ultra-miniature components. The coils are ideally suited to network and filter design, delay lines, and computer applications. Rated at 50 milliamperes.

Part No	L*	Min. Q @ F	Net Pr.
70F106AI	1 uh	41 @ 7.9 Mc.	$ .57
70F126AI	1.2 uh	44 @ 7.9 Mc.	.57
70F156AI	1.5 uh	48 @ 7.9 Mc.	.57
70F186AI	1.8 uh	39 @ 7.9 Mc.	.57
70F226AI	2.2 uh	48 @ 7.9 Mc.	.57
70F276AI	2.7 uh	39 @ 7.9 Mc.	.57
70F336AI	3.3 uh	48 @ 7.9 Mc.	.57
70F396AI	3.9 uh	44 @ 7.9 Mc.	.57
70F476AI	4.7 uh	46 @ 7.9 Mc.	.57
70F566AI	5.6 uh	44 @ 7.9 Mc.	.57
70F686AI	6.8 uh	44 @ 7.9 Mc.	.57
70F756AI	7.5 uh	40 @ 7.9 Mc.	.57
70F826AI	8.2 uh	40 @ 7.9 Mc.	.57
70F916AI	9.1 uh	40 @ 7.9 Mc.	.57
70F105AI	10 uh	48 @ 2.5 Mc.	.66
70F125AI	12 uh	52 @ 2.5 Mc.	.66
70F155AI	15 uh	52 @ 2.5 Mc.	.66
70F185AI	18 uh	52 @ 2.5 Mc.	.66
70F225AI	22 uh	51 @ 2.5 Mc.	.66
70F255AI	25 uh	48 @ 2.5 Mc.	.66
70F275AI	27 uh	49 @ 2.5 Mc.	.66
70F335AI	33 uh	50 @ 2.5 Mc.	.66
70F395AI	39 uh	48 @ 2.5 Mc.	.66
70F475AI	47 uh	48 @ 2.5 Mc.	.66
70F565AI	56 uh	45 @ 2.5 Mc.	.66
70F685AI	68 uh	45 @ 2.5 Mc.	.66
70F755AI	75 uh	40 @ 2.5 Mc.	.66
70F825AI	82 uh	44 @ 2.5 Mc.	.66
70F915AI	91 uh	39 @ 2.5 Mc.	.66
70F104AI	100 uh	40 @ 790 Kc.	.66
70F124AI	120 uh	44 @ 790 Kc.	.66
70F154AI	150 uh	44 @ 790 Kc.	.66
70F184AI	180 uh	45 @ 790 Kc.	.66
70F204AI	200 uh	45 @ 790 Kc.	.66
70F224AI	220 uh	45 @ 790 Kc.	.66
70F254AI	250 uh	46 @ 790 Kc.	.66
70F274AI	270 uh	45 @ 790 Kc.	.66
70F304AI	300 uh	42 @ 790 Kc.	.66
70F334AI	330 uh	47 @ 790 Kc.	.66
70F354AI	350 uh	44 @ 790 Kc.	.66
70F394AI	390 uh	42 @ 790 Kc.	.75
70F474AI	470 uh	47 @ 790 Kc.	.75
70F504AI	500 uh	42 @ 790 Kc.	.75
70F564AI	560 uh	39 @ 790 Kc.	.75
70F684AI	680 uh	44 @ 790 Kc.	.75
70F754AI	750 uh	35 @ 790 Kc.	.75
70F824AI	820 uh	42 @ 790 Kc.	.75
70F914AI	910 uh	35 @ 790 Kc.	.75
70F103AI	1.00 mh	40 @ 790 Kc.	.75
70F123AI	1.20 mh	37 @ 250 Kc.	.75
70F153AI	1.50 mh	40 @ 250 Kc.	.75
70F183AI	1.80 mh	40 @ 250 Kc.	.75
70F223AI	2.20 mh	40 @ 250 Kc.	.81
70F253AI	2.50 mh	48 @ 250 Kc.	.84
70F273AI	2.70 mh	50 @ 250 Kc.	.84
70F333AI	3.30 mh	56 @ 250 Kc.	.84
70F393AI	3.90 mh	47 @ 250 Kc.	.84
70F473AI	4.70 mh	54 @ 250 Kc.	.84
70F563AI	5.60 mh	46 @ 250 Kc.	.84
70F683AI	6.80 mh	51 @ 250 Kc.	.84
70F753AI	7.50 mh	44 @ 250 Kc.	.84
70F823AI	8.20 mh	48 @ 250 Kc.	.99
70F913AI	9.10 mh	37 @ 250 Kc.	.99
70F102AI	10.0 mh	48 @ 250 Kc.	.99
70F122AI	12 mh	39 @ 79 Kc.	1.08
70F152AI	15 mh	40 @ 79 Kc.	1.08
70F182AI	18 mh	41 @ 79 Kc.	1.08
70F222AI	22 mh	42 @ 79 Kc.	1.17

Single Pi R.F. Coils



These fixed inductors are wound on a mineral filled phenolic form which has axial leads. The coils are impregnated with an R.F. varnish to assure against moisture absorption.

Part No.	L*	Q Min.	Min. Fo. Mc	Net Price
72F105AP	10 uh	23	13	$ .60
72F125AP	12 uh	21	12	.60
72F155AP	15 uh	20	11	.60
72F185AP	18 uh	20	9.8	.60
72F225AP	22 uh	18	9.6	.60
72F275AP	27 uh	17	8.9	.60
72F335AP	33 uh	16	8.1	.60
72F395AP	39 uh	15	7.5	.60
72F475AP	47 uh	14	7.2	.60
72F565AP	56 uh	13	6.5	.60
72F685AP	68 uh	12	6.1	.60
72F825AP	82 uh	12	5.8	.60
72F104AP	100 uh	20	5.3	.69
72F124AP	120 uh	19	5.0	.69
72F154AP	150 uh	18	4.6	.69
72F184AP	180 uh	17	4.3	.69
72F224AP	220 uh	17	4.0	.75
72F274AP	270 uh	16	3.5	.75
72F334AP	330 uh	16	3.3	.81
72F394AP	390 uh	16	3.1	.81
72F474AP	470 uh	15	2.9	.84
72F564AP	560 uh	14	2.6	.84
72F684AP	680 uh	14	2.4	.84
72F824AP	820 uh	13	2.2	.84
72F103AP	1000 uh	28	1.9	.84

Single Pi Ferrite Core R.F. Chokes



This series of R.F. chokes affords maximum Q with minimum resistance through the use of ferrite core material. The coils are impregnated in a fungus resistant lacquer. Form Dim: .187 x 5/8" long.

Part No.	L*	Min. Q @ F	Net Pr.
73F104AF	100 uh	140 @ 790 kc.	$ .75
73F124AF	120 uh	140 @ 790 kc.	.75
73F154AF	150 uh	160 @ 790 kc.	.75
73F184AF	180 uh	160 @ 790 kc.	.75
73F224AF	220 uh	160 @ 790 kc.	.75
73F274AF	270 uh	160 @ 790 kc.	.75
73F334AF	330 uh	160 @ 790 kc.	.75
73F394AF	390 uh	160 @ 790 kc.	.75
73F474AF	470 uh	160 @ 790 kc.	.75
73F564AF	560 uh	160 @ 790 kc.	.75
73F684AF	680 uh	160 @ 790 kc.	.81
73F824AF	820 uh	150 @ 790 kc.	.81
73F103AF	1.0 mh	140 @ 790 kc.	.81
73F123AF	1.2 mh	140 @ 250 kc.	.81
73F153AF	1.5 mh	140 @ 250 kc.	.81
73F183AF	1.8 mh	140 @ 250 kc.	.81
73F223AF	2.2 mh	100 @ 250 kc.	.81
73F273AF	2.7 mh	100 @ 250 kc.	.81
73F333AF	3.3 mh	100 @ 250 kc.	.90
73F393AF	3.9 mh	95 @ 250 kc.	.90
73F473AF	4.7 mh	95 @ 250 kc.	.90
73F563AF	5.6 mh	95 @ 250 kc.	.99
73F683AF	6.8 mh	95 @ 250 kc.	.99
73F823AF	8.2 mh	70 @ 250 kc.	1.05
73F102AF	10.0 mh	65 @ 250 kc.	1.05

Heavy Duty Hash Chokes



Through the use of a molded powdered iron form we are able to offer a series of relatively high inductance, high current hash filter chokes.

Dim. 9/16" Diameter x 1¼" long.

Part No.	uh. ±20%	Rdc. Max.	Amps.	Net Price
5218	3.35	.010	13	$1.17
5219	4.9	.016	8	1.17
5220	8.8	.021	5	1.17
5230	4.0	.012	2	.90
5240	40.0	.082	2	1.05
5248	68.0	.054	2	1.05
5250	100.0	.216	2	1.17

Single Layer Color Coded R.F. Chokes



The following solenoid wound R.F. Chokes are impregnated with a thermosetting varnish and are color coded to EIA standards. Form Dimensions: .156 x ½" long.

Part No.	L	Min. Q @ F	Net Pr.
74F106AP	1.0 uh	45 @ 7.9 Mc.	$ .45
74F126AP	1.2 uh	45 @ 7.9 Mc.	.45
74F156AP	1.5 uh	45 @ 7.9 Mc.	.45
74F186AP	1.8 uh	45 @ 7.9 Mc.	.45
74F226AP	2.2 uh	45 @ 7.9 Mc.	.45
74F276AP	2.7 uh	45 @ 7.9 Mc.	.45
74F336AP	3.3 uh	45 @ 7.9 Mc.	.45
74F396AP	3.9 uh	45 @ 7.9 Mc.	.45
74F476AP	4.7 uh	50 @ 7.9 Mc.	.45
74F566AP	5.6 uh	50 @ 7.9 Mc.	.45
74F686AP	6.8 uh	50 @ 7.9 Mc.	.45
74F826AP	8.2 uh	50 @ 7.9 Mc.	.45
74F105AP	10 uh	50 @ 7.9 Mc	.48
74F125AP	12 uh	30 @ 2.5 Mc.	.48
74F155AP	15 uh	30 @ 2.5 Mc.	.48
74F185AP	18 uh	30 @ 2.5 Mc.	.51
74F225AI	22 uh	85 @ 2.5 Mc.	.51
74F275AI	27 uh	80 @ 2.5 Mc.	.54
74F335AI	33 uh	80 @ 2.5 Mc.	.54
74F395AI	39 uh	90 @ 2.5 Mc.	.57
74F475AI	47 uh	90 @ 2.5 Mc.	.60
74F565AI	56 uh	90 @ 2.5 Mc.	.60
74F685AI	68 uh	90 @ 2.5 Mc.	.60
74F825AI	82 uh	100 @ 2.5 Mc.	.60
74F104AI	100 uh	100 @ 2.5 Mc.	.60

L Tolerances: 1.0 to 2.2 uh ±20%, 2.7 to 100 uh ±10%.

Frequency Selective R.F. Chokes

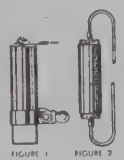


FIGURE 1 FIGURE 2

Designed for maximum efficiency and highest impedance at specific operating frequencies this group of R.F. chokes eliminates the designers task of attempting to choose the best coil for a particular application from miscellaneous and often insufficient design data. Designed to cover the major Amateur, Industrial, and Citizens bands the coils will also operate efficiently at frequencies approximating the recommended frequencies.

The RFC-3.5, RFC-7, and RFC-14 are the standoff type, mounted by a single 6-32 screw. All other coils are mounted with axial leads.

Part No.	L*	Freq. Mc.	Fig.	Net Pr.
RFC-3.5	266 uh	1.8-5	1	$1.20
RFC-7	208 uh	3-13	1	1.05
RFC-14	84 uh	7-20	1	.69
RFC-21	38.5 uh	15-30	2	.60
RFC-28	24 uh	25-40	2	.60
RFC-50	8.2 uh	30-90	2	.60
RFC-144	1.72 uh	75-180	2	.51
RFC-220	.82 uh	160-340	2	.51
RFC-420	.22 uh	350-500	2	.51



Light Duty Duo-Lateral Line Filter Chokes

Single Line Filter Chokes

Part No.	Dim: 1⅞" x 1¾" uh.	Rdc.	Amps.	Net Price
7825	600	.7	2	$1.80
7825-3	250	.25	3	1.80
7825-5	100	.1	5	1.80
7825-8	50	.05	8	1.80

Dual Line Filter Chokes

Part No.	Dim: 3¼" x 2⅛" uh.	Rdc.	Amps.	Net Price
D-7825	600	.7	2	$3.00
D-7825-3	250	.25	3	3.00
D-7825-5	100	.1	5	3.00
D-7825-8	50	.05	8	3.00

*TOLERANCE 0.1 TO 1.0 UH ± 20%, 1.1 TO 10 UH ± 10%, OVER 10 UH ± 5%

For a Complete Listing of MILLER PRODUCTS ask for a copy of our Latest General Catalog.

J. W. MILLER COMPANY

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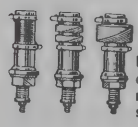
Adjustable R.F. Coils & Chokes

Encapsulated R.F. Chokes



The following series of R.F. chokes range in value from 0.1 uh to 50 mh. Basically identical to our standard series of axial lead R.F. chokes bearing the equivalent number, these coils are encapsulated in epoxy resin and conform to MIL-C-15305.

Part No.	L*	R Max.	Current MA	Net Price
4580-E	0.1 uh.	.012	300	$1.26
4582-E	0.15 uh.	.015	300	1.26
4584-E	0.22 uh.	.021	300	1.26
4586-E	0.33 uh.	.023	300	1.26
4588-E	0.47 uh.	.026	300	1.26
4590-E	0.68 uh.	.036	300	1.26
4592-E	0.75 uh.	.040	300	1.26
4594-E	0.82 uh.	.042	300	1.26
4602-E	1.0 uh.	.06	300	1.26
4604-E	1.5 uh.	.096	300	1.26
4606-E	2.4 uh.	.192	300	1.26
4608-E	3.9 uh.	.6	300	1.26
4609-E	5.5 uh.	.83	300	1.29
4610-E	6.2 uh.	.90	300	1.29
4611-E	8.2 uh.	1.34	300	1.29
4612-E	10.0 uh.	1.8	200	1.29
4622-E	10.0 uh.	.122	300	1.32
4624-E	15.0 uh.	.170	300	1.32
4626-E	24.0 uh.	.336	300	1.35
4628-E	39.0 uh.	.78	300	1.35
4629-E	55.0 uh.	1.10	300	1.35
4630-E	62.0 uh.	1.2	300	1.35
4631-E	82.0 uh.	1.92	300	1.35
4632-E	100.0 uh.	2.4	200	1.35
4642-E	0.10 mh.	4.92	125	1.50
4644-E	0.15 mh.	6.84	125	1.50
4646-E	0.24 mh.	8.16	125	1.50
4648-E	0.39 mh.	12.0	125	1.56
4649-E	0.55 mh.	13.2	125	1.98
4650-E	0.62 mh.	15.1	125	1.98
4651-E	0.75 mh.	16.4	125	1.98
4652-E	1.0 mh.	19.8	125	1.98
4662-E	1.0 mh.	8.4	125	2.01
4664-E	1.5 mh.	10.8	125	2.04
4666-E	2.4 mh.	14.4	125	2.13
4668-E	3.9 mh.	20.4	125	2.19
4669-E	5.5 mh.	26.4	125	2.31
4670-E	6.2 mh.	39.6	100	2.31
4671-E	8.2 mh.	54.0	100	2.37
4672-E	10.0 mh.	56.4	50	2.70
6302-E	2.5 mh.	9.36	200	2.28
6304-E	5.0 mh.	14.9	200	2.37
6306-E	10.0 mh.	36.0	125	2.52
6308-E	25.0 mh.	83.4	75	2.70
6310-E	50.0 mh.	133	75	2.94



Adjustable Ceramic Forms and R.F. Coils

Permeability tuned coils wound on silicone impregnated ceramic forms. Hardware necessary for assembly is supplied.

Sub-Miniature Adjustable R.F. Coils

Dimensions (form): 1/16" diameter x 5/8" long.

Cat No.	Microhenries	Net Price
4300	Form only	$1.05
4301	0.17- 0.27	1.50
4302	0.27- 0.41	1.50
4303	0.40- 0.65	1.56
4304	0.64- 0.95	1.59
4305	0.94- 1.55	1.65
4306	1.5 - 2.57	1.71
4307	2.5 - 4.40	1.77
4308	4.3 - 7.15	1.80
4309	7.1 - 12.5	1.83
4310	12.4 - 20.3	1.86
4311	20.1 - 32.8	1.89
4312	32.5 - 51.5	1.92
4313	51. -102.	1.95
4314	101. -180.	1.95
4315	178. -300.	1.95

#4300 comes complete with hardware and core*

#4300 Bulk packed per 100 Net Price 81.00

Standard Adjustable Ceramic Form and R.F. Coils

Dimensions (form): 3/8" diameter x 1 1/16" long.

Cat. No.	Microhenries	Net Price
4400	Form only	$1.14
4403	0.9- 1.6	1.62
4404	1.5- 3.2	1.65
4405	3.1- 6.8	1.68
4406	6.7- 15	1.74
4407	14.8- 31	1.80
4408	30 - 69	1.83
4409	68 - 130	1.89
4410	126 - 250	1.92
4411	245 - 475	1.95
4412	450 - 800	1.98
4413	750 -1400	2.01
4414	1300 -2100	2.01

#4400 comes complete with hardware and core*

#4400 Bulk packed per 100 Net Price 99.00

Miniature Adjustable R.F. Coils

Dimensions (form): 1/4" diameter x 7/8" long.

Cat No.	Microhenries	Net Price
4500	Form only	$1.05
4501	.4- .8	1.50
4502	1.0- 1.6	1.50
4503	1.6- 2.8	1.56
4504	2.8- 5	1.59
4505	5 - 9	1.65
4506	9 - 16	1.71
4507	16 - 24	1.77
4508	24 - 35	1.80
4509	35 - 60	1.83
4511	60 -120	1.86
4512	110 -200	1.89
4513	190 -330	1.92
4514	320 -500	1.95
4514-1	480 -800	2.01

#4500 comes complete with hardware and core*

#4500 Bulk packed per 100 Net Price 81.00



Linearity & Width Controls

Dimensions: 3/4" x 2 1/2" Max.
The coils will mount in either a 5/16" or 7/16" hole with adapter supplied.
*7/16" Mounting hole only.

Cat. No.	Inductance Range Millihenries	Net Price
6313	.5-5	$1.32
6314	2-18	1.23
6315	4-30	1.32
6316	4-30 (2.8-6.5 AGC)	1.80
6317	3.2-9 (.17-1.31 AGC)	1.65
6318	.3-3	1.11
6319	8-60	1.65
6320	.3-3 Tapped	1.14
6321	1-5 Tapped	1.32
6322	1.5-10	1.23
6323	.5-5 Tapped	1.14
6324	60-130 Tapped*	1.65
6325	4.2-30 (.78-1.37 AGC)	1.65
6326	2.5-19 Parallel (.18-1.7 Series)	2.25
6327	4-30 Parallel (.225-2.4 Series)	2.25
6328	9-24 (.19-1.1 AGC)	1.65
6329	2.2-10 Tapped	1.50
6330	45-215	1.80
6331	4-30 Parallel (.080-.7 Series)	2.10
6195	.185-1	.99
6196	.054-.245	.84
6196-A	.054-.5 Tapped	.96
6197	.55-2.3 Tapped	.96
6198	.17-.61	.84
6199-A	1.3-4.1 Tapped	1.02
6199-B	.5-1.7	.99



Wide Range Adjustable Inductors

Due to the wide range of these coils they will find immediate application in many prototype designs where the exact value of the required inductance is not known.

Dimensions: Max. Dia. 3/4"x2 1/4" long both types
Inductance measured at 1000 cycles

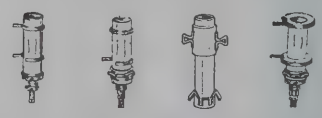
Untapped Inductors

Cat. No.	L Min.	L Max.	Net Price
9001	35 uh	.300 mh	$1.32
9002	.150 mh	1.00 mh	1.50
9003	.500 mh	3.50 mh	1.80
9004	1.75 mh	10.0 mh	2.10
9005	5.00 mh	20.0 mh	2.37
9006	10.0 mh	50.0 mh	2.76
9007	25.0 mh	130 mh	2.85
9008	65.0 mh	300 mh	2.88
9009	150 mh	750 mh	2.97

Tapped Osc. Inductors

9011	35 uh	.300 mh	$1.62
9012	.150 mh	1.00 mh	1.80
9013	.500 mh	3.50 mh	2.10
9014	1.75 mh	10.0 mh	2.40
9015	5.00 mh	20.0 mh	2.67
9016	10.0 mh	50.0 mh	2.76
9017	25.0 mh	130 mh	2.82
9018	65.0 mh	300 mh	3.19
9019	150 mh	750 mh	3.27

Coil Forms



We have compiled a separate listing of our coil forms that have appeared for years in our catalogs as part of the R.F. Coil listings. Resinite material is a phenolic impregnated tubing that can be certified to Mil-P-79B type PBG. The ceramic material meets Jan I-10, Grade L5 and is Silicone Impregnated to reduce moisture absorption. When ordering forms the type of core should be specified by the addition of a suffix taken from the following:

Suffix	Frequency Range of Core Material
Y	50-1.000 kc.
R	1-30 Mc.
W	30-300 Mc.

*Core for this item is available only in Ferrite material.

R is supplied unless specified. All hardware is supplied.

Part No.	Dia.	Lgth.	Mtg. Hole	Material	Net Price
20A000RBI	1/4	13/16	13/64	Resinite	$ .63
20A000RBI		Bulk Pkd. per 100 pcs			54.00
21A000RBI	3/8	1 1/8	1/4	Resinite	.66
21A000RBI		Bulk Pkd. Per 100 pcs			57.00
22A000RBI	1/2	1 7/8	1/4	Resinite	.81
22A000RBI		Bulk Pkd. per 100 pcs			69.00
40A000CBI	7/32	19/32	11/64	Ceramic	1.44
40A000CBI		Bulk Pkd. per 100 pcs			129.00
41A000CBI	1/4	13/16	3/16	Ceramic	1.50
41A000CBI		Bulk Pkd. per 100 pcs			135.00
42A999CBI	3/8	1	1/4	Ceramic	1.56
42A000CBI		Bulk Pkd. per 100 pcs			140.40
43A000CBI	1/2	1 1/16	1/4	Ceramic	1.62
43A000CBI		Bulk Pkd. per 100 pcs			145.80
4200*	.289	1 3/8	5/16	Nylon	.60
4200*		Bulk Pkd. per 100 pcs			51.00
4300	3/16	5/8	11/64	Ceramic	1.05
4300		Bulk Pkd. per 100 pcs			81.00
4400	3/8	1 1/16	1/4	Ceramic	1.14
4400		Bulk Pkd. per 100 pcs			99.00
4500	1/4	7/8	3/16	Ceramic	1.05
4500		Bulk Pkd. per 100 pcs			81.00

190 Iron Core Assortment
Two each of 6 different cores
Cores color coded for easy identification .84

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Miller

Radio Frequency Chokes

R.F. Chokes with Axial Leads

These chokes cover an inductance range from .1 microhenry to 10 millihenries in 5 decades with 8 coils per decade. Inductance values increase in steps of approximately 50%. Either single layer or 3-pi universal windings are used to insure low distributed capacity. Chokes are wound on low-loss molded phenolic or powdered iron core forms and are impregnated with a moisture- and fungus-resistant varnish. The type of powdered iron used allows the chokes to operate at all frequencies up into the ultra-high frequency region.

Dimensions: Phenolic form 1/8" diameter x 3/4" long. Iron core form 3/32" diameter x 7/8" long. Leads are 1½" long.



Phenolic Form
Single Layer Windings

Cat. No.	uh.*	Ohms Max.	Ma.	Net Pr.
4580	0.1	.012	3000	$ .45
4582	0.15	.014	2900	.45
4584	0.22	.024	2800	.45
4586	0.33	.023	2600	.45
4588	0.47	.026	2500	.45
4590	0.68	.036	2400	.45
4592	0.75	.039	2200	.45
4594	0.82	.042	2100	.45
4602	1.	.060	2000	.45
4604	1.5	.096	1800	.45
4606	2.4	.192	1500	.45
4608	3.9	.600	1000	.45
4609	5.5	.828	850	.48
4610	6.2	.900	700	.48
4611	8.2	1.34	600	.48
4612	10	1.80	500	.48

Iron Core Form
Single Layer Windings

Cat. No.	uh.*	Ohms Max.	Ma.	Net Pr.
4622	10	.122	1500	$ .51
4624	15	.170	1000	.51
4626	24	.336	800	.54
4628	39	.780	600	.54
4629	55	1.10	500	.57
4630	62	1.20	475	.57
4631	82	1.92	450	.57
4632	100	2.40	400	.57



Phenolic Form
3-Section Windings

Cat. No.	mh*	Ohms Max.	ma	Net Pr.
4642	0.1	4.92	125	$ .57
4644	0.15	6.84	125	.57
4646	0.24	8.16	125	.57
4648	0.39	12.0	125	.63
4649	0.55	13.2	125	.63
4650	0.62	15.1	125	.63
4651	0.75	16.4	125	.63
4652	1.0	19.8	125	.63

Iron Core Form
3-Section Windings

Cat. No.	mh*	Ohms Max.	ma	Net Pr.
4662	1	8.4	125	$ .66
4664	1.5	10.8	125	.69
4666	2.4	14.4	125	.75
4668	3.9	20.4	125	.81
4669	5.5	26.4	125	.93
4670	6.2	39.6	125	.93
4671	8.2	54.0	125	1.11
4672	10	56.4	50	1.29

Ferrite Core R.F. Chokes



A new series of R.F. Chokes taking advantage of the high permeability of ferrite cores. These chokes combine high inductance and low D.C. resistance with a small physical size.

Dimensions of core: 1/4" diameter x 7/8" long. 1½" long axial leads.

Cat. No.	mh*	Ohms Max.	ma	Net Pr.
6302	2.5	9.36	200	$ .81
6304	5	14.9	200	.93
6306	10	36.0	125	1.08
6308	25	83.4	75	1.26
6310	50	133	75	1.44



Multiple Pi Chokes

These Multiple Pi duo-lateral chokes have a low distributed capacity of 1.2-1.3 mmf. The current carrying capacity is comparatively high for this type of choke.

Inductance tol. ±5%.

Cat. No.	Mh.	Ohms Max.	MA	Net Price
4531-0	.25	9.6	200	$ .75
4531	.5	14.4	200	.75
4531-1	1	20.4	200	.75
4532	1.5	25.2	200	.78
4537	2.5	33.6	200	.81
4538	5	50.4	125	.96
4539	7.5	98.4	125	1.08
4540	10	114	125	1.20
4541	25	192	125	1.41

#4537 Bulk packed per 100 — Net Pr. 66.00

R.F. Chokes wound to closer tolerances if required in lots of 100 pieces or more at slightly higher prices.



Unshielded Chokes

These single section R.F. Chokes are ideally suited for general purpose applications in receiver and filter circuit. Solder lug terminals and single hole mounting. Inductance tol. ±5%.

Air Core Type

Dimensions: 1⅛" diameter x 5/8".

Cat. No.	Mh.	Ohms Max.	MA	Net Price
610	.25	9.6	125	$ .60
615	.5	14.4	125	.60
620	.75	19.2	125	.60
622	1.0	21.6	125	.60
630	1.5	25.2	125	.66
640	2.5	34.8	125	.75
650	5.0	52.8	125	.75
660	7.5	66.0	125	.78
670	10	81.0	125	.81
680	12.5	92.5	125	.84
690	15	102	125	.87
691	20	120	125	.96
692	30	156	100	.99
693	60	240	100	1.14
694	80	264	100	1.23

Center Tapped Types

Cat. No.	Mh.	Ohms Max.	MA	Net Price
670-T	10	80.4	125	.87
691-T	20	120	125	.99
693-T	60	240	100	1.32

Iron Core Type

These chokes are similar in construction to the No. 600 series except that they are wound on powdered iron cores. Inductance tol. ±5%.

Cat. No.	Mh.	Ohms Max.	MA	Net Price
951	.5	8.40	125	$ .78
952	1.0	13.2	125	.84
953	2.5	22.8	125	.93
954	5.0	34.8	125	1.05
955	7.5	44.4	125	1.14
956	10.0	56.4	125	1.20
957	25.0	99.5	100	1.32
958	50.0	156	100	1.50
959	75.0	204	100	1.65
960	100.0	240	100	1.86
961	150.0	312	100	1.98



Shielded Chokes

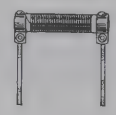
Single section wound R.F. Chokes assembled in round aluminum shield with two spade bolts for mounting. Solder lug terminals.

Iron Core Type

Dimensions: 1¼" dia. x 1⅛" high

Cat. No.	Mh.	Ohms Max.	MA	Net Price
851	.5	9.60	125	$1.17
852	1.0	13.2	125	1.23
853	2.5	24.0	125	1.26
854	5.0	37.2	125	1.32
855	7.5	50.4	125	1.38
856	10.0	56.4	125	1.50
857	25.0	112	125	1.65
Dimensions: 1⅜" dia. x 1⅛" high				
858	50.0	192	100	1.71
859	75.0	228	100	1.89
860	100.0	384	100	2.04
861	150.0	576	100	2.31

Ceramic Core R.F. Chokes



Miller ceramic core radio frequency chokes are the result of careful research and design, and present advantages found in no other comparable chokes. These chokes have extremely low distributed capacity.

All chokes are impregnated with a moisture- and fungus-resistant varnish.

Dimensions: (form) ¼" diameter by 1½" long.

Single Layer Wound Chokes

Part No.	uh.*	Ohms Max.	ma	Net Price
4528-1	1	.036	300	$ .54
4528	2.5	.108	300	.54
4529	5	.300	300	.54
4529-10	10	1.14	300	.54

Progressive Wound Chokes

Part No.	uh.*	Ohms Max.	ma	Net Price
4515	25	1.92	300	$ .60
4517	50	2.52	300	.60
4519	100	3.60	300	.60

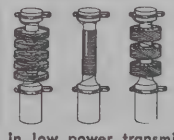
PC Air Core R.F. Chokes



The following R.F. Chokes have been designed to offer a wide range of inductance values for use in printed circuit applications. Our standard stock of these coils is impregnated with a high grade coil varnish to prevent moisture absorption. On special orders we can supply these items treated with fungus resistant material, or encapsulated in epoxy resin to meet MIL-C-15305

Part No.	L*	DC R Max.	Current	Net Price
970	1.0 mh.	20.6 ohms	125 ma.	$ .57
971	1.2 mh.	23.8 ohms	125 ma.	.57
972	1.5 mh.	26.4 ohms	125 ma.	.57
973	1.8 mh.	29.6 ohms	125 ma.	.60
974	2.2 mh.	32.9 ohms	125 ma.	.60
975	2.7 mh.	37.4 ohms	125 ma.	.60
976	3.3 mh.	41.8 ohms	125 ma.	.63
977	3.9 mh.	46.7 ohms	125 ma.	.63
978	4.7 mh.	51.8 ohms	125 ma.	.63
979	5.6 mh.	57.6 ohms	125 ma.	.63
980	6.8 mh.	64.4 ohms	125 ma.	.66
981	8.2 mh.	73.0 ohms	100 ma.	.66
982	10.0 mh.	81.6 ohms	100 ma.	.72
983	12.0 mh.	92.4 ohms	100 ma.	.75
984	15.0 mh.	105 ohms	100 ma.	.78
985	18.0 mh.	117 ohms	100 ma.	.81
986	22.0 mh.	130 ohms	75 ma.	.93
987	27.0 mh.	145 ohms	75 ma.	.96
988	33.0 mh.	251 ohms	75 ma.	1.02
989	39.0 mh.	277 ohms	75 ma.	1.05
990	47.0 mh.	316 ohms	50 ma.	1.08
991	56.0 mh.	351 ohms	50 ma.	1.14
992	68.0 mh.	391 ohms	50 ma.	1.20
993	82.0 mh.	442 ohms	50 ma.	1.26
994	100.0 mh.	473 ohms	50 ma.	1.32

Ceramic Form R.F. Chokes



A series of high quality fixed coils wound on a silicone impregnated steatite form. The coils are the standoff type and are mounted by a single 6-32 screw. They find primary application in low power transmitters and associated equipment where relatively high current capacity and low distributed capacitance are important.

Part Number	L*	Rated Current	Net Price
4552	0.25 mh.	150 ma.	$ .75
4553	0.50 mh.	150 ma.	.75
4554	1.0 mh.	150 ma.	.81
4555	2.5 mh.	150 ma.	.99
4556	5.0 mh.	150 ma.	1.02
4557	0.25 mh.	300 ma.	.87
4558	0.50 mh.	300 ma.	.87
4559	1.0 mh.	300 ma.	1.05
4560	2.5 mh.	300 ma.	1.14
4561	5.0 mh.	300 ma.	1.17

*TOLERANCE 0.1 TO 1.0 UH ± 20%, 1.1 TO 10 UH ± 10%, OVER 10 UH ± 5%

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Miller

Transistor Components and I.F. Transformers

Adjustable Padder Condensers



Used as adjustable oscillator padding condenser in super-het receivers to insure proper three-point tracking. They also find application as the horizontal drive control in television receivers. 1/4" single hole mounting.

Dimensions: 7/8" x 1" x 3/8" thick.

Cat. No.	Capacity Range	Net Price
160-A	360-1000 mmfd.	$ .84
160-B	50-400 mmfd.	.75
160-C	200-600 mmfd.	.84
160-D	10-160 mmfd.	.66
160-E	25-280 mmfd.	.72

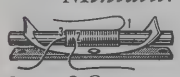
Standard Transistor Antenna Rod



Dimensions: 3/4" x 9".

Cat. No.	Q @ 790 KC	Freq. Range	Tuning Cond. Max. Capacity	Net Price
2000	450	540-1650 KC	365 mmf.	$1.95

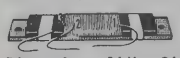
Miniature Transistor Antenna Rods



Dimensions: 3/4" x 3 3/4".

Cat. No.	Q @ 790 KC	Freq. Range	Tuning Cond. Max. Capacity	Net Price
2001	550	540-1650 KC	365 mmf.	$1.80
2003	500	540-1650 KC	130 mmf.	1.80

Ferrite-Strip Transistor Antenna Rods



Dimensions: 1/4" x 3/4" x 3 3/4" Tuning

Cat. No.	Q @ 790 KC	Freq. Range	Cond. Max. Capacity	Net Price
2004	500	540-1650 KC	365 mmf.	$1.80
2005	450	540-1650 KC	130 mmf.	1.80

Sub-Miniature Transistor Antenna Rods



Dimensions: 1/2"x2 1/2". Tuning

Cat. No.	Q @ 790 KC	Freq. Range	Cond. Max. Capacity	Net Price
2002	250	540-1650 KC	250-450 mmf.	$1.11
2007	220	540-1650 KC	100-250 mmf.	1.44

High-Q Ferrite Antenna Coil



Supplied with mounting bracket

Dimensions: 3/8" diameter x 2 1/4" long.

Cat. No.	Use	Freq. Range	Net Price
6300	Antenna Stage	540-1700 KC	$ .90

Unshielded Miniature Transistor Oscillators



The 2020 oscillator coil (Revised 5-lug) is designed for use in a converter oscillator circuit. The 2023 oscillator coil (6-lug) is for use where a separate transistor is used for the oscillator and another transistor for the mixer.

Dimensions: 3/8" x 1" high.

Cat. No.	Cond. Max. Capacity	I.F. Freq.	Net Price
2020	365 mmf.	455 KC	$1.65
2022	78-100 mmf.	455 KC	1.65
2023	365 mmf.	455 KC	1.65

Sub-Miniature Transistor I.F. Transformers & Matching Osc.



A high impedance, tapped primary winding coupled to a low impedance secondary provides optimum energy transfer.

Dimensions: 3/8" sq. x 5/8" high.

Cat. No.	Freq.	Impedance	Use	Net Price
9-C1	455 KC	25K— 600 Ohms	Input	$2.40
9-C2	455 KC	25K—1000 Ohms	Output	2.40
2021	Oscillator (Tuning Cap. 78 mmfd)			2.10

Miniature Transistor I.F. Transformers



Designed to have the proper impedance match when used with the transistors on our data sheets.

Dimensions: 1/2" sq. x 3/4" high.

Cat. No.	Freq.	Impedance	Use	Net Price
2031	455 KC	10K— 600 Ohms	Input	$2.10
2032	455 KC	10K—1000 Ohms	Output	2.10
2041	455 KC	25K— 600 Ohms	Input	2.10
2042	455 KC	25K—1000 Ohms	Output	2.10
2043	455 KC	70K—1000 Ohms	Input	2.10
2044	455 KC	30K—4000 Ohms	Output	2.10
2045	455 KC	70K— 500 Ohms	Input	2.10
2051	455 KC	100K—1000 Ohms	Input	2.10

Sub-Miniature I.F. Trans.



Through the use of a Ferrite shell core material these Sub-Miniature I.F. Transformers offer the gain and bandwidth characteristics previously obtained in only larger I.F. assemblies. (For Battery or AC-DC Radios.)

Dimensions: 1/2" sq. x 1 1/2" high.

Cat. No.	Item	Net Price
10-C1	455 KC Input I.F. Trans.	$2.85
10-C2	455 KC Output I.F. Trans.	2.85

Micro Miniature Transistor I.F. Trans. & Matching Oscillator



Construction is ultra small, rugged and mechanically stable. Tuning being effected by means of a sturdy threaded cup core which engages a threaded coil support. Dimensions: 9/32" sq. x 1 5/32" high

Cat. No.	Freq.	Impedance	Use	Net Price
2061	455 kc	50k - 800 ohms	Input	$2.10
2062	455 kc	30k - 500 ohms	Instage	2.10
2063	455 kc	20k - 5k ohms	Output	2.10
2060	Oscillator (Tuning cap. 78 to 100 mmfd, max.)			2.10

Mini Miniature Transistor I.F. Trans. & Matching Oscillator

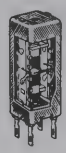


Similar in style to the Micro Miniature, these transformers are a little larger in size, with built-in capacitors for higher available Q.

Dimensions 13/32" sq. x 1/2" high

Cat. No.	Freq.	Impedance	Use	Net Price
2066	455 kc	50k - 800 ohms	Input	$2.10
2067	455 kc	30k - 500 ohms	Instage	2.10
2068	455 kc	20k - 5k ohms	Output	2.10
2065	Oscillator (Tuning cap. 78 to 110 mmfd, max.)			2.10

F.M. Transistor I.F. Transformers



This series of high quality I.F., Discriminator, and Ratio Detector transformers makes it possible for the first time to construct a completely self-contained battery operated F.M. receiver which compares favorably with its vacuum tube counterpart.

Dimensions: 3/4" sq. x 2" high.

Cat.	Freq.	Use	Net Price
1601	10.7 Mc	First I.F. Input	$2.28
1602	10.7 Mc	Second I.F. Instage	2.37
1603	10.7 Mc	Third I.F. Output	2.37
1604	10.7 Mc	Discriminator	2.55
1605	10.7 Mc	Ratio Det. w/Diodes	4.80
1606	10.7 Mc	Ratio Detector	2.25

Printed Circuit Style

Dimensions: 3/4" sq. x 2 1/8" high.

Cat No.	Freq.	Use	Net Price
1601-PC	10.7 Mc	Transistor First I.F.	$2.85
1602-PC	10.7 Mc	Transistor Second I.F.	2.97
1603-PC	10.7 Mc	Transistor Third I.F.	2.37
1605-PC	10.7 Mc	Ratio Detector with Diodes	5.70

Sub-Miniature Style



This series of transformers have single tuned I.F.'s and double tuned Ratio Detectors.

I.F. Trans. Dimensions: 13/32" sq. x 1/2" high

Ratio Det. Dimensions: 13/32" x 3/4" x 1/2" high

2070	10.7 Mc	First I.F.	Input	$2.25
2071	10.7 Mc	Second I.F.	Instage	2.25
2072	10.7 Mc	Third I.F.	Output	2.25
2073	10.7 Mc	Ratio Detector		2.70

Sub-Miniature Style

These imported transformers are designed for transistor operation with excellent impedance matching. * To be used as a pair

Dimensions: 8850, 8851, 8805, 8806 & 8807 25/32" x 7/16" x 1/2" high.

8808 & 8809 13/32" sq. x 5/8" high.

8810, 8811, 8812 & 8813 9/32" sq. x 1 5/32" high.

8814 13/32" x 1 5/32 x 9/16" high.

8852, 8853, & 8854 1/4" sq. x 7/16" high.

10.7 Mc. Transistor Trans

Cat. No.	Specs.	Use	Net Price
8850	300 kc. P/P	Discriminator	$2.10
8851	6 db.300 kc.	Double Tuned I.F.	2.10
8852	100K—300	Single Tuned I.F.	1.80
8853	20K—500	Single Tuned I.F.	1.80
8854	25K—500	Single Tuned I.F.	1.80

455 Kc. Transistor Transformers

Cat. No.	Specs.	Use	Net Price
8805	20 kc. P/P	Ratio Detector	$2.10
8806	20 kc. P/P	Discriminator	2.10
8807	6 db 15 kc.	Double Tuned I.F.	2.10
8808	100K Input	Discriminator Pri.*	1.50
8809	20 kc. P/P	Discriminator Sec.*	1.50
8810	50K—800	Single Tuned I.F.	1.50
8811	30K—500	Single Tuned I.F.	1.50
8812	20K—5K	Single Tuned I.F.	1.50
8813	Oscillator (Tuning Cap. 78 to 110 pf. Max.)	(455 kc. I.F.)	1.50
8814	70K - 800	Single tuned I.F. with Mechanical Filter	2.70

455 k.c. I.F. Amplifier

A pre-tuned I.F. strip that simplifies the construction of many projects.

Cat. No.	Item	Net Price
8901	Input Matching I.F.	$2.10
8902	I.F. Strip (Gain 50 db) (Selectivity 8 kc. @ 6 db)	4.75
8903	Combination 8901 & 8902	5.75

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Miller

R. F. and I. F. Transformers



Unshielded High-Q R.F. Coils

A complete line of Unshielded Permeability tuned coils for replacement use or as the front end components in new receiver design.
These #5495 series coils can be shielded in our #S-33 shields (1⅛" sq.) with very little loss in Q. Mounting is by means of a single ¼" hole.
Dimensions (form): ⅜" x 2".
Ranges shown are for use with a 365 mmfd. variable tuning condenser.

Long Wave Coils (140-420 KC)

Cat. No.	Use	Net Price
X-5495-A	Antenna Stage	$1.65
X-5495-RF	RF Stage	1.65
X-5495-C	Standard Osc. 455 KC	1.65
X-5496-C	Tapped Osc. 455 KC	1.65

Broadcast Band Coils (540-1700 KC)

A-5495-A	Antenna Stage	1.65
A-5495-RF	RF Stage	1.65
A-5495-C	Standard Osc. 455 KC	1.65
A-5496-C	Tapped Osc. 455 KC	1.65

Medium Wave Coils (1.7-5.5 MC)

B-5495-A	Antenna Stage	1.65
B-5495-RF	RF Stage	1.65
B-5495-C	Standard Osc. 455 KC	1.65
B-5496-C	Tapped Osc. 455 KC	1.65

Short Wave Broadcast Coils (5-18 MC)

C-5495-A	Antenna Stage	1.65
C-5495-RF	RF Stage	1.65
C-5495-C	Standard Osc. 455 KC	1.65
C-5496-C	Tapped Osc. 455 KC	1.65

High Frequency Coils (12-36 MC)

D-5495-A	Antenna Stage	1.65
D-5495-RF	RF Stage	1.65
D-5495-C	Standard Osc. 455 KC	1.65
D-5496-C	Tapped Osc. 455 KC	1.65

F.M. Stereo Multiplex Inductors



Basically the system involves pick-up of sound by two microphones, the left (L) and right (R). Subsequently the two audio signals are combined in such a way that L plus R frequency modulates an F-M carrier in the conventional way while L minus R amplitude modulates a 38KC stereophonic subcarrier, and the resulting double side-band AM signal (23-53KC) with suppressed carrier. likewise frequency modulates the FM carrier. A 19KC pilot sub-carrier signal also frequency modulates the FM carrier and at the receiver provides a means of controlling the frequency and phase of the 38 KC carrier for re-insertion. When broadcasting Stereo Multiplex the region of 53 to 75KC is allotted to the station for SCA signals.
Dimensions: ¾" Sq. x 1 7/32" High.

Cat. No.	Description	Net Price
1351	Low Pass Filter	$1.95
1352	BP Filter Series Element	1.80
1353	BP Filter Shunt Element	1.80
1354	Locked Osc. 19 kc.	2.55
1355	Output Trans.38 kc.	2.40

Printed Circuit Multiplex Inductors

The following coils are electrically the same as the regular point to point wiring type listed above. The printed circuit board PCM can be adapted for use with either the regular coils or the printed circuit type.
Dimensions: ¾" Sq. x 1 7/32" High.

Cat. No.	Description	Net Price
1351-PC	Low Pass Filter	$1.95
1352-PC	BP Filter Series Element	1.80
1353-PC	BP Filter Shunt Element	1.95
1354-PC	Locked Osc. 19 kc.	1.95
1355-PC	Output Trans. 38 kc.	2.25
PCM	Printed Circuit Board	5.55

New F.M. Stereo Multiplex Inductors



For use in a newly designed circuit that eliminates the 19 kc Oscillator and resulting synchronizing problems. In conjunction with an improved low pass filter and detecting system improved separation can be achieved.
Dimensions: ¾" Sq. x 1 7/32" High

Cat. No.	Description	Net Price
1356	19 kc. Amplifier Coil	$2.31
1357	38 kc. Output Trans.	2.25
1358	67 kc. Low Pass Filter	2.40

Communications I.F. Transformers



Designed for experimental use in communications equipment where selectivity and stability are important. The 100 kc. I.F. transformer and BFO coil are intended for tube application, while the 455 kc. crystal filter I.F. transformers have taps on the winding to allow for use with both tubes and transistors. The 1800 kc. I.F. transformer offers the best possible "Q" with stability to give a degree of selectivity that compares with lower frequency I.F. transformers. This transformer is for use with tubes only. Part number 1770 is a double tunel I.F. transformer having taps on both Primary and Secondary winding.
Dimensions: ¾" by ¾" by 2" high.

Cat No.	Description	Net Price
1709	100 KC I.F.—2.5 KC Bandwidth	$2.25
1710	100 KC I.F.—3 KC Bandwidth	2.10
1711	100 KC B.F.O.	1.95
1725	455 KC Crystal Filter I.F. Input	1.95
1726	455 KC Crystal Filter I.F. Output	1.95
1727	455 KC B.F.O.	1.80
1730	1800 KC I.F.—25 KC Bandwidth	2.10
1770	455 KC Double Tuned Transistor I.F.—30K:1K	2.34
1731	1610 KC Link Coupling Coil Unshielded	2.37
1732	1650 KC I.F. (C B Transceivers)	2.10
1733	1650 KC Printed Circuit I.F.	2.10
1740	9 Mc S.S.B. Input Trans.	1.95
1741	9 Mc S.S.B. Output Trans.	1.95

Miniature I.F. Trans.



Designed for experimental use and for general replacement in "personal" radio receivers, this series of shell core permeability tuned transformers are becoming increasingly popular. Tuning from top and bottom of the shield. Transformers are available for all standard I.F.

*(With diode filter capacitors)
Dimensions: ¾" by ¾" by 2" high.

Cat. No.	Item	Net Price
12-H1	262 KC Input I.F. Trans	$1.74
12-H2	262 KC Output I.F. Trans.	1.74
12-H6	262 KC Output I.F. Trans.*	1.80
12-C1	455 KC Input 16 KC @ 6db	1.62
12-C2	455 KC Output 21 KC @ 6db	1.62
12-C6	455 KC Output I.F. Trans.	1.71
12-C7	455 KC Input I.F. Battery	1.62
12-C8	455 KC Output I.F. Battery	1.62
12-C9	455 KC Input I.F. AC-DC	1.62
12-C10	455 KC Output I.F. AC-DC	1.62
12-C12	455 KC Tapped Pri. I.F. Trans.	1.95
12-C30	455 KC Input 11.4 KC @ 6db	1.62
12-C31	455 KC Output 13.6 KC @ 6db	1.62
12-C45	455 KC Discriminator	2.70
13-W1	1500 KC Input or Interstage	1.65
13-W2	1500 KC Output I.F. Trans.	1.65
1463	10.7 MC Input or Interstage	1.95
1464	10.7 MC Discriminator	2.25
1465	10.7 MC Ratio Detector	2.34
1725	455 kc Xtal Filter I.F. Input	1.95
1726	455 kc Xtal Filter I.F. Output	1.95
6203	4.5 MC Input or Interstage	1.98
6204	4.5 MC Discriminator	2.25
6205	4.5 MC Ratio Detector	2.25
6260	21.25 MC I.F. Trans.	2.55
6261	21.25 MC Discriminator	2.70
6262	21.25 MC Radio Detector	2.70

Printed Circuit I.F. Trans.

Same as our regular miniature I.F. transformers shown above, except for terminals and mounting. Supplied in all standard frequencies.
*(With diode filter capacitors)
Dimensions: ¾" sq. x 2" high.

		Net Price
13-PH1	262 KC Input I.F. Trans.	$1.71
13-PH2	262 KC Output I.F. Trans.	1.71
13-PH6	262 KC Output I.F. Trans. *	1.80
13-PC1	455 KC Input I.F. Trans.	1.65
13-PC2	455 KC Output I.F. Trans.	1.65
13-PC6	455 KC Output I.F. Trans. *	1.74
13-PC7	455 KC Input I.F. Trans. Battery	1.65
13-PC8	455 KC Output I.F. Trans.Battery	1.65
13-PC9	455 KC Input I.F. Trans. AC-DC	1.65
13-PC10	455 KC Output I.F. Trans.AC-DC	1.65
1463-PC	10.7 MC Input or Interstage	1.95
1464-PC	10.7 MC Discriminator Trans.	2.25
1465-PC	10.7 MC Ratio Detector Trans.	2.34
6203-PC	4.5 MC Input or Interstage	2.07
6204-PC	4.5 MC Discriminator Trans.	2.25
6205-PC	4.5 MC Ratio Detector Trans.	2.25

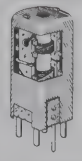
J-Tran Top Tuned I.F. Trans



The standard J-TRAN series of miniature I.F. transformers has hollow hexagonal-hole cores and thereby, with the aid of a suitable tuning tool (#182), permits either double or single ended tuning. The transformer is mounted with a unique snap fastener which is permanently attached to the shield.
Dimensions: ¾" by ¾" by 2" high. *(With diode filter capacitors)

Cat. No.	Item	Net Price
14-H1	262 kc Input I.F.	$1.80
14-H2	262 kc Output I.F.	1.74
14-H6	262 kc Output I.F.*	1.89
14-C1	455 kc Input I.F.	1.62
14-C2	455 kc Output I.F.	1.62
14-C6	455 kc Output I.F.*	1.80
14-C7	455 kc Input I.F. Battery Radios	1.62
14-C8	455 kc Output I.F. Battery Radios	1.62
14-C9	455 kc Input I.F. AC-DC Radios	1.62
14-C10	455 kc Output I.F. AC-DC Radios	1.62
6270	4.5 Mc Input or Interstage	1.80
6271	4.5 Mc Ratio Detector	2.97
1457	10.7 MC Input or Interstage	1.95
1458	10.7 MC Discriminator	2.25
1459	10.7 MC Ratio Detector	2.34
1464-WB	10.7 MC Disc. 900 KC. P/P	2.25
1465-WB	10.7 MC Ratio Det. 800 KC. P/P	2.34
6230	TV Converter I.F.	1.80
6231	TV 44 MC First I.F. Trap	1.80
6232	TV 42.5 MC Second I.F. 41.25 MC	1.59
6233	TV 45.5 MC Third I.F. 47.25 MC	1.92
6234	TV 44 MC Fourth I.F.	1.50

Top Tuned P.C. I.F. Transformers



The printed circuit series of miniature J-TRAN I.F. transformers is similar to the standard J-TRAN shown in that both cores may be tuned from either end of the shield.
Dimensions: ¾" by ¾" by 2" high. *(With diode filter capacitors)

Cat. No.	Item	Net Price
16-PH1	262 kc Input I.F.	$1.71
16-PH2	262 kc Output I.F.	1.71
16-PH6	262 kc Output I.F.*	1.89
16-PC1	455 kc Input I.F.	1.65
16-PC2	455 kc Output I.F.	1.65
16-PC6	455 kc Output I.F.*	1.80
16-PC7	455 kc Input I.F. Battery Radios	1.65
16-PC8	455 kc Output I.F. Battery Radios	1.65
16-PC9	455 kc Input I.F. AC-DC Radios	1.65
16-PC10	455 kc Output I.F. AC-DC Radios	1.65
6270-PC	4.5 Mc Input or Interstage	1.80
6271-PC	4.5 Mc Ratio Detector	2.97
6230-PC	TV 44 MC Converter I.F. Trans.	1.95
6231-PC	TV 44 MC First I.F. Trans. Trap	1.86
6232-PC	TV 42.5 MC Second I.F. 41.25 MC	1.68
6233-PC	TV 45.5 MC Third I.F. 47.25 MC	1.86
6234-PC	TV 44 MC Fourth I.F. Trans.	1.65

For a Complete Listing of MILLER PRODUCTS ask for a copy of our Latest General Catalog.

J. W. MILLER COMPANY

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AIR VARIABLE CAPACITORS

Whatever the choice . . . sub-miniature capacitors for printed circuit use—or large, heavy duty types . . . time and again engineers specify Johnson Air Variables!

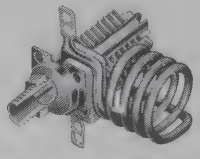
More than 11 basic capacitor types are readily available in a wide selection of single section, dual section, butterfly and differential models. Units range in size from the diminutive sub-miniature Type "U" capacitors, to large, rugged heavy duty "C" and "D" types. Standard stock capacitors in a wide range of plate spacings, capacity per section, breakdown ratings, and finishes will meet many military and commercial applications . . . specials to your specifications are also available in production quantities.

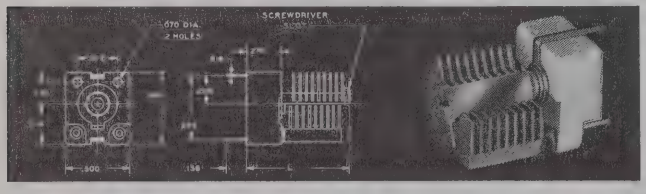
TYPE "U", "UA" AND "UB" CAPACITORS

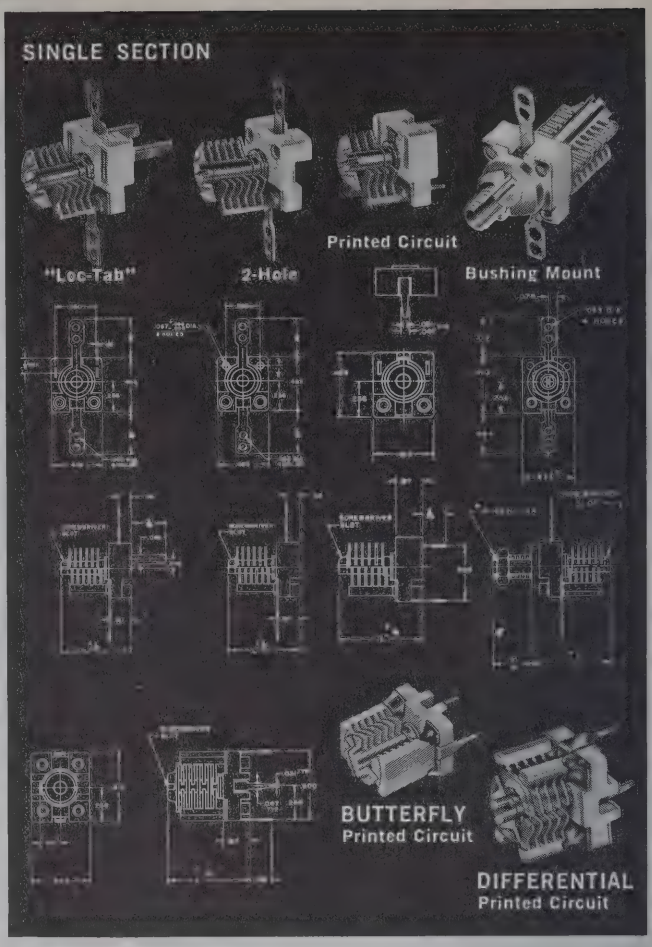
Cut costs, improve performance, and save valuable space in compact electronic equipment with these sub-miniature air variable capacitors. Available in single-section, differential and butterfly types, they occupy minimum mounting area – Type "U" requires less than 0.2 square-inch and Types "UA" and "UB" less than 0.23 square-inch area for chassis or printed board mounting. Rotors and stators are precision machined from one piece of solid brass, providing outstanding mechanical stability and uniformity. Units offer high "Q" (greater than 1500 at 1 mc.), high torque-to-mass ratio (2½ to 10 inch ounces), and exceptionally low temperature coefficient (plus 45 ± 15 PPM/°C) – provides absolute freedom from moisture entrapment found in trimmer capacitors of the enclosed or solid dielectric type. All metal parts silver-plated – ceramic is steatite, Grade L-4 or better. Exceptionally uniform delta C and voltage characteristics . . . breakdown ratings available to 1100 volts DC. No special tools required for installation – slotted and accommodates large screwdriver for quick adjustment. Choice of wide, double-pierced or printed circuit style terminals. Single-section models available in "Loc-Tab"; 2-Hole; Printed Circuit; and #10-32 Bushing Mount types—Differential and Butterfly models available in Printed Circuit types.

"U-LC" TUNERS

Combines precision machined Type "U" capacitor with an air wound, silver-plated inductor to form a compact, tuneable LC circuit. Excellent "Q" and temperature stability – capacitor end frame equipped with #10-32 threaded bushing for mounting. Recessed screwdriver slot contributes to ease of tuning – slot on opposite end of rotor shaft also may be used for adjustment. High torque (2½ to 10 inch ounces) holds rotor to adjusted position. Printed circuit types available on special order.







TYPE "V" CAPACITORS

Slightly larger than the Type "U" capacitors, these miniature air variables offer all of the design, construction and performance features of the Type "U", plus higher capacity, with very little increase in mounting area requirement. Requires less than 0.3 square inch for printed board mounting.

SPECIFICATIONS AND PRICES

TYPE "U", "UA" AND "UB" CAPACITORS

Cat. No.	Nominal Cap. per Sec. Max.	Nominal Cap. per Sec. Min.	Plates per Sec.	L	Volts Peak Bkdwn.	Air Gap	Net Price
SINGLE SECTION — "Loc-Tab"; 2-Hole; Printed Circuit Types							
NOTE: To order "LocTab" type, add -1 to Cat No.; for 2-hole type, add -4; and for Printed Circuit type, add -5 to Cat. No.							
189-1	3.5 pf	1.2 pf	4	29/64"	750	.010"	$0.60
189-2	5.4 pf	1.3 pf	6	1/2"	750	.010"	.63
189-3	7.3 pf	1.4 pf	8	35/64"	750	.010"	.65
189-4	9.1 pf	1.5 pf	10	19/32"	750	.010"	.68
189-5	11.0 pf	1.7 pf	12	5/8"	750	.010"	.70
189-6	13.0 pf	1.8 pf	14	43/64"	750	.010"	.72
189-7	15.0 pf	2.0 pf	16	47/64"	500	.010"	.74
189-8	17.0 pf	2.2 pf	18	25/32"	500	.010"	.76
189-26	4.1 pf	1.3 pf	6	1/2"	1100	.016"	.72
189-27	6.7 pf	1.6 pf	10	5/8"	1100	.016"	.74
189-28	8.9 pf	1.8 pf	14	3/4"	1100	.016"	.76
SINGLE SECTION — #10-32 Bushing Mount Types							
189-3-54	7.3 pf	1.4 pf	8	19/32"	750	.010"	(Available on special order)
189-4-54	9.1 pf	1.5 pf	10	41/64"	750	.010"	
189-5-54	11.0 pf	1.7 pf	12	11/16"	750	.010"	
189-6-54	13.0 pf	1.8 pf	14	3/4"	750	.010"	
189-7-54	15.0 pf	2.0 pf	16	51/64"	500	.010"	
189-8-54	17.0 pf	2.2 pf	18	27/32"	500	.010"	
BUTTERFLY — Printed Circuit Types							
189-251	4.5 pf	1.7 pf	8	17/32"	750	.010"	$0.86
189-252	6.5 pf	1.8 pf	12	5/8"	750	.010"	.88
189-253	8.5 pf	1.9 pf	16	47/64"	750	.010"	.90

TYPE "U", "UA" AND "UB" CAPACITORS

Cat. No.	Nominal Cap. per Sec. Max.	Nominal Cap. per Sec. Min.	Plates per Sec.	L	Volts Peak Bkdwn.	Air Gap	Net Price
DIFFERENTIAL — Printed Circuit Types							
189-351	3.5 pf	1.2 pf	4	7/16"	750	.010"	$0.78
189-352	5.4 pf	1.3 pf	6	31/64"	750	.010"	.80
189-353	7.3 pf	1.5 pf	8	17/32"	750	.010"	.82
189-354	9.1 pf	1.6 pf	10	37/64"	750	.010"	.84
189-355	11.0 pf	1.7 pf	12	5/8"	750	.010"	.86
189-356	13.0 pf	1.9 pf	14	11/16"	750	.010"	.88

TYPE "U-LC" TUNERS

Cat. No.	Resonant Freq. Mc Max.	Resonant Freq. Mc Min.	Plates per Sec.	L	Volts Peak Bkdwn.	Air Cap	Coil Turns	Net Price
#10-32 Bushing Mount Types								
250-101-4	230	100	18	27/32"	500	.010"	4¼	(Available on special order)
250-102-4	340	190	12	11/16"	750	.010"	2¼	
250-103-4	450	280	10	41/64"	750	.010"	1¼	
250-104-4	520	360	6	35/64"	750	.010"	1¼	
250-105-4	750	450	10	41/64"	750	.010"	½	

TYPE "V" CAPACITORS

Cat. No.	Nominal Cap. per Sec. Max.	Nominal Cap. per Sec. Min.	Plates per Sec.	L	Volts Peak Bkdwn.	Air Gap	Net Price
SINGLE SECTION — Printed Circuit Types							
193-4-5	13 pf	1.4 pf	8	.581	650	.010"	$0.70
193-6-5	20 pf	1.7 pf	12	.683	650	.010"	.72
193-8-5	27 pf	2.0 pf	16	.785	650	.010"	.74
193-10-5	34 pf	2.2 pf	20	.887	650	.010"	.76

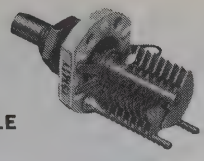
NOTE: For applications requiring capacity values other than those listed, specials may be furnished with 10, 14 or 18 plates.

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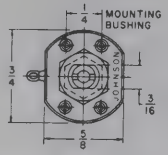
TYPE "M" CAPACITORS

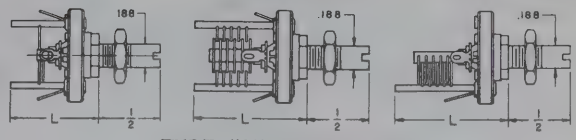
These small Type "M" miniature air variable capacitors are excellent for use in compact equipment. Bridge type stator terminal provides an extremely low inductance path to both stator supports. Soldered plate construction, oversize bearing, and heavily anchored stator supports insure extreme rigidity. Large beryllium copper compression rotor contact provides steady torque – and rotor stays "put" where set. Rotor contact and all other metal parts are nickel plated – steatite insulator is DC-200 treated. Mounting bushing threaded with ¼-32 flats to prevent turning – mounting nut furnished. Peak voltage 1250 volts on .017" spaced units; 850 volts on 160-130 which is spaced .013". 3/16" diameter shaft* slotted for screwdriver adjustment. Available in production quantities with the following features: locking bearings; 180° stop; various shaft extensions; high torque; silver or other platings.
*Instrument type tuning knob to fit 3/16" shaft available.

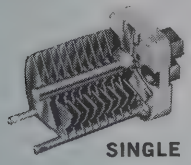

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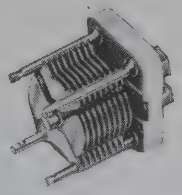

BUTTERFLY

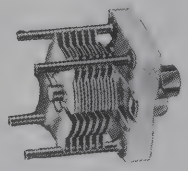

DIFFERENTIAL

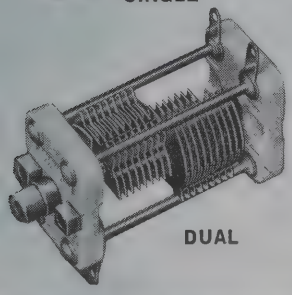





SINGLE

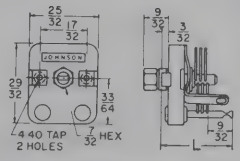

BUTTERFLY


DIFFERENTIAL

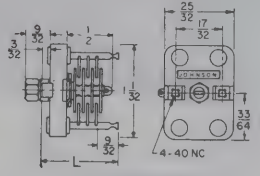

DUAL

TYPE "S" CAPACITORS

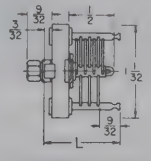
Midway in physical size between the Type "M" and "K" capacitors, the Type "S" is compact in design—rugged in construction. Unit is equipped with DC-200 treated steatite insulator, and nickel-plated brass plates. The "S" capacitor has a plate spacing of .013" with a peak voltage rating of 850 volts. Other spacings; single hole mounting types; straight shaft; screwdriver shaft; or locking-type screwdriver shaft available on special order in production quantities. Available in Single Section, Butterfly, Differential and Dual Section Types.



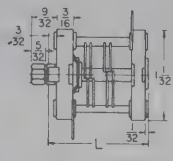
SINGLE SECTION



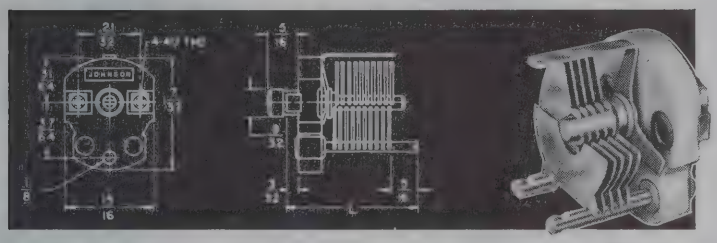
BUTTERFLY

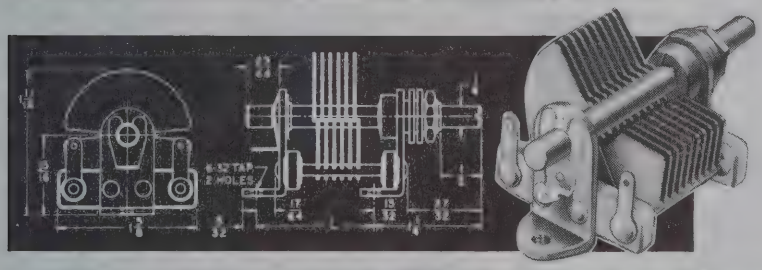


DIFFERENTIAL



DUAL SECTION





TYPE "K" CAPACITORS

Widely used for military and many commercial applications, the Type "K" capacitor has a DC-200 impregnated steatite insulator, slotted stator contacts, and extra-rigid soldered plate construction. Peak voltage rating is 1000 volts with a plate spacing of .015" – plates are nickel-plated brass. The Type "K" capacitor is available in production quantities to meet MIL-C-92A specifications – other capacities and variations for specialized military and commercial applications are also available in production quantities. Butterfly and Differential Types will soon be available.

TYPE "R" CAPACITORS

This rugged Johnson version of a popular standardized capacitor, has extra-heavy steatite stator support insulators and soldered .023" thick brass plates. All metal parts are heavily nickel-plated for resistance to corrosion. Sturdy brass end frames offer excellent rigidity. Double bearing construction and silver-plated beryllium copper wiping contacts provide smooth, reliable performance. Peak voltage rating is 1200 volts – available with .024", .036", .050", .071", or .095" plate spacings, as well as special platings and shaft lengths in production quantities. Bearing threaded ⅜"-32. Also available without mounting feet for panel mounting applications.

SPECIFICATIONS AND PRICES

TYPE "M" CAPACITORS

Cat. No.	Nom. Cap. Sec. Max.	Nom. Cap. Sec. Min.	Plates per Sec.	L	Net Price
SINGLE SECTION					
160-102	5 pf	1.5 pf	5	45/64"	$0.90
160-104	8.7 pf	1.8 pf	9	13/16"	.95
160-107	14.2 pf	2.3 pf	15	1"	1.00
160-110	19.6 pf	2.7 pf	21	1 11/64"	1.10
160-130	32 pf	3 pf	28	1 17/64"	1.20
BUTTERFLY					
160-203	3.1 pf	1.5 pf	5	45/64"	$1.20
160-205	5.1 pf	1.8 pf	9	13/16"	1.30
160-208	8 pf	2.2 pf	16	1"	1.45
160-211	10.8 pf	2.7 pf	22	1 11/64"	1.60
DIFFERENTIAL					
160-303	5.0 pf	1.5 pf	5	45/64"	$1.25
160-305	8.7 pf	1.8 pf	9	13/16"	1.45
160-308	14.2 pf	2.3 pf	15	1"	1.65
160-311	19.6 pf	2.7 pf	21	1 11/64"	1.85

TYPE "S" CAPACITORS

Cat. No.	Nom. Cap. Sec. Max.	Nom. Cap. Sec. Min.	Plates per Sec.	L	Net Price
SINGLE SECTION					
148-1	15 pf	2.3 pf	6	53/64"	$1.00
148-2	25 pf	2.6 pf	10	15/16"	1.05
148-3	35 pf	2.9 pf	14	1 1/32"	1.10
148-4	50 pf	3.2 pf	19	1 9/64"	1.15
148-5	75 pf	3.9 pf	29	1 13/32"	1.20
148-6	100 pf	4.5 pf	38	1 43/64"	1.30
BUTTERFLY					
148-201	9 pf	1.8 pf	6	53/64"	$1.45
148-202	14 pf	2.1 pf	10	15/16"	1.60
148-203	20 pf	2.4 pf	14	1 1/32"	1.70
148-204	27 pf	2.8 pf	19	1 9/64"	1.95
148-205	42 pf	3.6 pf	29	1 13/32"	2.20
148-206	54 pf	4.4 pf	38	1 43/64"	2.45

TYPE "K" CAPACITORS

Cat. No.	Nom. Cap. Sec. Max.	Nom. Cap. Sec. Min.	Plates per Sec.	L	Net Price
158-1	10 pf	2.9 pf	3	7/8"	$1.25
158-2	25 pf	3.7 pf	7	1"	1.35
158-3	50 pf	4.6 pf	14	1 3/16"	1.55
158-4	75 pf	5.5 pf	20	1 3/8"	1.70
158-5	100 pf	6.4 pf	27	1 5/8"	1.85

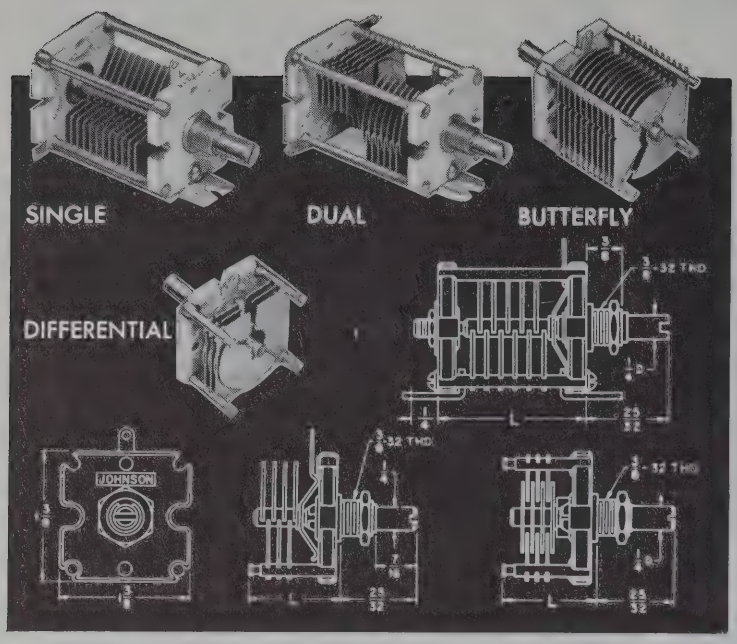
TYPE "S" CAPACITORS

Cat. No.	Nom. Cap. Sec. Max.	Nom. Cap. Sec. Min.	Plates per Sec.	L	Net Price
DIFFERENTIAL					
148-301	15 pf	2.3 pf	6	53/64"	$1.50
148-302	25 pf	2.6 pf	10	15/16"	1.60
148-303	35 pf	2.9 pf	14	1 1/32"	1.70
148-304	50 pf	3.2 pf	19	1 9/64"	1.80
148-305	75 pf	3.9 pf	29	1 13/32"	1.90
148-306	100 pf	4.5 pf	38	1 43/64"	2.10
DUAL SECTION					
148-503	25 pf	2.9 pf	10	1 25/64"	$2.25
148-504	35 pf	3.2 pf	14	1 19/32"	2.40
148-505	50 pf	3.5 pf	19	1 51/64"	2.55
148-507	100 pf	4.8 pf	38	2 27/32"	3.00

TYPE "R" CAPACITORS

Cat. No.	Nom. Cap. Sec. Max.	Nom. Cap. Sec. Min.	Plates per Sec.	L	Net Price
149-1	20 pf	5 pf	3	1 7/32"	$2.50
149-2	35 pf	6 pf	5	1 7/32"	2.60
149-3	50 pf	6.5 pf	7	1 7/32"	2.70
149-4	80 pf	8 pf	11	1 7/32"	2.85
149-5	102 pf	8.5 pf	14	1 13/32"	3.00
149-6	140 pf	13.5 pf	19	1 19/32"	3.30

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TYPE "C" AND "D" CAPACITORS

Heavy .051" aluminum plates and 5/16" diameter aluminum tie rods; 1/4" cadmium-plated steel shafts; laminated phosphor bronze contact springs; and steatite insulation. Type "C" – overall width: 5 1/2" – height: 5 13/32" – height bottom to shaft center: 3 3/32". Type "D" – overall width: 4 1/4" – height: 4" – height bottom to shaft center: 2 5/32". Dual types have center rotor connection for better balance. End frames tapped 8-32, 3 holes, for panel mounting – brackets furnished for chassis mounting.

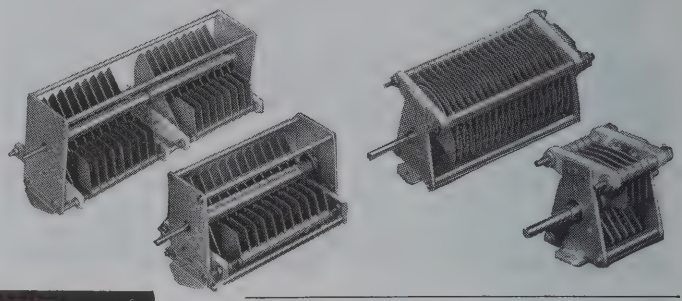
TYPE "E" AND "F" CAPACITORS

High capacity per cubic inch and extremely low capacity to chassis. Heavy aluminum plates .032" thick with rounded edges and large 1/4" tie rods; stainless steel shafts; sturdy phosphor bronze contact springs; and center rotor contact on dual types. End frames tapped 8-32, 3 holes for panel mounting – brackets furnished for chassis mounting.

TYPE "L" CAPACITORS

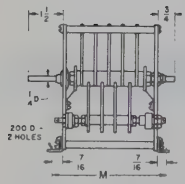
Ideal choice for applications requiring extreme stability and strength practically impervious to shock and vibration. Rotor bearings and stator support rods soldered directly to heavy 3/16" thick steatite insulator. Special split-sleeve tension bearing and silver-plated beryllium copper contact provide constant torque and smooth capacity variation. Heavy brass soldered plates and large diameter tie rods provide excellent rigidity. Removable chassis mounting brackets can be used to mount auxiliary equipment. Plating is heavy nickel – plate spacing .030". Peak voltage rating is 1500 volts. Also available with .020", .060", and .080" spacing as well as special platings, shaft lengths and stator terminal locations in production quantities. Bearings threaded 3/8-32", mounting nut provided. Models with 6-32 tapped mounting posts soldered to end frame also available on special order.

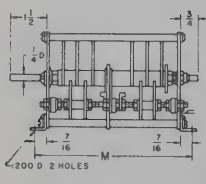
Cat. No.	Nom. Cap. per Sec. Max.	Nom. Cap. per Sec. Min.	Plates per Sec.	L	Net Price
	SINGLE SECTION – Single End Plate				
167-1	11 pf	2.8 pf	3	3/4"	$1.85
167-2	27 pf	3.5 pf	7	61/64"	2.00
167-3	51 pf	4.6 pf	13	1 1/4"	2.20
167-4	75 pf	5.7 pf	19	1 9/16"	2.40
	SINGLE SECTION – Double End Plate				
167-11	99 pf	6.8 pf	25	2 1/32"	3.90
167-12	202 pf	11.6 pf	51	3 21/64"	5.00
	BUTTERFLY				
167-21	10.5 pf	2.8 pf	5	55/64"	2.25
167-22	26 pf	4.3 pf	12	1 1/4"	2.65
167-23	51 pf	6.8 pf	23	1 3/4"	3.25
	DIFFERENTIAL				
167-31	11 pf	2.8 pf	3	3/4"	2.30
167-32	27 pf	3.5 pf	7	61/64"	2.50
167-33	51 pf	4.6 pf	13	1 1/4"	2.90
	DUAL SECTION				
167-51	27 pf	5.0 pf	7	1 5/8"	4.00
167-52	51 pf	6.5 pf	13	2 15/64"	4.45
167-53	99 pf	9.8 pf	25	3 7/16"	5.30

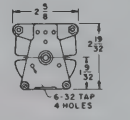


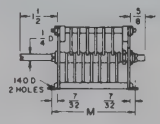
SPECIFICATIONS AND PRICES

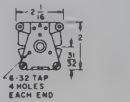
Cat. No.	Pkg. Voltage	Nom. Cap. /Sec. Max.	Nom. Cap. /Sec. Min.	Air Gap	Plates Per Sec.	M	Net Price
	TYPE C SINGLE SECTION						
152-1	7000	252 pf	34 pf	.175"	24	7 11/16"	$17.95
152-2	7000	496 pf	56 pf	.175"	47	13 1/16"	24.50
152-6	11000	103 pf	30 pf	.350"	17	9 15/32"	15.90
152-8	13000	51 pf	24 pf	.500"	10	8 9/16"	14.10
152-9	13000	102 pf	42 pf	.500"	21	14 7/32"	18.35
	TYPE C DUAL SECTION						
152-501	4500	204 pf	21 pf	.125"	15	9 15/32"	21.60
152-502	4500	290 pf	26 pf	.125"	21	11 3/16"	24.95
152-503	7000	198 pf	27 pf	.175"	19	13 1/16"	24.70
152-504	7000	305 pf	37 pf	.175"	29	17 21/32"	30.60
152-505	9000	147 pf	30 pf	.250"	19	15 23/32"	27.20
152-507	11000	50 pf	18 pf	.350"	8	11 3/16"	18.50
152-509	11000	103 pf	32 pf	.350"	17	17 21/32"	26.00
	TYPE D SINGLE SECTION						
153-6	3500	496 pf	36 pf	.080"	39	7 11/16"	17.60
153-8	4500	146 pf	23 pf	.125"	17	5 21/32"	12.50
153-11	7000	98 pf	23 pf	.175"	15	5 21/32"	12.20
153-12	7000	151 pf	31 pf	.175"	23	7 11/16"	14.50
153-13	7000	244 pf	45 pf	.175"	37	11 3/16"	17.65
153-15	9000	53 pf	20 pf	.250"	10	5 21/32"	11.15
153-16	9000	73 pf	25 pf	.250"	14	6 11/16"	12.35
153-17	9000	99 pf	30 pf	.250"	19	8 9/16"	13.65
153-18	9000	149 pf	43 pf	.250"	29	11 3/16"	16.20
	TYPE D DUAL SECTION						
153-501	3500	95 pf	13 pf	.080"	8	5 21/32"	14.70
153-502	3500	147 pf	15 pf	.080"	12	6 11/16"	16.00
153-503	3500	202 pf	19 pf	.080"	16	8 9/16"	19.00
153-504	3500	291 pf	24 pf	.080"	23	10 11/32"	21.80
153-505	3500	496 pf	38 pf	.080"	39	14 7/32"	30.15
153-506	4500	155 pf	24 pf	.125"	17	10 11/32"	19.60
153-507	4500	198 pf	27 pf	.125"	23	13 1/16"	22.00
153-508	7000	52 pf	15 pf	.175"	8	6 11/16"	14.50
153-509	7000	72 pf	17 pf	.175"	11	8 9/16"	16.15
153-510	7000	97 pf	22 pf	.175"	15	10 11/32"	18.30
153-511	7000	151 pf	31 pf	.175"	23	14 7/32"	23.80
153-513	9000	52 pf	10 pf	.250"	19	10 11/32"	16.45
153-514	9000	97 pf	30 pf	.250"	19	15 23/32"	22.75

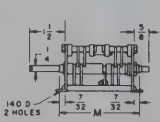












Cat. No.	Pkg. Voltage	Nom. Cap. /Sec. Max.	Nom. Cap. /Sec. Min.	Air Gap	Plates per Sec.	M	Net Price
	TYPE E SINGLE SECTION						
154-1	2000	244 pf	12 pf	.045"	23	3 7/32"	$ 7.90
154-2	2000	353 pf	15 pf	.045"	33	3 31/32"	8.90
154-3	2000	488 pf	19 pf	.045"	45	4 29/32"	10.45
154-7	3000	100 pf	11 pf	.075"	15	3"	7.00
154-8	3000	154 pf	14 pf	.075"	23	3 7/8"	8.00
154-9	3000	251 pf	20 pf	.075"	37	5 3/8"	9.80
154-10	3000	347 pf	25 pf	.075"	51	6 7/8"	11.55
154-11	4500	38 pf	9 pf	.125"	9	2 3/4"	6.40
154-12	4500	53 pf	11 pf	.125"	12	3 13/32"	7.05
154-13	4500	74 pf	13 pf	.125"	17	4 1/32"	7.50
154-14	4500	101 pf	16 pf	.125"	23	4 31/32"	8.10
154-15	4500	145 pf	20 pf	.125"	33	6 17/32"	9.40
154-16	4500	241 pf	32 pf	.125"	55	10"	12.25
	TYPE E DUAL SECTION						
154-502	2000	312 pf	13 pf	.045"	29	7 3/32"	14.85
154-503	3000	52 pf	8 pf	.075"	8	4 17/32"	9.80
154-504	3000	72 pf	8 pf	.075"	11	4 31/32"	10.40
154-505	3000	99 pf	10 pf	.075"	15	5 13/16"	11.55
154-506	3000	153 pf	13 pf	.075"	23	7 1/2"	13.70
154-507	3000	196 pf	15 pf	.075"	29	8 13/32"	15.40
154-508	4500	52 pf	10 pf	.125"	12	6 19/32"	10.70
154-509	4500	74 pf	12 pf	.125"	17	7 7/8"	12.30
154-510	4500	100 pf	15 pf	.125"	23	9 23/32"	14.05
	TYPE F SINGLE SECTION						
155-1	2000	35 pf	7 pf	.045"	6	1 29/32"	5.90
155-2	2000	54 pf	8 pf	.045"	9	2 1/16"	6.15
155-3	2000	66 pf	8 pf	.045"	11	2 7/32"	6.40
155-4	2000	106 pf	10 pf	.045"	17	2 11/16"	7.00
155-5	2000	154 pf	12 pf	.045"	25	3 5/16"	7.85
155-6	2000	252 pf	17 pf	.045"	41	4 17/32"	9.60
155-8	3000	52 pf	9 pf	.075"	13	2 3/4"	6.80
155-9	3000	67 pf	11 pf	.075"	17	3 3/32"	7.10
155-10	3000	99 pf	14 pf	.075"	25	4 1/32"	7.80
155-11	3000	148 pf	18 pf	.075"	37	5 5/16"	9.55
	TYPE F DUAL SECTION						
155-501	2000	53 pf	7 pf	.045"	9	3 15/16"	10.10
155-502	2000	66 pf	7 pf	.045"	11	4 1/4"	10.70
155-503	2000	104 pf	9 pf	.045"	17	5 5/32"	12.30
155-504	2000	153 pf	11 pf	.045"	25	6 13/32"	13.65
155-505	2000	202 pf	14 pf	.045"	33	7 5/8"	15.20
155-506	3000	51 pf	8 pf	.075"	13	5 1/4"	10.95
155-507	3000	66 pf	10 pf	.075"	17	6 1/8"	12.20
155-508	3000	99 pf	13 pf	.075"	25	7 7/8"	14.30

E. F. JOHNSON COMPANY

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TUBE SOCKETS–GENERAL SPECIFICATIONS

To simplify selection of sockets and to provide complete specifications for standard, industrial and military requirements, wherever applicable, Johnson tube sockets have been categorized under a socket standardization program. General specifications are listed on the following pages – detailed specifications on the complete socket line are covered in Socket Standardization Booklet 536. Should you desire a copy for Engineering Department use, please make your request on company letterhead.

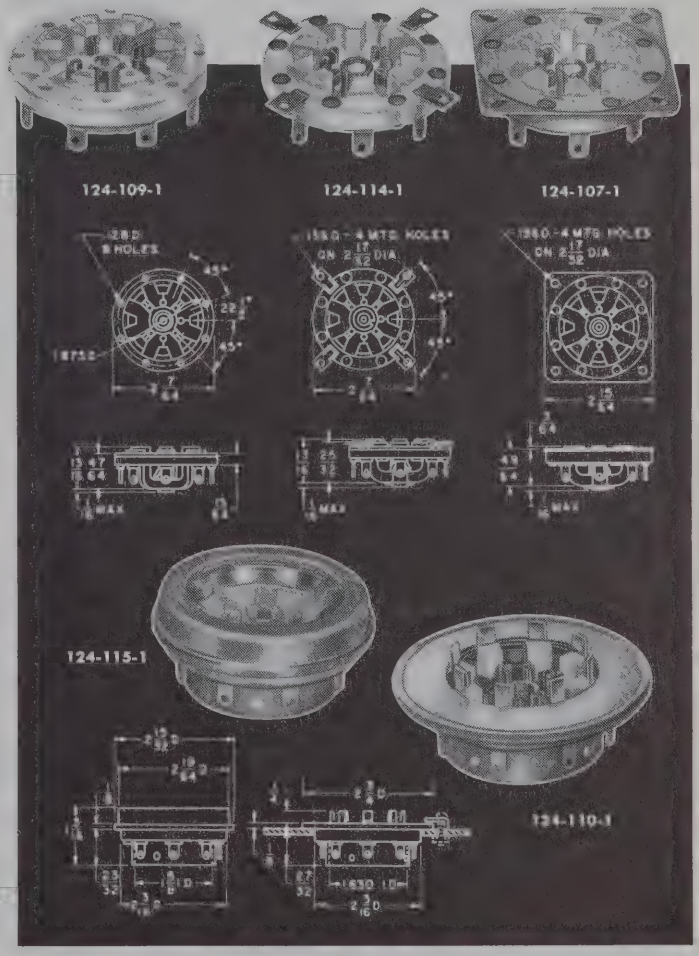
Standard – Commercial grade for general requirements. Bayonet sockets have porcelain bases, glazed top and sides with .0002 cadmium-plated phosphor bronze contacts. Wafer sockets have glazed steatite bases, DC-200 treated. Contacts are plated brass with steel springs. Shells and shields are etched aluminum.

Industrial – Higher quality than Standard types. Glazed steatite bases, DC-200 treated. Contacts: .0005 silver-plated beryllium copper on Bayonet Sockets – .0005 silver-plated phosphor bronze with beryllium copper springs on Wafer Sockets. Shells and shields are aluminum, iridite No. 14 treated. (Except 123-206-100.) Fungus resistant cushion washers under contacts.

Military – Top quality for military requirements. Glazed grade L-4 or better steatite bases, DC-200 treated. Phosphor bronze contacts and beryllium copper springs, .001 silver-plated on Wafers – Bayonet sockets have .0005 silver-plated beryllium copper contacts. Aluminum shields on shielded Wafers are iridite treated – bayonet shells are brass .0003 nickel-plated. Threaded hardware .0002 nickel-plated, unthreaded hardware .0003. Hot tin-dipped terminals. Fungus resistant cushion washers. (Glass base melamine on Wafers.) Wafer sockets protected for 200 hour salt spray test.

SOCKETS FOR 4X150A, 4X150D, 4X250B, 4CX250B, 4X250F, 7034, 7035

For use with high power transmitting tubes. Available in many designs – with or without, low inductance screen grid by-pass capacitors. Basic socket molded of low dielectric loss-factor Kel-F plastic. Control grid contact "guide" machined for accurate alignment, tapped for 6-32 machine screw. Contacts are low-resistance silver-plated beryllium copper. Tube pin contacts heat treated to provide positive contact pressure and extended life. Annealed soldering tabs may be easily bent or formed. **Additional specifications and information available on D[illegible] Chart 755.**



Rugged light weight basic socket with silver-plated brass mounting saddle. Cathode terminals insulated. Four elongated .140" x .234" mounting holes to accommodate mounting circle diameters from 2 27/64" to 2 39/64". Mounts below chassis in 1 21/32" diameter hole.

Cat. No. 124-107-1 ..... **Net Price $6.25**

Same as 124-107-1 except cathode terminals grounded. Four mounting holes .136" diameter on circle of 2 17/32" diameter.

Cat. No. 124-108-1 ..... **Net Price $6.50**

Low cost, light weight basic socket without metal mounting ring. Cathode terminals insulated. Mounts below chassis in 1 21/32" diameter hole.

Cat. No. 124-109-1 ..... **Net Price $5.30**

Basic socket with mounting ring and low-inductance 2700 mmf. screen grid by-pass capacitor; cathode terminals insulated. Mounts above chassis through 2 1/2" diameter hole with 3 clips drilled for 6-32 screws. Provision for mounting socket skirt directly to 1.625" O.D. outer conductor of coaxial-type line.

Cat. No. 124-110-1 ..... **Net Price $12.25**

Same as 124-110-1 except cathode terminals grounded.

Cat. No. 124-112-1 ..... **Net Price $12.50**

Same as 124-108-1, less metal mounting saddle. Low inductance grounding of cathode terminals No. 2, 4, 6, and 8 through integral combination grounding and mounting lugs. Mounts below chassis in 1 21/32" diameter hole.

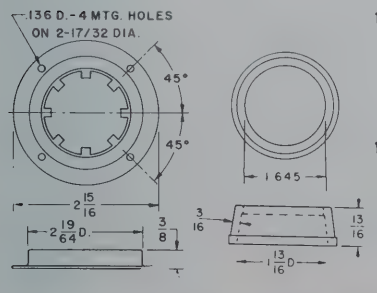
Cat. No. 124-114-1 ..... **Net Price $6.10**

Basic socket with mounting ring and smaller low-inductance 1100 mmf. screen grid by-pass capacitor. Requires less mounting space than other screen grid by-pass type sockets. Withstands 1500 volts DC under applicable test specifications. Cathode terminals insulated. Recessed silver-plated beryllium copper screen grid contacts provide positive electrical contact and low inductance. Mounts above chassis through 2 1/2" diameter hole with 3 clips drilled for 6-32 screws. Provision for mounting socket skirt directly to 1.625" O.D. outer conductor of coaxial-type line.

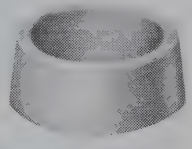
Cat. No. 124-115-1 ..... **Net Price $13.75**

Same as 124-115-1, except cathode terminals grounded.

Cat. No. 124-116-1 ..... **Net Price $13.50**



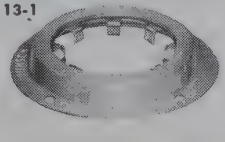
124-111-1



High quality heat resistant steatite chimney for use with 124-107-1, 124-108-1, 124-109-1, 124-110-1, 124-112-1, and 124-114-1 sockets. Tapered construction directs air flow through tube cooling fins. Maximum base diameter 2 9/32".

Cat. No. 124-111-1 ..... **Net Price $0.45**

124-113-1



1450 pf. circular silvered-mica screen grid by-pass capacitor mounted within a low-loss silicone resin sealed silver-plated drawn brass housing. Low inductance silver-plated beryllium copper screen grid contact fingers are heat treated to provide positive contact pressure as well as extended life. Capacitor dielectric strength tested at 1000 volts DC. Unique design permits replacement of screen grid by-pass capacitor by merely removing 4 mounting screws; socket rewiring unnecessary. Fully complies with MIL-C-10950A. For use with 124-107-1, 124-108-1, 124-109-1, 124-114-1, and similar sockets.

Cat. No. 124-113-1 ..... **Net Price $5.00**

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SOCKETS FOR RCA 6816, 6884, 7457, 7844, 7843, AND SIMILAR TUBES

For ultra high frequency tubes such as RCA 6816, 6884, 7457, 7844, 7843, 7842 and similar tube types. Socket machined low dielectric loss-factor teflon, electrical grade per MIL-P-19468A. Contacts are low resistance silver-plated beryllium copper per QQ-C-533. Socket shell is silver-plated brass. Mounts below chassis in 1⅜" diameter hole. Four mounting holes .133" diameter on circle of 2-1/32" diameter.

Cat. No. 124-152-1 ..... **Net Price $5.50**

SOCKETS FOR RCA 8072, 8121 AND SIMILAR TUBES

For ultra high frequency tubes such as RCA #8072, #8121, #8122 and 8462 types with JEDEC base #E11-81. Base materials have low dielectric constants which result in low pin-to-pin and shunt capacity. Elevation pads permit excellent base pin cooling. Raised boss provides indexing – aids in aligning tube pins and socket contacts when inserting tube. Socket contacts grip tube pins directly at base of tube – providing minimum inductance. Barriers between terminals for increased leakage path and higher voltage breakdown. Means for direct cathode ground provided by tabs located at mounting points adjacent to cathode contacts. Large center hole and base configuration results in low capacity; three point mounting provides stability. Terminals numbered. Teflon chimney offers increased leakage path and higher voltage breakdown. Low inductance screen by-pass capacitor for VHF and UHF operation.

Diallyl Phthalate base and mill hardened beryllium copper contacts, silver plated, provide superior electrical characteristics. Continuous heat resistance to 400°F.

Cat. No. 124-311-1 ... Standard ..... **Net Price $1.10**

Same as 124-311-1, but with low-loss glass-filled silicone base and heat treated beryllium copper contacts, silver plated, offer continuous heat resistance to 500°F.

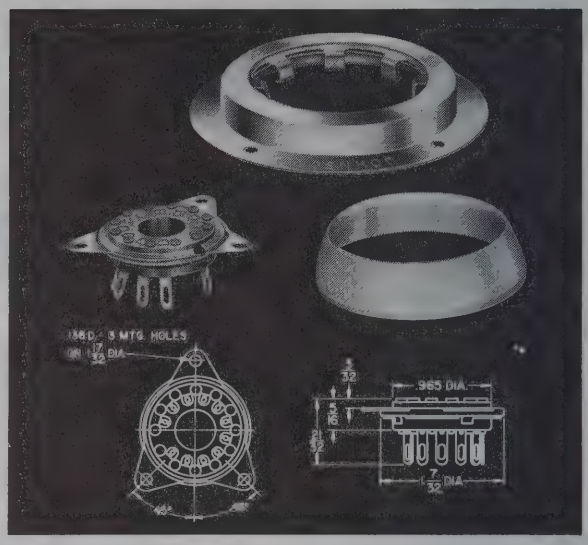
Cat. No. 124-311-100 ... Industrial ..... **Net Price $1.35**

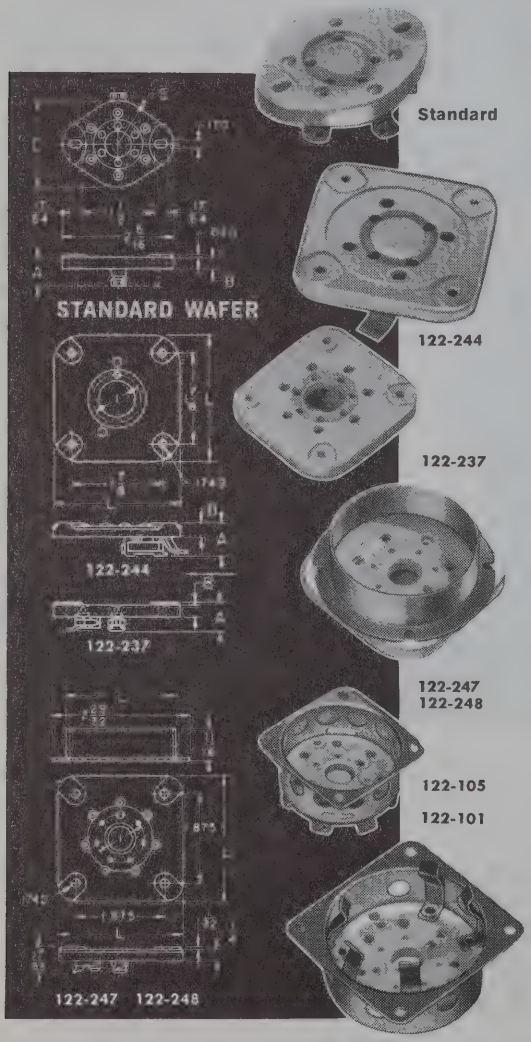
Teflon chimney for 124-311-100

Cat. No. 124-119-1 ..... **Net Price $0.66**

Screen by-pass capacitor for 124-311-100

Cat. No. 124-113-1 ..... **Net Price $5.00**





STANDARD WAFER SOCKETS

Insulated with Grade L-4 steatite, or better. Countersunk rivets and bossed mounting holes permit sub-panel mounting. Brass contacts with cadmium-plated steel springs. Locating grooves facilitate tube insertion.

Cat. No.	Type	A	B	C	E	For Tube	Net Price
122-224-1	Standard	9/16"	1/4"	1 11/16"	7/8"	4 Pin	$0.76
122-224-100	Industrial	9/16"	1/4"	1 11/16"	7/8"	4 Pin	.89
122-224-200	Military	9/16"	1/4"	1 11/16"	7/8"	4 Pin	1.07
122-225-1	Standard	9/16"	1/4"	1 11/16"	59/64"	5 Pin	.83
122-225-200	Military	9/16"	1/4"	1 11/16"	59/64"	5 Pin	1.20
122-226-1	Standard	9/16"	1/4"	1 11/16"	59/64"	6 Pin	.97
122-226-200	Military	9/16"	1/4"	1 11/16"	59/64"	6 Pin	1.35
122-227-1	Standard	9/16"	1/4"	1 13/16"	31/32"	7 Pin	1.05
122-227-200	Military	9/16"	1/4"	1 13/16"	31/32"	7 Pin	1.55
122-228-1	Standard	15/32"	3/16"	1 11/16"	57/64"	Octal	1.05
122-228-200	Military	15/32"	3/16"	1 11/16"	57/64"	Octal	1.65

SUPER JUMBO 4 PIN SOCKET

Heavy duty steatite insulated 4 pin wafer – for super jumbo base tubes such as the 8008, and many rectifier and thyratron types with E.I.A. Base Nos. A4-15, A4-16, and A4-18. Long, parallel contacts are designed to withstand high currents.

Cat. No.	Type	A	B	L	Net Price
122-244-1	Standard	11/16"	9/32"	2 5/8"	$1.75
122-244-100	Industrial	11/16"	9/32"	2 5/8"	2.00
122-244-200	Military	11/16"	9/32"	2 5/8"	2.45

GIANT 5 PIN SOCKET

Large steatite wafer socket designed for tubes such as the 4-125A, 4-250A, and RK-48 with E.I.A. Base No. A5-19. Tube seal ventilation is provided by one central and five ventilating holes located between contacts. Contacts designed to withstand heavy current.

Cat. No.	Type	Net Price
122-275-1	Standard	$2.35
122-275-100	Industrial	2.75
122-275-200	Military	3.25

GIANT 7 PIN SOCKET

A rugged wafer socket for tubes such as the 4E27, HK257, and 813 with E.I.A. Base No. A7-17. Contacts are designed with maximum surface area against tube prongs. ¾" ventilating hole in base provides tube seal cooling.

Cat. No.	Type	A	B	L	Net Price
122-237-1	Standard	9/16"	1/4"	2 5/8"	$1.40
122-237-100	Industrial	9/16"	1/4"	2 5/8"	1.65
122-237-200	Military	9/16"	1/4"	2 5/8"	1.90

SEPTAR SOCKETS

Designed for 7 pin tubes such as the 7094, with E.I.A. Base No. E7-2. Furnished with a separate aluminum shield ring.

Cat. No.	Type	L	Net Price
122-247-1	Standard	2 5/8"	$1.75
122-247-100	Industrial	2 5/8"	2.00
122-247-200	Military	2 5/8"	2.30
122-248-1	Standard	2 3/8"	1.55
122-248-100	Industrial	2 3/8"	1.85
122-248-200	Military	2 3/8"	2.15

VHF SEPTAR SOCKETS

Takes ⅓ less space than previously available types – permits compact design with medium button septar bases such as the 5894, 6524, and 6252 with E.I.A. Base No. E7-20. Molded contact recesses in base prevents turning. Aluminum shell submounts tube for maximum input and output shielding. ⅜" holes provide adequate ventilation.

Cat. No.	Type	Net Price
122-105-100	Industrial	$1.80
122-105-200	Military	2.10

For tubes with medium molded flare septar base such as the 826, 832, 4D32, PL6549, PL-177A, Y-65 with E.I.A. Base No. E7-2. Industrial type has 5 and military type has 7 retainer springs. With ventilated shield. Provision for mounting button mica capacitors directly to socket. Special terminals permit direct mounting of grid coils – two holes provided for mounting of bus bar neutralizing leads.

Cat. No.	Type	Net Price
122-101-100	Industrial	$2.85
122-101-200	Military	3.35

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CONNECTORS

NOTE: Connectors, unless otherwise specified, are available in 10 molded colors to Federal Standard 595. Catalog number for color desired is determined by adding color numbers on chart below to 5th and 6th digits of catalog number listed for series. Example: To order 105-800 in Violet, add color number for Violet (12) to 5th and 6th digits of series number, and order 105-812. To order 105-680-16 in Violet, add 12 to 5th and 6th digits of series number, and order 105-692-16.

Color	No.	Color	No.	Color	No.
White	01	Orange	06	Violet	12
Red	02	Yellow	07	Grey	13
Black	03	Brown	08		
Dark Green	04	Dark Blue	10		

DELUXE TIP JACK
(U.S. Pat. No. 2,704,357)

Molded body with recessed silver-plated machined beryllium copper contact. Hot tin-dipped solder terminal. Current rating: 10 amps. Voltage breakdown: 11,000 volts DC. Capacity to ⅛" panel: 2.0 mmf. ¼"-32 nut furnished.

Cat. No. 105-600 (10 colors available—see above) **Net Price $0.20**

STANDARD TIP JACK

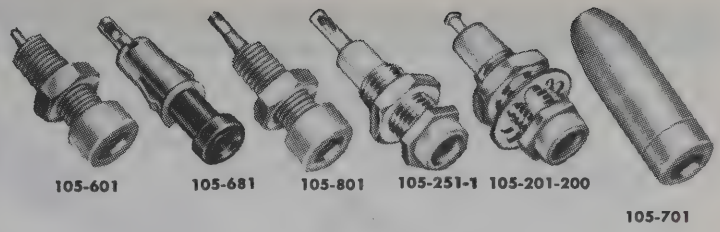
Molded body with recessed, cadmium-plated formed phosphor bronze contact. Current rating: 10 amps. Voltage breakdown: 9,000 volts DC. Capacity to ⅛" panel: 2.0 mmf. ¼"-32 nut furnished.

Cat. No. 105-800 (10 colors available—see above) **Net Price $0.13**

RAPID-MOUNT TIP JACK

Low cost – fast mounting! Snap "speed clip" into hole in .061" to .069" thick panels and insert jack. Silver-plated phosphor bronze contact. Voltage breakdown: 7,000 volts DC. Capacity to ⅛" panel: 3.8 mmf. Current rating: 10 amps.

Cat. No. 105-680-16 (10 colors available—see above) **Net Price $0.11**



METAL-CLAD TIP JACKS – STANDARD

Molded body, nickel-plated machined brass jacket. Formed, silver-plated phosphor bronze contact. Current rating: 10 amps. Voltage breakdown: 7,000 volts DC. Capacity to ⅛" panel: 3.8 mmf. ¼"-32 nut and lock washer furnished.

Cat. No. 105-250-1 (10 colors available—see above) **Net Price $0.18**

METAL-CLAD TIP JACKS – MILITARY
(U.S. Pat. No. 2,704,357)

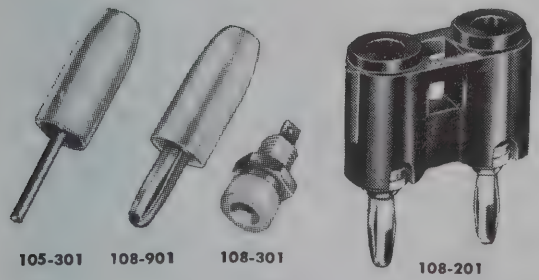
High reliability tip jack for military use or demanding industrial applications. Highest quality materials – withstands severe environmental temperature, vibration and salt spray conditions. Complies with MS-16108, Rev. F. of MIL-STD-242A. Closed entry contact design prohibits entry of tip plug .085" or larger – prevents accidental contact damage by careless probe insertion. Heavy nickel-plated brass jacket. Gold-plated, beryllium copper contact spring greatly exceeds minimum insertion/withdrawal cycle requirements of MS-16108. Current rating: 5 amps. Voltage breakdown: 8,000 volts DC. Capacity to ⅛" Panel: 3.8 PF. ¼"-32 nut and lock washer furnished. Terminal style: "A". (Terminal Style "C" per MS-16108 available on special order in production quantities.)

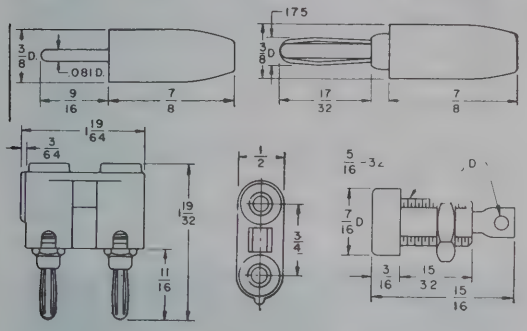
Cat. No. 105-200-200 (10 colors available—see color chart) **Net Price $0.27**

JACK AND SLEEVE ASSEMBLY
(U.S. Pat. No. 2,704,357)

Includes Deluxe Tip Jack (105-601 to 105-613), less mounting nut, with inside threaded molded sleeve. Ideal for patch cords, or insulated rear connection of panel mounted tip jack.

Cat. No. 105-700 (10 colors available—see above) **Net Price $0.20**





SOLDERLESS TIP PLUG (Patent Pending)

Completely insulated, molded sleeve. Recessed metal head prevents exposure of metal surfaces when engaged in any standard tip jack. All metal parts are nickel-plated brass. Designed for solderless connection of up to 16 gauge stranded wire. Fits all standard tip jacks. Current rating: 10 amps.

Cat. No. 105-300 (10 colors available—see above) **Net Price $0.15**

SOLDERLESS BANANA PLUGS (Patent Pending)

Compact, high voltage insulated plug for a wide variety of applications. Designed for fast, solderless connection of up to 16 gauge stranded wire. Body and pin are constructed of one-piece, nickel-plated brass with high grade nickel silver springs. Sleeve is molded. Current rating: 15 amps.

Cat. No. 108-300 (10 colors available—see above) **Net Price $0.19**

DUAL SOLDERLESS BANANA PLUG (Patent Pending)

Extremely versatile solderless dual banana plug. Molded body incorporates polarity indication and strain relief hole for wire leads. Springs are high quality nickel silver – bodies are nickel-plated. Accurately machined brass studs extend the full length of pins for extra strength. Voltage breakdown: 10,000 volts DC. Capacity plug to plug: 1.3 mmf. Current carrying capacity: 15 amps.

Cat. No. 108-200 (10 colors available—see above) **Net Price $0.60**

BANANA JACK

Completely insulated, molded body with cadmium-plated insert. Accommodates banana plugs of nominal .175" diameter. Voltage breakdown: 12,500 volts DC. Capacity to ¼" panel: 2.4 mmf. nominal. Mounts in 2¼" diameter circular, "D," or double flat hole (¼" across flats). Single nut furnished for mounting – no other mounting hardware needed.

Cat. No. 108-900 (10 colors available—see above) **Net Price $0.10**

BINDING POSTS (U.S. Pat. No. 2,806,999)

Compact, insulated, pre-assembled binding posts with molded body and silver-plated shank. Fluted thumb nut self-captivated. Connection made at solder stud, or lug may be slipped over threaded portion and secured with a nut. Single banana plug fits hole in top of binding post. Insulation resistance greater than 200 megohms after MIL-T-5422B humidity test.

Rated at 15 amps. current carrying capacity. Voltage Breakdown: 8,000 volts DC. Capacity to ⅛" Panel: 3.3 pf. Mounts in 21/64" diameter circular hole, "D", or double flat hole – ¼" across flats. Single 5/16-32 mounting nut furnished – no other hardware required.

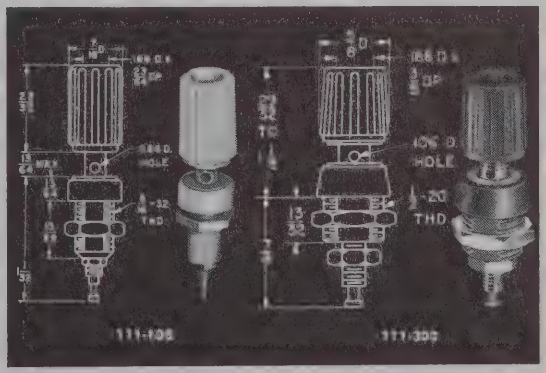
Cat. No. 111-100 (10 colors available—see color chart) ..... **Net Price $0.30**

Rated at 40 amps. current carrying capacity at 75°C ambient. Voltage Breakdown: 7,000 volts DC. Capacity to ⅛" panel: 3.5 pf. Mounts in ½" diameter circular hole, "D", or double flat hole – .422 across flats. Single ½-20 mounting nut furnished – no other hardware needed.

Cat. No. 111-300 (6 colors available) ..... **Net Price $0.40**

MOUNTING PLATE – Pre-punched, etched aluminum mounting plate for accurate mounting of two 111-100 binding posts, or 108-900 banana jacks in 21/64" diameter holes on exact ¾" centers.

Cat. No. 111-20 ..... **Net Price $0.02**

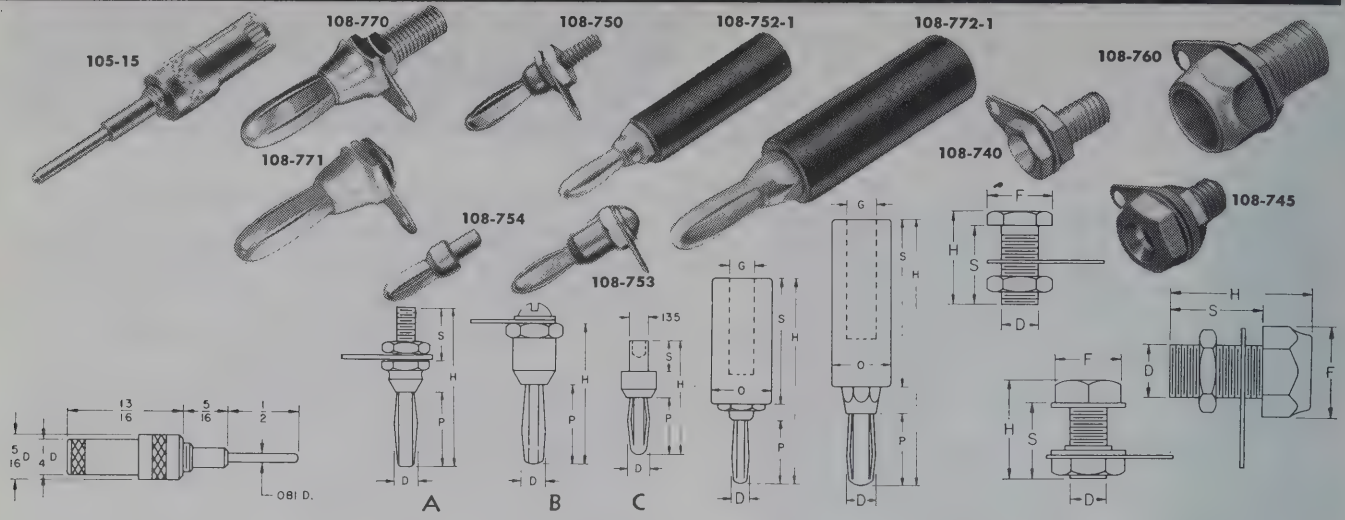


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MISCELLANEOUS CONNECTORS



SOLDERLESS PHONE TIP PLUGS

Solderless phone tip plugs with knurled nickel-plated brass body and sleeve – construction permits leads to be firmly secured without soldering. 3/16" pin . . . last 1/2" of tip .081" diameter. For use with all standard tip jacks.

Cat. No. 105-15 ..... **Net Price $0.20**

STANDARD BANANA PLUGS

This group of standard banana plugs has accurately machined brass studs which extend the full length of the plugs, providing extra strength. Springs are nickel-silver–highly resistant to corrosion. Bodies and hardware .0001 nickel-plated. All banana plugs listed below, are available with beryllium copper springs and nickel, cadmium, or silver plating, when desired. A wide selection of miniature solder-type plugs is also available on special order – however quantities in special platings or plugs should be sufficiently large for economical production runs. Solder terminal and nut or screw furnished.

Cat. No.	Dwg.	S	P	D	H	Thread	Net Price
108-750	A	3/8"	17/32"	.175"	1 1/8"	6-32	.14
108-750-2	A	3/4"	17/32"	.175"	1 1/8"	6-32	.15
108-753	B	...	17/32"	.175"	15/16"	6-32	.15

This banana plug is similar to the standard types listed above, except that it is designed for riveting. Springs are beryllium copper, cadmium-plated.

108-754	C	7/32"	13/32"	.155"	13/16"	....	$0.10

Jumbo type banana plugs with accurately machined brass studs extending full length of the pins. Nickel-silver springs. Bodies and hardware .0001 nickel-plated. With solder lug and nut or screw.

108-770	A	5/8"	3/4"	.300"	1 25/32"	1/4"-28	$0.35
108-771	B	...	3/4"	.300"	1 1/8"	10-32	35

STANDARD INSULATED BANANA PLUGS

These standard size insulated banana plugs are equipped with plastic handles, brass nickel-plated bodies, and nickel-silver springs. The 108-752-1 has a black plastic handle–the 108-752-2 has a red plastic handle.

Cat. No.	S	P	D	H	G	O	Net Price
108-752-1	1 3/8"	17/32"	.175"	2 1/8"	7/32"	7/16"	$0.30
108-752-2	1 3/8"	17/32"	.175"	2 1/8"	7/32"	7/16"	.30

JUMBO INSULATED BANANA PLUGS

These jumbo size insulated banana plugs are similar in design to the standard types listed above, but are somewhat larger in size. With brass nickel-plated bodies, and nickel-silver springs. The 108-772-1 has a black plastic handle – the 108-772-2 has a red plastic handle.

Cat. No.	S	P	D	H	G	O	Net Price
108-772-1	1 3/4"	3/4"	.300"	2 25/32"	3/8"	5/8"	$0.55
108-772-2	1 3/4"	3/4"	.300"	2 25/32"	3/8"	5/8"	.55

STANDARD BANANA JACKS

High quality machined brass banana jack. Nickel-plated. Furnished complete with solder terminal and nut.

Cat. No.	F	D	S	H	Hole Dia.	Thread	Net Price
108-740	3/8"	1/4"	17/32"	5/8"	.166"	1/4"-28	$0.12

High quality machined brass banana jacks with plastic head molded to body. Nickel-plated. Furnished complete with solder terminal and nut. The 108-745-1 is equipped with red plastic head – the 108-745-2 is equipped with black plastic head.

108-745-1	7/16"	1/4"	31/64"	21/32"	.166"	1/4"-28	$0.22
108-745-2	7/16"	1/4"	31/64"	21/32"	.166"	1/4"-28	.22

This jumbo banana jack will accommodate plugs such as the 108-770 and the 108-771 listed above. Machined brass, nickel-plated. Furnished complete with solder terminal and nut.

108-760	9/16"	3/8"	21/32"	1"	.277"	3/8"-32	$0.35

PRINTED CIRCUIT PLUGS AND JACKS

Designed for use in printed circuits. Tough, low-loss plastic construction per MIL-P-17091. Horizontal and vertical tip jacks designed to accommodate .080" tip plug. **Choice of 10 molded colors for coded applications, see color ordering information on next page.**

HORIZONTAL JACK

Unique design accepts .080" dia. tip plug in either end, or from top or bottom! Silver-plated beryllium copper formed contact. Two terminals.

Cat. No.	Color	Net Price
105-750	(10 colors, see preceding page)	$0.08

VERTICAL JACK

Mounts through single .052" hole, requires minimum mounting area. Silver-plated, machined beryllium copper-contact.

Cat. No.	Color	Net Price
105-850	(10 colors, see preceding page)	$0.11

SUB-MINIATURE TIP PLUG

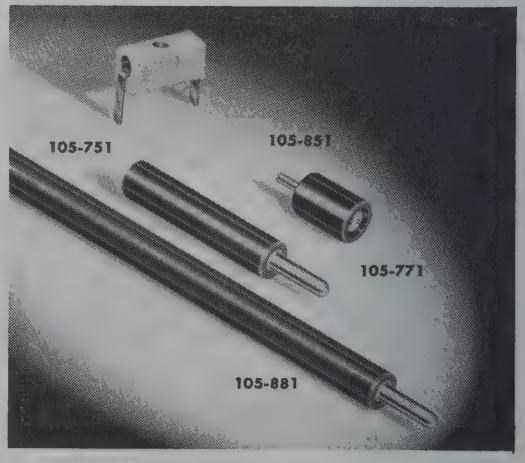
For use with miniature jack, .080" dia. tip. Nickel-plated machined brass body, solder type lead connection.

Cat. No.	Color	Net Price
105-770	(10 colors, see preceding page)	$0.14

LONG HANDLE TIP PLUG

For use with horizontal, vertical, or standard .080" diameter tip jacks. Four-inch nylon handle for ready access to "hard to reach" test points. Nickel-plated machined brass body, solder type lead connection.

Cat. No.	Color	Net Price
105-880	(10 colors, see preceding page)	$0.25



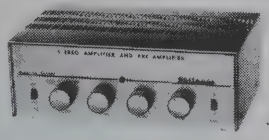
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Philmore Guaranteed ELECTRONIC COMPONENTS

14 WATT STEREO AMPLIFIER AND PRE-AMPLIFIER

Model No. SA1400
Net Price $39.50



SPECIFICATIONS

Output Power:	14 Watts (7 Watts per channel)
Output Impedance:	4, 8 and 16 ohms
Frequency Response:	±1db, 40 to 16000 CPS.
Harmonic Distortion:	Less than 1%
Hum and Noise Level:	50db below rated output
Input for Full Output	
Phono:	5mV Magnetic 300mV Ceramic or Crystal
Tuner or Auxiliary:	300mV
Selector Switch:	Stereo-Phono, Tuner and Auxiliary Monaural-Phono, Tuner and Auxiliary
Tone Control:	More than — 11db at 10000 C/S
Power Supply:	117 Volts, 50/60 CPS. 85 Watts
Controls:	Input Selector, Selector, Volume Control, Balance Control, Tone Control and Power Switch
Cabinet:	Smart Hammertone Gray finish with Silver etched front panel.
Dimensions:	10½" x 6⅜" x 3¾"
Tube Compliment:	6BM8-2 12AX7-1 6CA4-1

No. SA1400 ..... Net Price $39.50 ea.
(Subject to possible Federal Excise Tax)

NEW IMPROVED THREE TUBE (Including Rectifier Tube) TWO-BAND AC-DC RADIO KIT



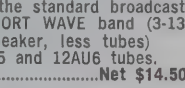
Provides signal strength sufficient to drive a 3½" PM speaker.

Simplified instructions, fully illustrated with pictorial and schematic diagrams, speed assembly. Chassis is completely punched and plated. Panel is attractive gray hammertone, with white silk-screened lettering and dial. Here is a professional radio Kit that is perfect for the beginner in radio. When assembled, you have a TWO BAND set, covering the standard broadcast band (550-1650 KC) and SHORT WAVE band (3-13 MC). (Complete with PM speaker, less tubes)

Uses 1 each: 35W4, 50C5 and 12AU6 tubes.

No. 7001-CR ..... Net $14.50

HI-FI TURNOVER CRYSTAL CARTRIDGE WITH TONE ARM



Contains the CX401 cartridge with two Sapphire needles, 30 to 11,000 cps., 6 Volt output. Includes arm rest and hardware. Spring counter balanced aluminum arm. Needles are very easily replaceable. Individually boxed.

No. C401 ..... Net Price $2.65

STEREO PHONO AMPLIFIER WITH TRANSFORMERS



4-tube Stereo Amplifier plus Silicon Rectifier. Neat, compact, fully assembled, furnished with tubes. Two volume controls with on-off switch, two tone controls, standard RCA type input jacks for phono cartridge; features two 2500-ohm output transformers to match 3.2 ohm voice coil.

No. PA63D ..... Net Price $12.75 ea.

3 CIRCUIT SLIM PHONE PLUG



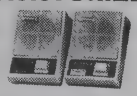
Black bakelite barrel. All parts N.P. Fits all standard type jacks.

Length of Barrel — 1⅝"
Diameter of Barrel — ½"
Overall Length — 2⅞"

No. 524W Net Price $.36 ea.

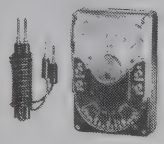
TWO STATION TRANSISTORIZED INTERCOM

No. TC2
Net Price $10.95 Per Set



Beautifully styled high-impact plastic cabinets, with sloping design for full maximum speaker performance. Consists of a master control, and listen-talk push button switch and a remote (sub). Both stations can call each other, even when master is in off position, by pressing either one of the push buttons, which sends a signal. Provides excellent communication between two locations in home, shop or office. Supplied complete with 66 feet connecting cable and plugs, 9 Volt battery, insulated staples, plastic tape and instructions. Size of cabinets 1¾" high x 4" deep x 3" wide. Eye appealing blister packed for quick sales.

20,000 OHMS PER VOLT MULTITESTER



20,000 ohms per volt D.C., 10,000 ohms per volt A.C. Easy reading 3" rectangular scale.

Specifications

DC Voltage	:	0-5-25-100-500-1000 Volts (20,000 ohms per volt)
AC Voltage	:	0-5-25-100-500-1000. Volts (10,000 ohms per volt)
DC Current	:	0-50uA, 0-5-50-500MA
Resistance	:	0-6K-600K-6Meg-60Meg
Decibels	:	—20db to +62db (in 5 ranges)
Batteries	:	uses 1-1½ volt penlite battery, and 1-15 volt battery (Burgess type Y10 or equivalent)

Molded bakelite case 4⅝" high x 3" wide x 1¼" deep. Supplied with smart leather carrying case, test leads, instructions and batteries.

No. M620 Net Price $18.25 ea.

COMBINATION DYNAMIC HEADSET WITH BOOM MICROPHONE

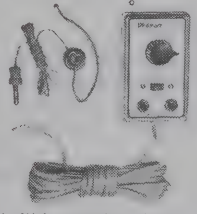


Some Uses: • Citizens' Band Radio • Dispatchers • Commercial Radio • Stage Direction

Consists of 8 ohm dynamic headset and 50,000 ohm dynamic boom microphone. Equipped with comfortable earcushion, and protective plastic covered headband. Supplied with 4 foot shielded microphone lead, and 4 foot headset two-wire cable. Frequency response of microphone 300 to 5000 CPS.

No. 2269 Net Price $11.95 ea.

PRIVATE RADIO-TV LISTENER WITH REMOTE VOLUME CONTROL



Housed in compact plastic cabinet (size 2⅞" x 1¾" x 1⅜") incorporating a speaker on-off switch, and built-in remote volume control for convenient listening.

Simple to attach on any make TV, Radio, FM, Phonograph, or HI-FI Sets. Does not interfere with the normal operation of the set. Supplied with 20 feet of Cable, and miniature earphone with plastic covered wire earholder. Has built-in extra jack for additional person to listen.

No. TVS ..... Net Price $3.25 ea.

LIGHTWEIGHT DYNAMIC PHONES



Equipped with slim plastic covered metal ear support. With either our No. 660 Ultra-Miniature plug, 15/16" length, or our No. 702 sub-miniature plug, 1⅛" length, and 38" flexible plastic cord. Individually packed in clear plastic bags.

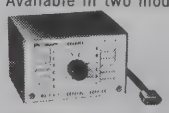
No.	Description	Net Price Ea.
140 P-6	8 ohm with No. 660 Plug	$.33
140 P-7	8 ohm with No. 702 Plug	.33
140 P-6-15	15 ohm with No. 660 Plug	.33
140 P-7-15	15 ohm with No. 702 Plug	.33

MULTIPLE C/B CRYSTAL ADAPTERS

12 Channel Crystal Selector switch assemblies, housed in smartly styled cabinet.

- 12 position switch for exact frequency location.
- 20" coaxial cable is fitted with 2 prong plug, which eliminates all soldering.
- Etched front panel allows C/Bʳer to fill in desired channels.
- Will operate up to 12 different channels.
- Indicator knobs are supplied to pin point the exact channel desired.
- Compact cabinet. Size 4¼" x 3⅜" x 2⅝".
- Supplied with 12 Ceramic sockets.

Available in two models.



Model No. CB150, designed to operate on either the transmit or receive section of the C/B Transceivers.

No.	Net Price
CB150	$9.95 ea.

Model No. CB155 has the same operating characteristics as the model CB150, but includes the additional outstanding feature, which enables the user to operate six transmit channels and six receive channels simultaneously. Supplied with two 20" coaxial cables fitted with 2-prong plugs.

No. CB155 ..... Net Price $12.95 ea.

COMBINATION S.W.R. BRIDGE AND FIELD STRENGTH METER



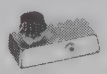
Specifications

Impedance:		52 ohms
Accuracy	:	±5db., 2 to 30 Mc.
Power	:	1 kilowatt
Meter	:	1⅝" easy to read 2 color dial

Attractive grey metal cabinet, size 5¾" H x 2¼" D x 1 13/16" W. Includes two standard fittings. Supplied with 5 section detachable collapsible antenna, and set of instructions.

No. FS45 Net Price $12.95 ea.

GUITAR MICROPHONE



Compact guitar microphone with built-in volume control. Adjustable mounting bracket. Includes interconnecting 6½ foot shielded cable, with plugs. High impedance crystal cartridge. Attractively packaged in multi-colored box.

No. S1711 Net Price $4.05 ea.

MINIATURE PM SPEAKER



For Transistor and subminiature tube applications. 8-ohm impedance. Speakers are full round without flange. Individually boxed.

No.	Size	Net Price
TS20	2"	$1.10 ea.
TS21	2¼"	1.10 ea.
TS25	2½"	1.10 ea.
TS26	2¾"	1.10 ea.

SUBMINIATURE PUSHBUTTON SWITCH



S.P.S.T. normally open momentary switch. Completely enclosed housing. Mounts in ¼" hole, in panels up to ⅛" thick. Supplied with red plastic button and mounting nut.

No. 2289 ..... Net Price $.22

SUB MINIATURE VARIABLE CAPACITOR



1 Gang 365 mmfd. Overall 1" square. Depth ½", 1¼" diameter clear plastic dial with Calibrations and Knurled edges. For Transistor-RF Circuits, calibrated 530 to 1600kc.

No. 1950D ..... Net Price $.75 ea.

NEON PANEL LAMPS



Gives direct indication on 115 and 230 volt AC-DC lines. Totally enclosed with Jewel and lamp, 1" long. Mounts in 5/16" panel hole. Complete with mounting nut and washer. Uses external resistor 100K ohms for 115 volt, and 270K ohms for 230 volt. Available in Red, Clear or Yellow lens. Individually boxed. Specify color.

No. NL50 .....Net Price $.42 ea.

PHILMORE MFG. CO. INC.

We will be pleased to send our latest Catalog upon request.

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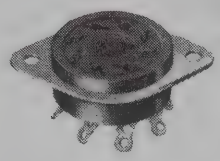
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TUBE SOCKETS, AND MICROPHONE CONNECTORS



"S" TYPE TUBE SOCKETS

Amphenol "S" type tube sockets mount quickly and easily without screws or rivets by means of a patented "Retainer Ring Mounting." Sockets position to line up contacts for convenient wiring. The "S" type tube socket may be used with "Plug Caps" to make high-quality, low-cost cable connectors. Available also in mica-filled phenolic.



"MIP" SOCKETS

Amphenol's famous "MIP" socket (Molded-in-Plate) features Bakelite dielectric, and 4 to 20 contacts.



"CP" PLUGS

Amphenol "CP" plugs also mount simply through use of the patented "Retainer Ring Mounting." "CP" plugs are ideal as chassis connectors with plug-in units and are available optionally in mica-filled phenolic. They also adapt to cable applications when used with steel caps.



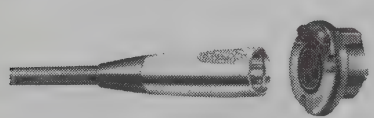
110/220 VOLT PLUGS & RECEPTACLES

Amphenol's 110/220 volt plugs and receptacles may be panel or cable mounted. Available with rubber grommeted or cable clamp type shields, recessed or raised mountings, two or three contacts.



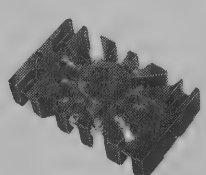
110 VOLT GROUND PLUGS & RECEPTACLES

Amphenol's 110 volt ground plugs and receptacles meet latest UL requirements. The 160 Series may be panel or cable mounted.



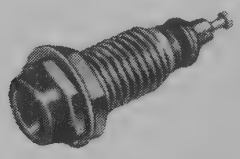
MIKE CONNECTORS

Designed for use with shielded microphone cables, Amphenol's family of microphone connectors are available in several series and include "Quick" Microphone Connectors with quick-button disconnect, 75 Series, single and double contact 80 Series, and its companion, 3, 4 and 6 contact 91 Series.



RELAY SOCKETS

Amphenol relay sockets are available in a broad range of contact styles and sizes, with up to 20 contacts.

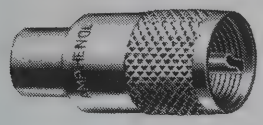


MILITARY TIP JACKS

Amphenol military tip jacks feature a recessed silver-plated contact for top durability and high performance. Tip jacks formerly were manufactured by the i.p.c. division.

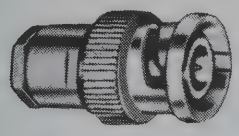
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Amphenol® RF PRODUCTS



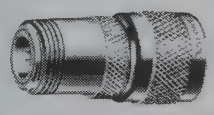
83 SERIES UHF CONNECTORS

Amphenol's UHF 83 Series consists of both small and large single and twin contact connectors. All are low-cost, general purpose connectors of non-constant impedance. They operate satisfactorily at frequencies up to 200 megacycles, can be used with caution up to 500 megacycles, and can be used at peak voltages up to 500 volts.



MIL-CRIMP, QUICK-CRIMP & SOLDER BNC CONNECTORS

Amphenol Series BNC connectors for small coaxial cables consist of non-constant impedance types and an improved constant 50 ohm impedance type. All incorporate quick-connect and disconnect bayonet-lock coupling and are weatherproof. Now you can have your MIL-spec and crimp it, too — with the first quick-crimp connector to meet MIL-C-23329A, Amphenol's MIL-Crimp.



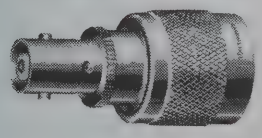
SERIES N CONNECTORS

Completely weatherproof Series N connectors are the most popular constant impedance connectors for medium size coaxial cables. They can be used throughout microwave frequencies with minimum line unbalance or increase in standing-wave ratio. Although Series N 50 ohm and 70 ohm connectors do not mate, 70 ohm cables may be used with 50 ohm Series N connectors where impedance matching is not critical.



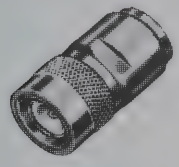
SUB*Minax*® RF CONNECTORS

Amphenol's SubMinax RF connector family provides the most complete subminiature line available from one source. The SubMinax 27 Series is gold-plated and uses a MIL-C-22557 screw-on and push-on coupling. The SubMinax 5116 is silver-plated and mates with competitive non-MIL-C-22557 screw-on, push-on coupling types. The 5116 contains only five components, saving as much as two-thirds assembly time.



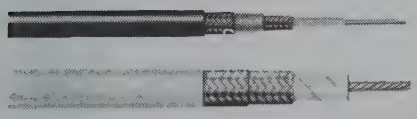
BETWEEN SERIES ADAPTERS

Amphenol can provide the most complete line available of between-series adapters.



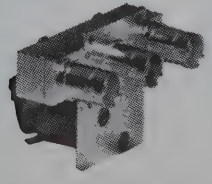
OTHER RF CONNECTORS

Types C, HN, LC, BN, TNC, LN, SKL, MB, MC, SM, TWINAX, MHV, and Terminations, as well as a variety of modifications, make up the complete Amphenol line.



COAXIAL CABLE

Amphenol provides the broadest line of RG and non-RG coaxial cable available, and is generally accepted as the quality leader in this field. Dielectric includes Teflon, Polyethylene, and Polyfoam.



COAXIAL SWITCHES

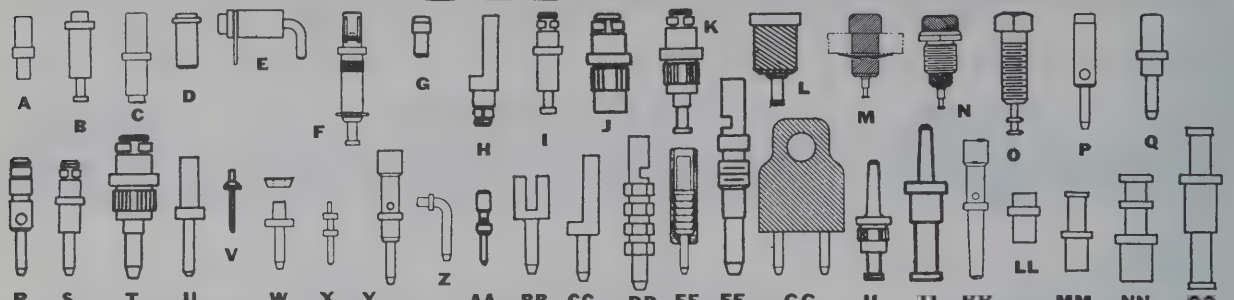
Amphenol coaxial switches provide remote and manual switching up through 4000 mc. Single pole, single throw–through 12 pole. Available with a variety of terminating connectors and relay voltages.

Amphenol® DISTRIBUTOR DIVISION / amphenol corporation

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CAMBRIDGE THERMIONIC CORPORATION

CAMBION® CONNECTORS— JACKS AND PLUGS



NOTE: Part Numbers having Gold, Bright Alloy, Electro-tin, Silver or Electro-solder spelled out in Finish Column, do not require dash numbers to indicate finish.

JACKS

Order per Part No. and all applicable Dash No's. Examples: **(3395-2-03) (2209-1-03) (1802-1).**

Fig. Type	Cambion Part No.	Recommended Board Thickness Per Dash No. 1/32	1/16	3/32	1/8	3/16	1/4	Finish -03 Gold	Finish -08 Bright Alloy	For Pin Dia.	Net Ea., Lots 10-49	50-99	100-249
A	3394	-1	-2	-3	-4			-03		.025b	12c	12c	11c
B	3395			-1	-2	-3		-03		.025b	14c	13c	12c
C	3309 Dbl-End		-1	-2	-3	-4		-03		.025b .040b	22c	20c	19c
D	3388-1	.031 to .156						-03		.040b	17c	16c	15c
E	3422-1	To .078 Max.						-03		.040b	20c	19c	18c
F	3304				-1	-2	-3	-03		.040a	12c	12c	11c
G	3230-1	.031 to .062						Gold		.025b	19c	18c	17c
B	3320	-1	-2	-3	-4	-5		-03		.040b	20c	19c	18c
H	2655-1	.047 to .125						-03		.045c	29c	27c	25c
									-08		26c	24c	23c
I	2378	-1	-2	-3	-4	-5		-03		.045c	20c	19c	18c
									-08		17c	16c	15c
J	2320		-1	-2	-3	-4		-03 to order		.062c	19c	18c	17c
									-08		16c	15c	14c
K	2515		-1	-2	-3	-4		-03 to order		.062c	20c	19c	18c
									-08		17c	16c	15c
K	2265		-1	-2	-3	-4		-03		.080c	20c	19c	18c
									-08		17c	16c	15c
	2756-1*	(Snap-on insulator for 2265 jack)						black and red:			4½c	4½c	4c
								white:			3c	3c	2½c
L	4352-1*‡	.031 to .094						-03		.040b	17c	16c	15c
L	4353-1**	.031 to .094						-03		.040b	17c	16c	15c
L	4351-1**	.031 to .179						-03		.045c	33c	30c	28c
									-08		29c	27c	25c
M	2202-1	.047 to .250 (Insulated, white-with .312 shank dia.)						-03		.080c	37c	35c	32c
N	2209-1	.375 thread length (Insulated, white-with ⅜-32 metal thread)						-03		080c	53c	49c	45c
O	2425-1	⅜ thread length Banana plug jack							Bright Alloy	I.D. .107a	22c	21c	20c
O	1802-1	.750 thread length Banana plug jack							Bright Alloy	I.D. .170a	26c	24c	22c

JACK AND PLUG COMBINATIONS

Order per Part No. and all applicable Dash No's. Examples: **(3301-1-0310) (2650-3-08).**

Fig. Type	Cambion Part No.	Rcecommended Board Thickness Per Dash No. 1/32	1/16	3/32	1/8	3/16	Finish -03 Gold	Finish -08 Bright Alloy	For Pin Dia.	Net Ea., Lots 10-49	50-99	100-249
P	3301-1§	For patch cord wire					0310		.040b	17c	16c	15c
Q	3310	-1	-2	-3	-4	-5	-03		.040b	22c	20c	19c
R	3103-1#	For patch cord wire					-03		.045c	25c	23c	21c
S	2650	-1	-2	-3	-4	-5	-03		.045c	23c	22c	21c
								-08		20c	19c	19c
T	2317		-1	-2	-3	-4	-03		.080c	23c	22c	21c
								-08		20c	19c	18c

PATCH CORDS

Order per Part No. and all applicable Dash No's. Examples: **(2871-1-0316) (3306-2-0312).**

Cambion Part No.	Wire Lengths From Shoulder to Shoulder 2"	4"	6"	8"	12"	Finish -03 Gold	Finish -08 Bright Alloy	Pin Dia.	Pin Lgth.	Net Ea., Lots 10-49	50-99	100-249
2871-1♦ Fig. GG	P.C. Shorting bar with molded insul.					-03		.040	.181	26c	25c	23c
3306♦		-2	-3			-03		.040	.188	34c	32c	29c
				-4	-5	-03				37c	35c	32c
3300♦	-1	-2	-3			-03		.040b	.188▲	52c	47c	44c
Combination (P-J)		-4	-5			-03				55c	50c	47c

PIN PLUGS

Order per Part No. and all applicable Dash No's. Examples: **(3889-1) (3396-1-03) (2662-1-0819).**

Fig. Type	Cambion Part No.	Recom'ed Board Thick. Per Dash No. 1/32	1/16	3/32	1/8	Finish -03 Gold	Finish -08 Bright Alloy	Pin Dia.	Pin Lgth.	Net Ea., Lots 10-49	50-99	100-249
U	3231	-1	-2	-3		Gold		.025	.125	3c	3c	3c
U	2970	-1	-2	-3		Gold		.040	.300	3c	3c	3c
U	2971	-1	-2	-3		Gold		.040	.150	3c	3c	3c
U	3232	-1	-2	-3		Gold		.040	.300	3c	3c	3c
U	3233	-1	-2	-3		Gold		.040	.150	3c	3c	3c
U	3241	-1	-2	-3		Gold		.040	.100	3c	3c	3c
V	3889-1	.031 only				Gold		.025	.188	3c	3c	3c
U	3220	-1	-2	-3	-4	Electro-Solder		.045	.188	2c	2c	2c
V	3221	-1	-2	-3	-4	Electro-Solder		.045	.188	2c	2c	2c
U	3393	-1	-2	-3	-4	-03		.025	.125	2c	2c	2c
	3202	-1	-2	-3		-03		.025	.125	3c	3c	3c
W	3396-1	.008 to .024				-03		.040	.188	4c	4c	4c
X	3340-1	For Molds				Gold		.025	.125	3c	3c	3c
Y	3308-1	I.D. for Wire				-03		.040	.188	5c	5c	5c
Z	1521	-1	-2	-3		-03		.040	.222	5c	5c	5c
AA	3050-1	I.D. for Wire				-03		.025	.125	11c	10c	9c
	3102-1	Insulated 3050 with black insulation, unassembled (ADD -0310)								12c	12c	11c
BB	2319	-1	-2			-03 to order		.062	.200	12c	12c	11c
							-08			11c	10c	9c
BB	2850	-1	-2			-03 to order		.045	.200	12c	12c	11c
							-08			11c	10c	9c
CC	2654-1	.047 to .125				-03		.045	.188	12c	12c	11c
							-08			11c	10c	9c
DD	2379-1	I.D. for Wire				-03 to order		.045	.188	6c	6c	6c
							-08			5c	5c	5c
DD	2379-2	I.D. for Wire				-03 to order		.062	.188	6c	6c	6c
							-08			5c	5c	5c
DD	2201-2	I.D. for Wire				-03		.080	.200	6c	6c	6c
							-08			5c	5c	5c
EE	2662-1†	I.D. for Wire				-03 to order		.062	.188‡	11c	10c	9c
							-08			9c	8½c	8c
EE	2663-1†	I.D. for Wire				-03 to order		.045	.188‡	11c	10c	9c
							-08			9c	8½c	8c
EE	2660-1†	(2662 with slotted barrel)				-03 to order		.062	.188‡	16c	15c	14c
							-08			14c	13c	12c
EE	2661-1†	(2663 with slotted barrel)				-03 to order		.045	.188‡	16c	15c	14c
							-08			14c	13c	12c
FF	2225-1†	I.D. for Wire				-03		.080	.203‡	20c	19c	18c
							-08			17c	16c	15c
	3094-1	Wire adapter				Silver		.040	.103	3c	3c	3c

TAPER PIN PLUGS AND TAPER RECEPTACLES

Order per Part No. and all applicable Dash No's. Examples: **(1016-4) (1781-1-04) (2115-6).**

Fig. Type	Cambion Part No.	Recommended Board Thick. Per Dash No. 1/32	1/16	3/32	1/8	3/16	1/4	Finish Electro-Tin (E-t)	Sh'k Dia.	Taper Series	Ea. 100-999	Pkg. 1000, Lots 1000-4999	5000-9999
II	1016	-1	-2	-3	-4	-5		E-t	.124■	.037P	4c	30.90	28.40
II	1017	-1	-2	-3	-4	-5		E-t	.124■	.037P	4c	30.90	28.40
JJ	1799	-1	-2	-3	-4	-5	-6	E-t	.145	.053P R	3c	27.80	25.50
KK	1781-1	I.D. for Wire						-04(E-t) -03 (Gold)		.053P	4c 5c	29.30 43.90	26.90 40.20
LL	1015	-1	-2	-3	-4	-5	-6	E-t	.113	.053R	3c	25.00	22.90
MM	2186	-1	-2	-3	-4	-5	-6	E-t	.112	.053R	4c	34.80	31.90
NN	2114	-1	-2	-3	-4	-5	-6	E-t	.145	.053R	4c	34.10	31.30
NN	2113	-1	-2	-3	-4	-5	-6	E-t	.145	.053R	3c	26.70	24.50
NN	2132	-1	-2	-3	-4	-5	-6	E-t	.145	.053RR	6c	52.20	47.90
OO	2115	-1	-2	-3	-4	-5	-6	E-t	.145	.053RR	5c	44.50	40.90

NOTES APPLYING TO CAMBION PARTS LISTED ABOVE

a—one piece construction. **b**—captivated spring insert. **c**—compression spring. *Insulation color, (ADD DASH NO.): **-10** Black; **-12** Red; **-19** White. †With insulator, unassembled: (ADD DASH NO.): **-10** Black; **-12** Red; **-19** White. ‡With insulator, assembled. §With Black insulation, unassembled. #With insulation, unassembled (ADD DASH NO.): **-10** Black; **-12** Red. ▲Mates with itself. ■Over knurl. **P**—Plug. **R**—Receptacle. **PR**—Combination Plug-Receptacle. **RR**—Combination Receptacle-Receptacle. ♦With insulation, assembled (ADD DASH NO.): **-10** Black; **-12** Red; **-16** Blue. **(P-J)**—Plug-Jack. ‡Insulated, Press Mount with .148 shank diameter. *Insulated, Press Mount with .185 shank diameter.

1032-65A

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CAMBRIDGE THERMIONIC CORPORATION

CAMBION® SOLDER TERMINALS — TURRET, PIN & FORK TYPES

Cambion No.	Fig.	Diameter, Inches: Shank (Thd.)	Turret	Shoulder	Height, In. Ref.: Board: Above	Below	Board Thickness*	Notes	Net Pkg 100: 100-499	500-999	Net Per 1000, Lots of: 1000-4999	5000-9999	10000-24999	25000-49999
1011	A	.090	.093	.125	.290	.....	1—6	.....	$2.01	$1.83	$15.80	$14.50	$13.30	$12.90
1012	A	.090	.093	.125	.427	.....	1—6	.....	2.20	2.00	17.60	16.10	14.80	14.30
1013	A	.090	.109	.156	.343	.....	1—6	.....	2.42	2.20	19.30	17.70	16.30	15.70
1014	A	.090	.109	.156	.471	.....	1—6	.....	2.75	2.50	21.30	19.60	18.00	17.40
1021	B	.220	.125	.312‡	.218	.172	3	a, y	7.15	6.50	56.40	51.70	47.50	45.80
1022	B	.250	.141	.344‡	.250	.203	4	a, y	7.92	7.20	62.30	57.10	52.50	50.60
1023	B	.257	.156	.375‡	.312	.203	5	a, y	8.69	7.90	68.20	62.60	57.50	55.40
1026	C	.090	.094	.125	.237	.....	1—4	.....	1.36	1.24	10.70	9.80	9.10	8.80
1027	D	.112	.140	.188	.328	.070†	1—4	b	3.52	3.20	27.10	24.80	22.80	22.00
1028	E	.071	.096	.125	.188	.040†	1—4	b	2.83	2.57	22.20	20.30	18.80	18.20
1030	F	.072	.050	.094	.250	.125	1—6	.....	3.63	3.30	28.10	25.80	23.70	22.80
1031	G	.072	.050	.094	.078	.250	1—6	.....	2.81	2.55	22.00	20.20	18.70	18.10
1032	G	.062	.045	.078	.078	.140	1—4	.....	1.76	1.60	13.80	12.60	11.70	11.30
1035	H	.125	.093	.156	.237	.134	1—6	c	2.39	2.17	18.70	17.20	15.90	15.40
1036	I	.125	.093	.156	.237	.082	1—6	c	2.26	2.05	17.70	16.20	15.00	14.50
1040	J	.090	.109	.156	.159	.....	1—5	.....	1.93	1.75	14.80	13.60	12.50	12.00
1041	K	.090	.109	.156	.159	.082	1—5	d	2.01	1.83	15.80	14.50	13.40	13.00
1042	I	.090	.109	.156	.281	.082	1—5	d	2.55	2.32	20.00	18.40	17.00	16.40
1043	H	.090	.109	.156	.281	.164	1—5	d	2.53	2.30	19.90	18.20	16.90	16.30
1081	H	.201	.145	.250	.342	.315	2—6	.....	4.62	4.20	36.60	33.60	30.70	29.60
1091	C	.090	.093	.125	.219	.....	1—6	.....	3.20	2.91	25.10	23.00	21.30	20.60
1130•	L	.060	.050	.094	.125	.....	11—4	e, z	1.65	1.50	12.90	11.90	11.00	10.60
1131•	L	.060	.050	.094	.188	.....	11—6	e, z	1.76	1.60	14.10	12.90	11.90	11.50
1132•	L	.060	.050	.094	.250	.....	1—4	e, z	1.76	1.60	14.10	12.90	11.90	11.50
1133•	L	.060	.050	.094	.313	.....	1—4	e, z	2.04	1.85	16.10	14.80	13.70	13.20
1134•	L	.060	.050	.094	.375	.....	1—6	e, z	2.04	1.85	16.10	14.80	13.70	13.20
1135•	L	.060	.050	.094	.438	.....	2—4	e, z	2.26	2.05	17.70	16.20	15.00	14.50
1136•	L	.060	.050	.094	.500	.....	2—4	e, z	2.37	2.15	18.90	17.30	16.00	15.50
1140•	M	.108	.050	.156	.188	.156	1—6	f, z	2.42	2.20	19.10	17.00	16.20	15.70
1141•	M	.108	.050	.156	.375	.156	1—6	f, z	3.03	2.75	23.70	21.70	20.10	19.40
1142•	M	.108	.050	.156	.375	.344	1—6	f, z	3.69	3.35	29.10	26.70	24.70	23.90
1143	N	.181	.093	.250	.250	.219	1—6	.....	3.56	3.24	28.00	25.70	23.70	23.00
1245•	J	.112	.145	.188	.234	.....	1—6	h	1.90	1.73	14.90	13.70	12.70	12.30
1457•	J	.078	.075	.125	.187	.....	1—4	h	1.19	1.08	9.30	8.50	7.90	7.60
1459	L	.039	.039	.062	.080	.022†	2	g	1.65	1.50	12.90	11.80	10.90	10.60
1460	L	.046	.046	.078	.090	.028†	2	g	1.65	1.50	12.90	11.80	10.90	10.60
1461	L	.050	.050	.078	.090	.033†	2	g	1.65	1.50	12.90	11.80	10.90	10.60
1462	L	.059	.059	.094	.090	.040†	2	g	1.65	1.50	12.90	11.80	10.90	10.60
1463	N	.116	.070	.156	.156	.125	1—5	.....	1.71	1.55	13.30	12.20	11.30	10.90
1512	J	.062	.093	.125	.156	.043†	1—6	g	1.98	1.80	15.50	14.20	13.20	12.70
1513	C	.112	.145	.188	.328	.078†	1—6	g	2.66	2.42	20.80	19.20	17.70	17.10
1520	I	.114	.145	.188	.360	.109	1—6	g, l	2.88	2.62	22.60	20.70	19.20	18.60
1548	C	.112	.146	.188	.312	.078†	1—6	.....	1.65	1.50	12.90	11.80	10.90	10.60
1558•	C	.090	.093	.125	.219	.....	1—6	.....	1.11	1.01	8.70	8.00	7.40	7.25
1579	I	.202	.141	.250	.344	.110	1—5	.....	3.75	3.41	29.40	27.00	25.00	24.20
1582•	O	(4-40)	.145	.188	.357	.....	1, 2	j	3.70	3.36	29.00	26.60	24.60	23.80
1597	C	.090	.093	.125	.219	.....	1—6	.....	1.35	1.23	10.60	9.70	9.00	8.70
1604	J	.062	.062	.094	.093	.....	11—3	.....	1.36	1.24	10.70	9.80	9.10	8.80
1619	N	.242	.154	.312	.342	.280	6	.....	7.37	6.70	58.30	53.50	49.00	47.20
1620•	H	.262	.200	.312	.500	.436	2—6	.....	7.92	7.20	62.40	57.30	52.40	50.50
1724•	C	.112	.142	.188	.359	.....	1—6	h	1.83	1.66	14.40	13.20	12.20	11.80
1797	J	.110	.138	.188	.188	.067†	1—4	.....	1.87	1.70	14.60	13.40	12.40	12.00
1798	C	.135	.110	.188	.312	.043†	2—5	.....	2.83	2.57	22.20	20.30	18.80	18.20
1979	P	.112	.130	.188	.317	.060†	1—6	.....	2.86	2.60	22.50	20.60	19.10	18.40
2000•	I	.090	.063	.125	.219	.104	1—4	.....	1.85	1.68	14.50	13.30	12.30	11.90
2004•	H	.090	.063	.125	.219	.188	1—4	.....	1.82	1.65	14.20	13.00	12.10	11.70
2027	J	.071	.096	.125	.187	.043†	1—4	.....	1.61	1.46	12.60	11.60	10.60	10.20
2034	C	.090	.109	.156	.281	.....	1—6	.....	1.91	1.74	15.00	13.70	12.60	12.10
2040•	H	.072	.050	.094	.186	.164	1—6	.....	1.97	1.79	15.40	14.10	13.00	12.60
2041	J	.072	.050	.094	.104	.....	1—6	.....	1.22	1.11	9.60	8.80	8.10	7.90
2042•	K	.072	.050	.094	.104	.082	1—6	.....	1.33	1.21	10.40	9 60	8.90	8.60
2043	C	.072	.050	.094	.186	.....	1—6	.....	1.27	1.16	10.00	9.20	8.50	8.20
2044•	I	.072	.050	.094	.186	.082	1—6	.....	1.41	1.28	11.00	10.10	9.30	9.00
2051•	O	(4-40)	.145	.188	.357	.....	1, 2	j, k	4.16	3.78	32.60	29.90	27.70	26.80
2080•	Q	.090	.093	.125	.301	.....	1—5	.....	1.72	1.56	13.50	12.40	11.40	11.10
2081	R	.120	.093	.156	.219	.219	1—4	l	2.57	2.34	20.20	18.50	17.10	16.50
2084•	Q	.112	.145	.188	.484	.....	1—6	h	3.30	3.00	25.90	23.80	21.80	21.00
2085•	J	.047	.040	.062	.094	.....	11—4	.....	1.02	.93	8.10	7.40	6 80	6.50
2100	J	.062	.062	.094	.093	.022†	11—3	.....	1.63	1.48	12.80	11.70	10.80	10.50
2110•	C	.262	.200	.312	.500	.....	2—6	.....	6.30	5.73	49.40	45.40	41.90	40.60
2141	K	.116	.096	.156	.187	.187	1—4	m	3.40	3.10	26.80	24.60	22.80	22.00
2154	S	.047	.072	.072	.166	.026†	11—6	.....	3.48	3.16	27.30	25.00	23.00	22.20
2228	T	.062	.094	.047#	.156	.....	1, 2	g, n	2.75	2.50	21.40	19.60	18.00	17.40
2267	U	.125	.093	.120	.187	.....	1	o	2.31	2.10	18.10	16.60	15.20	14.70
2268	U	.156	.109	.150	.244	.....	1	o	2.97	2.70	23.40	21.40	19.70	19.00
2269	U	.188	.145	.185	.327	.....	1	o	3.74	3.40	29.00	26.60	24.40	23.50
2345	V	.125	.093	.156‡	.238	.187	3	p	5.52	5.02	43.40	39.80	36.80	35.60
2380	W	.250	.140	.234	.593	.....	1	g, p	7.13	6.48	56.00	51.30	47.50	45.90
2381	X	.250	.140	.234	.719	.....	1	g, p	7.02	6.38	55.10	50.50	46.70	45.20
2420	Y	.087	.114	.099	.047	.064†	1	g	2.88	2.62	22.60	20.70	19.20	18.60
2750	L	.060	.060	.125	.156	.....	1—4	g	1.67	1.52	13.20	12.10	11.10	10.80
2751	Z	.060	.060	.125	.188	.....	1—4	g	1.67	1.52	13.20	12.10	11.10	10.80
2753	AA	.060	.060	.125	.136	.....	1—4	g	1.67	1.52	13.20	12.10	11.10	10.80
2754	BB	.060	.060	.125	.188	.....	1—4	g	1.67	1.52	13.20	12.10	11.10	10.80
2755	CC	.060	.122	.125	.136	.042†	1—4	g	1.67	1.52	13.20	12.10	11.10	10.80
3495	DD	.140	.093	.188‡	.250	.187	2—6	a, y	7.92	7.20	61.30	56.20	53.40	50.70
3653•	C	.062	.062	.094	.156	.....	11—4	q	1.33	1.21	10.40	9.60	8.90	8.60
1010	1	.112	.146§	.040#	.312	.078†	1—6	r	5.01	4.55	39.30	36.00	33.30	32.30
1018	2	.047	.072§	.025#	.094	.026†	11—6	s	1.76	1.60	13.80	12.60	11.70	11.30
1019	3	.047	.072§	.025#	.156	.026†	11—6	s	1.93	1.75	15.10	13.80	12.80	12.40
1024	4	.090	.090§	.032#	.219	.172	1—4	.....	3.01	2.74	23.60	21.70	20.00	19.40
1025	3	.112	.145§	.063#	.391	.....	1—6	h	6.25	5.68	49.00	45.00	41.60	40.20
1578	3	.150	.142§	.064#	.375	.081†	2—5	t	3.37	3.06	26.40	24.20	22.40	21.70
1623	5	(6-32)	.188§	.053#	.207	.....	1	.....	7.48	6.80	53.20	50.70	49.60	48.00
1782•	3	.185	.250§	.090#	.688	.120†	3—6	u	8.04	7.31	63.10	57.90	53.50	51.80
1783•	3	.135	.219§	.062#	.500	.102†	2—4	u	5.40	4.91	42.30	38.80	35.90	34.70
1784•	7	.112	.156§	.040#	.344	.070†	2—4	u	3.05	2.77	23.90	21.90	20.30	19.60
1785	2	.062	.094§	.029#	.156	.043†	11—6	.....	1.61	1.46	12.60	11.60	10.60	10.20
1937	7	.112	.156§	.072#	.344	.070†	2—4	u	7.89	7.17	61.90	56.80	52.50	50.80
1969	2	.112	.188§	.053#	.328	.078†	1—5	v	2.44	2 22	19.10	17.60	16.20	15.70
2032	7	.156	.188§	.040#	.344	.070†	3	g, w	4.73	4.30	37.40	34.30	31.40	30.30
2086	6	.122	.156§	.032#	.156	.099	1—5	x	3.26	2.96	25.50	23.40	21.60	20.90
2089	3	.047	.062§	.025#	.156	.026†	11—6	s	2.08	1.89	16.20	14.90	13.70	13.20
2187	7	.032	.045§	.008#	.080	.....	11—4	g	1.98	1.80	15.50	14.20	13.20	12.70
2752	8	.060	.125§	.029#	.188	.042†	1—4	g	2.51	2.28	19.70	18.10	16.70	16.20
2926	8	.060	.125§	.029#	.188	.....	1—4	g	4.17	3.79	32.70	29.90	27.60	26.70

Silver-plated brass unless otherwise noted. Other platings available on special order. **See Chart and Notes for variations.**



*Suffixes available; see chart. †Thru-hole dia. ‡Base O.D.; hex on 2345. §Spade width. #Slot width. •Available in gold to MS Series 17000 and Western Electric specifications; add **-03** suffix to order (i.e., 2085-1-**03**); prices on request.

ORDERING CHART

Add suffix to indicate board thickness. Limitations are listed for each type in table, left, and notes below.

Suffix	Board Thckns.	Suffix	Board Thckns.
-11	1/4"	-4	1/16"
-1	1/8"	-5	5/16"
-2	1/16"	-6	1/4"
-3	3/32"		

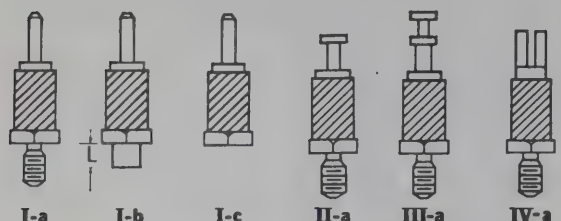
Notes: a, Knurled mtg. shank tapped 4-40 for 3495; 6-32, 1021; 8-32, 1022; 10-32, 1023. **b,** Slotted type. **c,** Below-board turret .062" dia. **d,** Below-board turret .070" dia. **e,** Chamfers on top of shoulder and pin. **f,** Chamfers on top and bottom of shoulder and both pins; below-board pin .040" dia. **g,** Electro-solder plate over copper flash. **h,** Chamfer on upper edge of shoulder. **i,** Below-board turret .082" dia. **j,** Suffix -1 for .125" and -2 for .188" boards. **k,** Hex base. **l,** Straight knurl on shank. **m,** Below-board turret .088" dia. **n,** Knurl .049" l. with .297" below-board lgth. for -1; .100" lgth., -2. **o,** Hex-base, press mt. in .085" min. depth hole. **p,** Grndg. type, hex base, 4-40 tap; 2345 also spacer. **q,** Add suffix -01 (silver plated); other finishes available. **r,** Castellated; two slots at right angles. **s,** Chamfer on upper edge of spade. **t,** Straight knurl on shank. **u,** Chamfer on bottom edge of spade, upper edge of shoulder; straight knurl on shank. **v,** Radial knurl on lower edge of shoulder. **w,** Chamfer on lower spade edge, upper shoulder edge. **x,** Thru-hole .047 dia. **y,** Copper-tin-zinc alloy plated. **z,** Electro-tin plate over copper plate.

For Complete Technical information ask for Cambion Catalog 700 available upon request.

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CAMBRIDGE THERMIONIC CORPORATION

CAMBION® INSULATED TERMINALS—DIALLYL AND MELAMINE



I-a Threaded Stud Type | I-b Rivet Type | I-c Threaded Hole Type | II-a | III-a | IV-a

Also available in -b and -c types (See Fig. I).

★QUANTITY DISCOUNTS

For quantity discount, read price from stock listing below. Find the same price in this table in the first column, and read across for best price in quantity desired.

Each	Net Each, Lots of					
1-49	50-99	100-249	250-499	500-999	1000-2499	2500-4999
19c	15c	13c	12c	11c	10c	9c
20c	16c	14c	13c	12c	11c	10c
21c	17c	15c	14c	13c	12c	11c
22c	18c	17c	15c	14c	13c	12c
23c	19c	17c	16c	14c	13c	12c
25c	19c	18c	16c	15c	14c	13c
26c	20c	18c	17c	15c	14c	13c
28c	22c	20c	18c	17c	16c	15c

DIALLYL-INSULATED TERMINALS

Brass mounting studs and terminals. **Stud Finish:** .0003″ cadmium plate, colored chromate. **Hex Base:** 5/16″ dia., types 4870-1 through 4893-1; 1/4″ dia. all others. **Breakdown Volts:** 6000 v. rms, types 4810-1 through 4869-1; 3000 v. rms, all others.

HOW TO ORDER

Order by complete catalog number, i.e., Basic Part No., Terminal Finish, and Insulator Color.

Example: 4810-1-0516

Basic Part No. | Terminal Finish (Electro Tin Lead) | Insulator Color (Blue)

TERMINAL FINISHES

-05 Standard: Electro-tin lead. **-01:** Silver, available plated to order.

INSULATOR COLORS

Standard Color -16: Blue. All others, below, available manufactured to order.

Code	Color	Code	Color	Code	Color	Code	Color	Code	Color
10	Black	12	Red	14	Yellow	16	Blue	19	Natural
11	Brown	13	Orange	15	Green	18	Gray		

MELAMINE-INSULATED TERMINALS

All units listed here in diallyl are also available in melamine (-19 Natural color only), except Figure C types, threaded hole or internal thread configurations. Slightly lower prices for melamine units available upon request.

To order melamine change first two part number digits to "49".

Camb. Basic Part No.	Fig.	Ht. Over Brd. In.	Pin, Tur. Dia., In.	Rivet Dia., or Thd. Size	Stud, "L" Lgth., or Tap Depth	Net Ea., 1-49*
4810-1	III-a	.719	.140	4-40	1/8	20c
4811-1	III-a	.719	.140	6-32	1/8	20c
4811-2	III-a	.719	.140	6-32	1/4	20c
4811-3	III-a	.719	.140	6-32	3/8	20c
4812-1	III-b	.719	.140	.098	.094*	20c
4812-2	III-b	.719	.140	.098	.125†	20c
4812-3	III-b	.719	.140	.098	.156‡	20c
4812-4	III-b	.719	.140	.098	.234§	20c
4813-1	III-b	.719	.140	.141	.094*	20c
4813-2	III-b	.719	.140	.141	.125†	20c
4813-3	III-b	.719	.140	.141	.156‡	20c
4813-4	III-b	.719	.140	.141	.234§	20c
4814-1	III-c	.719	.140	4-40	5/16	23c
4815-1	III-c	.719	.140	6-32	5/16	23c
4816-1	III-a	.938	.140	4-40	1/8	22c
4817-1	III-a	.938	.140	6-32	1/8	22c
4817-2	III-a	.938	.140	6-32	1/4	22c
4817-3	III-a	.938	.140	6-32	3/8	22c
4818-1	III-b	.938	.140	.098	.094*	22c
4818-2	III-b	.938	.140	.098	.125†	22c
4818-3	III-b	.938	.140	.098	.156‡	22c
4818-4	III-b	.938	.140	.098	.234§	22c
4819-1	III-b	.938	.140	.141	.094*	22c
4819-2	III-b	.938	.140	.141	.125†	22c
4819-3	III-b	.938	.140	.141	.156‡	22c
4819-4	III-b	.938	.140	.141	.234§	22c
4820-1	III-c	.938	.140	4-40	1/8	26c
4821-1	III-c	.938	.140	6-32	1/8	26c
4822-1	III-a	.594	.093	4-40	1/8	20c
4823-1	III-a	.594	.093	6-32	1/8	20c
4823-2	III-a	.594	.093	6-32	1/4	20c
4823-3	III-a	.594	.093	6-32	3/8	20c
4824-1	III-b	.594	.093	.098	.094*	20c
4824-2	III-b	.594	.093	.098	.125†	20c
4824-3	III-b	.594	.093	.098	.156‡	20c
4824-4	III-b	.594	.093	.098	.234§	20c
4825-1	III-b	.594	.093	.141	.094*	20c
4825-2	III-b	.594	.093	.141	.125†	20c
4825-3	III-b	.594	.093	.141	.156‡	20c
4825-4	III-b	.594	.093	.141	.234§	20c
4826-1	III-c	.594	.093	4-40	5/16	23c
4827-1	III-c	.594	.093	6-32	5/16	23c
4828-1	III-a	.813	.093	4-40	1/8	22c
4829-1	III-a	.813	.093	6-32	1/8	22c
4829-2	III-a	.813	.093	6-32	1/4	22c
4829-3	III-a	.813	.093	6-32	3/8	22c
4830-1	III-b	.813	.093	.098	.094*	22c
4830-2	III-b	.813	.093	.098	.125†	22c
4830-3	III-b	.813	.093	.098	.156‡	22c
4830-4	III-b	.813	.093	.098	.234§	22c
4831-1	III-b	.813	.093	.141	.094*	22c
4831-2	III-b	.813	.093	.141	.125†	22c
4831-3	III-b	.813	.093	.141	.156‡	22c
4831-4	III-b	.813	.093	.141	.234§	22c
4832-1	III-c	.813	.093	4-40	1/8	26c
4833-1	III-c	.813	.093	6-32	1/8	26c
4834-1	II-a	.594	.140	4-40	1/8	20c
4835-1	II-a	.594	.140	6-32	1/8	20c
4835-2	II-a	.594	.140	6-32	1/4	20c
4835-3	II-a	.594	.140	6-32	3/8	20c
4836-1	II-b	.594	.140	.098	.094*	20c
4836-2	II-b	.594	.140	.098	.125†	20c
4836-3	II-b	.594	.140	.098	.156‡	20c
4836-4	II-b	.594	.140	.098	.234§	20c
4837-1	II-b	.594	.140	.141	.094*	20c
4837-2	II-b	.594	.140	.141	.125†	20c
4837-3	II-b	.594	.140	.141	.156‡	20c
4837-4	II-b	.594	.140	.141	.234§	20c
4838-1	II-c	.594	.140	4-40	5/16	23c
4839-1	II-c	.594	.140	6-32	5/16	23c
4840-1	II-a	.813	.140	4-40	1/8	22c
4841-1	II-a	.813	.140	6-32	1/8	22c
4841-2	II-a	.813	.140	6-32	1/4	22c
4841-3	II-a	.813	.140	6-32	3/8	22c
4842-1	II-b	.813	.140	.098	.094*	22c
4842-2	II-b	.813	.140	.098	.125†	22c
4842-3	II-b	.813	.140	.098	.156‡	22c
4842-4	II-b	.813	.140	.098	.234§	22c
4843-1	II-b	.813	.140	.141	.094*	22c
4843-2	II-b	.813	.140	.141	.125†	22c
4843-3	II-b	.813	.140	.141	.156‡	22c
4843-4	II-b	.813	.140	.141	.234§	22c
4844-1	II-c	.813	.140	4-40	1/8	26c
4845-1	II-c	.813	.140	6-32	1/8	26c
4846-1	I-a	.665	.070	4-40	1/8	20c
4847-1	I-a	.665	.070	6-32	1/8	20c
4847-2	I-a	.665	.070	6-32	1/4	20c
4847-3	I-a	.665	.070	6-32	3/8	20c
4848-1	I-b	.665	.070	.098	.094*	20c
4848-2	I-b	.665	.070	.098	.125†	20c
4848-3	I-b	.665	.070	.098	.156‡	20c
4848-4	I-b	.665	.070	.098	.234§	20c
4849-1	I-b	.665	.070	.141	.094*	20c
4849-2	I-b	.665	.070	.141	.125†	20c
4849-3	I-b	.665	.070	.141	.156‡	20c
4849-4	I-b	.665	.070	.141	.234§	20c
4850-1	I-c	.665	.070	4-40	5/16	23c
4851-1	I-c	.665	.070	6-32	5/16	23c
4852-1	I-a	.884	.070	4-40	1/8	22c
4853-1	I-a	.884	.070	6-32	1/8	22c
4853-2	I-a	.884	.070	6-32	1/4	22c
4853-3	I-a	.884	.070	6-32	3/8	22c
4854-1	I-b	.884	.070	.098	.094*	22c
4854-2	I-b	.884	.070	.098	.125†	22c
4854-3	I-b	.884	.070	.098	.156‡	22c
4854-4	I-b	.884	.070	.098	.234§	22c
4855-1	I-b	.884	.070	.141	.094*	22c
4855-2	I-b	.884	.070	.141	.125†	22c
4855-3	I-b	.884	.070	.141	.156‡	22c
4855-4	I-b	.884	.070	.141	.234§	22c
4856-1	I-c	.884	.070	4-40	1/8	26c
4857-1	I-c	.884	.070	6-32	1/8	26c
4858-1	IV-a	.625	#	4-40	1/8	23c
4859-1	IV-a	.625	#	6-32	1/8	23c
4859-2	IV-a	.625	#	6-32	1/4	23c
4859-3	IV-a	.625	#	6-32	3/8	23c
4860-1	IV-b	.625	#	.098	.094*	23c
4860-2	IV-b	.625	#	.098	.125†	23c
4860-3	IV-b	.625	#	.098	.156‡	23c
4860-4	IV-b	.625	#	.098	.234§	23c
4861-1	IV-b	.625	#	.141	.094*	23c
4861-2	IV-b	.625	#	.141	.125†	23c
4861-3	IV-b	.625	#	.141	.156‡	23c
4861-4	IV-b	.625	#	.141	.234§	23c
4862-1	IV-c	.625	#	4-40	5/16	25c
4863-1	IV-c	.625	#	6-32	5/16	25c
4864-1	IV-a	.844	#	4-40	1/8	25c
4865-1	IV-a	.844	#	6-32	1/8	25c
4865-2	IV-a	.844	#	6-32	1/4	25c
4865-3	IV-a	.844	#	6-32	3/8	25c
4866-1	IV-b	.844	#	.098	.094*	25c
4866-2	IV-b	.844	#	.098	.125†	25c
4866-3	IV-b	.844	#	.098	.156‡	25c
4866-4	IV-b	.844	#	.098	.234§	25c
4867-1	IV-b	.844	#	.141	.094*	25c
4867-2	IV-b	.844	#	.141	.125†	25c
4867-3	IV-b	.844	#	.141	.156‡	25c
4867-4	IV-b	.844	#	.141	.234§	25c
4868-1	IV-c	.844	#	4-40	1/8	28c
4869-1	IV-c	.844	#	6-32	1/8	28c
4870-1	II-a	.390	.072	2-56	1/8	19c
4870-2	II-a	.390	.072	2-56	5/16	19c
4870-3	II-a	.390	.072	2-56	1/4	19c
4871-1	II-b	.390	.072	.078	.094*	19c
4871-2	II-b	.390	.072	.078	.125†	19c
4872-1	II-c	.390	.072	2-56	5/16	20c
4873-1	II-a	.547	.072	2-56	1/8	21c
4873-2	II-a	.547	.072	2-56	5/16	21c
4873-3	II-a	.547	.072	2-56	1/4	21c
4874-1	II-b	.547	.072	.078	.094*	21c
4874-2	II-b	.547	.072	.078	.125†	21c
4875-1	II-c	.547	.072	2-56	.117	22c
4876-1	II-a	.453	.072	2-56	1/8	19c
4876-2	II-a	.453	.072	2-56	5/16	19c
4876-3	II-a	.453	.072	2-56	1/4	19c
4877-1	II-b	.453	.072	.078	.094*	19c
4877-2	II-b	.453	.072	.078	.125†	19c
4878-1	II-c	.453	.072	2-56	5/16	20c
4879-1	II-a	.610	.072	2-56	1/8	21c
4879-2	II-a	.610	.072	2-56	5/16	21c
4879-3	II-a	.610	.072	2-56	1/4	21c
4880-1	II-b	.610	.072	.078	.094*	21c
4880-2	II-b	.610	.072	.078	.125†	21c
4881-1	II-c	.610	.072	2-56	.117	22c
4882-1	III-a	.390	.072	2-56	1/8	19c
4882-2	III-a	.390	.072	2-56	5/16	19c
4882-3	III-a	.390	.072	2-56	1/4	19c
4883-1	III-b	.390	.072	.078	.094*	19c
4883-2	III-b	.390	.072	.078	.125†	19c
4884-1	III-c	.390	.072	2-56	5/16	20c
4885-1	III-a	.547	.072	2-56	1/8	21c
4885-2	III-a	.547	.072	2-56	5/16	21c
4885-3	III-a	.547	.072	2-56	1/4	21c
4886-1	III-b	.547	.072	.078	.094*	21c
4886-2	III-b	.547	.072	.078	.125†	21c
4887-1	III-c	.547	.072	2-56	.117	22c
4888-1	I-a	.422	.060	2-56	1/8	19c
4888-2	I-a	.422	.060	2-56	5/16	19c
4888-3	I-a	.422	.060	2-56	1/4	19c
4889-1	I-b	.422	.060	.078	.094*	19c
4889-2	I-b	.422	.060	.078	.125†	19c
4890-1	I-c	.422	.060	2-56	5/16	20c
4891-1	I-a	.579	.060	2-56	1/8	21c
4891-2	I-a	.579	.060	2-56	5/16	21c
4891-3	I-a	.579	.060	2-56	1/4	21c
4892-1	I-b	.579	.060	.078	.094*	21c
4892-2	I-b	.579	.060	.078	.125†	21c
4893-1	I-c	.579	.060	2-56	.117	22c

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For panel thickness: *1/16″; †3/32″; ‡1/8″; §5/16″. #Spade slot .060″ x .062″.

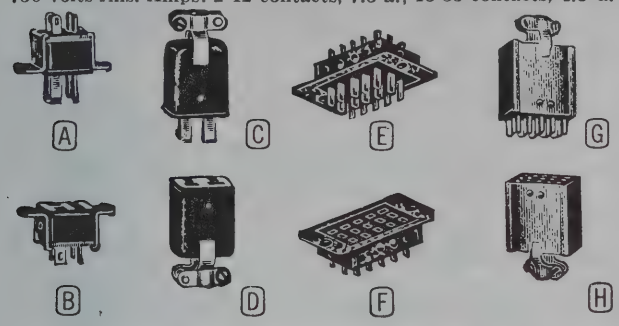
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"Jones" Type Plugs, Sockets

300 SERIES CONNECTORS

Compact, polarized connectors. Insulating material is molded Bakelite. Fiber lined metal caps are black wrinkle finished. New "Monoblock" construction eliminates internal moisture traps. Snap-in contacts may be prewired or replaced. Rated Voltage: 730 volts rms. Amps: 2-12 contacts, 7.5 a.; 15-33 contacts, 4.5 a.



PLUGS WITH ANGLE BRACKETS (FIG. A)

C-J No.	Contacts	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
P-302-AB	2	$0.248	$0.198	$0.165	$0.132	$0.125
P-303-AB	3	.308	.246	.205	.164	.156
P-304-AB	4	.338	.27	.225	.18	.171
P-306-AB	6	.42	.336	.28	.224	.213
P-308-AB	8	.495	.396	.33	.264	.251
P-310-AB	10	.563	.45	.375	.30	.285
P-312-AB	12	.623	.498	.415	.332	.315

SOCKETS WITH ANGLE BRACKETS (FIG. B)

S-302-AB	2	$0.27	$0.216	$0.18	$0.144	$0.137
S-303-AB	3	.323	.258	.215	.172	.163
S-304-AB	4	.36	.288	.24	.192	.182
S-306-AB	6	.45	.36	.30	.24	.228
S-308-AB	8	.563	.45	.375	.30	.285
S-310-AB	10	.668	.534	.445	.356	.338
S-312-AB	12	.773	.618	.515	.412	.391

PLUGS WITH CABLE CLAMPS (FIG. C)

P-302-CCT	2	$0.57	$0.456	$0.38	$0.304	$0.289
P-303-CCT	3	.608	.486	.405	.324	.308
P-304-CCT	4	.668	.534	.445	.356	.338
P-306-CCT	6	.735	.588	.49	.392	.372
P-308-CCT	8	.81	.648	.54	.432	.41
P-310-CCT	10	.908	.726	.605	.484	.46
P-312-CCT	12	.99	.792	.66	.528	.502

SOCKETS WITH CABLE CLAMPS (FIG. D)

S-302-CCT	2	$0.578	$0.462	$0.385	$0.308	$0.293
S-303-CCT	3	.623	.498	.415	.332	.315
S-304-CCT	4	.675	.54	.45	.36	.342
S-306-CCT	6	.773	.618	.515	.412	.391
S-308-CCT	8	.90	.72	.60	.48	.456
S-310-CCT	10	1.005	.804	.67	.536	.509
S-312-CCT	12	1.155	.924	.77	.616	.585

PLUGS WITH SHALLOW BRACKETS (FIG. E)

P-315-SB	15	$1.223	$0.978	$0.815	$0.652	$0.619
P-318-SB	18	1.508	1.206	1.005	.804	.764
P-321-SB	21	1.778	1.422	1.185	.948	.901
P-324-SB	24	2.108	1.686	1.405	1.124	1.068
P-327-SB	27	2.37	1.896	1.58	1.264	1.201
P-330-SB	30	2.715	2.172	1.81	1.448	1.376
P-333-SB	33	2.993	2.394	1.995	1.596	1.516

SOCKETS WITH SHALLOW BRACKETS (FIG. F)

S-315-SB	15	$1.373	$1.098	$0.915	$0.732	$0.695
S-318-SB	18	1.635	1.308	1.09	.872	.828
S-321-SB	21	1.913	1.53	1.275	1.02	.969
S-324-SB	24	2.258	1.806	1.505	1.204	1.144
S-327-SB	27	2.52	2.016	1.68	1.344	1.277
S-330-SB	30	2.865	2.292	1.91	1.528	1.452
S-333-SB	33	3.135	2.508	2.09	1.672	1.588

PLUGS WITH CABLE CLAMPS (FIG. G)

P-315-CCT	15	$1.29	$1.032	$0.86	$0.688	$0.654
P-318-CCT	18	1.56	1.248	1.04	.832	.79
P-321-CCT	21	1.838	1.47	1.225	.98	.931
P-324-CCT	24	2.168	1.734	1.445	1.156	1.098
P-327-CCT	27	2.46	1.968	1.64	1.312	1.246
P-330-CCT	30	2.865	2.292	1.91	1.528	1.452
P-333-CCT	33	3.068	2.454	2.045	1.636	1.554

SOCKETS WITH CABLE CLAMPS (FIG. H)

S-315-CCT	15	$1.133	$0.906	$0.755	$0.604	$0.574
S-318-CCT	18	1.703	1.362	1.135	.908	.863
S-321-CCT	21	1.973	1.578	1.315	1.052	.999
S-324-CCT	24	2.325	1.86	1.55	1.24	1.178
S-327-CCT	27	2.595	2.076	1.73	1.384	1.315
S-330-CCT	30	3.00	2.40	2.00	1.60	1.52
S-333-CCT	33	3.21	2.568	2.14	1.712	1.626

400 AND 2400 SERIES CONNECTORS

400 Series are rated at 1200 volts rms at 15 amps. Polarized. Phosphor bronze "knifeswitch" socket contacts engage both sides of flat plug contacts.

2400 Series are rated at 1700 volts at 15 amps. New design provides greater contact surface, increased pressure and smoother action. Greater contact-to-contact and contact-to-ground distance. Interchangeable with the 400 Series.



400 SERIES PLUGS WITH ANGLE BRACKETS (FIG. I)

C-J No.	Contacts	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
P-402-AB	2	$0.623	$0.498	$0.415	$0.332	$0.315
P-404-AB	4	.758	.606	.505	.404	.384
P-406-AB	6	.915	.732	.61	.488	.464
P-408-AB	8	1.05	.84	.70	.56	.532
P-410-AB	10	1.193	.954	.795	.636	.604
P-412-AB	12	1.313	1.05	.875	.70	.665

2400 SERIES PLUGS WITH SHALLOW BRACKETS

P-2402-SB	2	$0.84	$0.672	$0.56	$0.448	$0.426
P-2404-SB	4	.99	.792	.66	.528	.502
P-2406-SB	6	1.155	.924	.77	.616	.585
P-2408-SB	8	1.305	1.044	.87	.696	.661
P-2410-SB	10	1.493	1.194	.995	.796	.756
P-2412-SB	12	1.635	1.308	1.09	.872	.828

400 SERIES SOCKETS WITH ANGLE BRACKETS (FIG. J)

S-402-AB	2	$0.705	$0.564	$0.47	$0.376	$0.357
S-404-AB	4	.915	.732	.61	.488	.464
S-406-AB	6	1.11	.888	.74	.592	.562
S-408-AB	8	1.313	1.05	.875	.70	.665
S-410-AB	10	1.538	1.23	1.025	.82	.779
S-412-AB	12	1.733	1.386	1.155	.924	.878

2400 SERIES SOCKETS WITH SHALLOW BRACKETS

S-2402-SB	2	$0.923	$0.738	$0.615	$0.492	$0.467
S-2404-SB	4	1.08	.864	.72	.576	.547
S-2406-SB	6	1.253	1.002	.835	.668	.635
S-2408-SB	8	1.425	1.14	.95	.76	.722
S-2410-SB	10	1.605	1.284	1.07	.856	.813
S-2412-SB	12	1.778	1.422	1.185	.948	.901

PLUGS WITH CABLE CLAMPS (FIG. K)

400 SERIES

P-402-CCT	2	$0.975	$0.78	$0.65	$0.52	$0.494
P-404-CCT	4	1.193	.954	.795	.636	.604
P-406-CCT	6	1.395	1.116	.93	.744	.707
P-408-CCT	8	1.59	1.272	1.06	.848	.806
P-410-CCT	10	1.793	1.434	1.195	.956	.908
P-412-CCT	12	2.003	1.602	1.335	1.068	1.015

2400 SERIES

P-2402-CCT	2	$1.185	$0.948	$0.79	$0.632	$0.60
P-2404-CCT	4	1.343	1.074	.895	.716	.68
P-2406-CCT	6	1.50	1.20	1.00	.80	.76
P-2408-CCT	8	1.643	1.314	1.095	.876	.832
P-2410-CCT	10	1.815	1.452	1.21	.968	.92
P-2412-CCT	12	2.003	1.602	1.335	1.068	1.015

SOCKETS WITH CABLE CLAMPS (FIG. L)

400 SERIES

S-402-CCT	2	$1.058	$0.846	$0.705	$0.564	$0.536
S-404-CCT	4	1.32	1.056	.88	.704	.669
S-406-CCT	6	1.605	1.284	1.07	.856	.813
S-408-CCT	8	1.883	1.506	1.255	1.004	.954
S-410-CCT	10	2.168	1.734	1.445	1.156	1.098
S-412-CCT	12	2.438	1.95	1.625	1.30	1.235

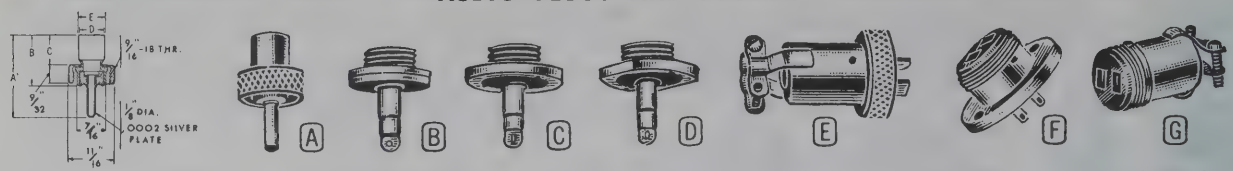
2400 SERIES

S-2402-CCT	2	$1.275	$1.02	$0.85	$0.68	$0.646
S-2404-CCT	4	1.425	1.14	.95	.76	.722
S-2406-CCT	6	1.583	1.266	1.055	.844	.802
S-2408-CCT	8	1.763	1.41	1.175	.94	.893
S-2410-CCT	10	1.943	1.554	1.295	1.036	.984
S-2412-CCT	12	2.123	1.698	1.415	1.132	1.075

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Cinch Jones Plugs and Sockets

AUDIO PLUGS AND SOCKETS



SERIES 101 PLUGS (FIG. A)

All plugs are identical except the cable ferrule which is furnished in five sizes listed below. All metal parts are of brass. Fit 101 Series sockets. Ideal for high frequency connections.

C-J No.	A	B	C	D	E
P-101-¼"	1¼"	¾"	7/16"	¼"	9/32"
P-101-.290	1¼"	¾"	7/16"	.290"	.319"
P-101-5/16"	1⅜"	⅞"	9/16"	5/16"	11/32"
P-101-⅜"	1⅜"	11/16"	⅜"	⅜"	13/32"
P-101-½"	1⅞"	1⅜"	1 1/16"	½"	9/16"

QUANTITY PRICES FOR 101 SERIES PLUGS

C-J No.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
P-101-¼"	$0.653	$0.522	$0.435	$0.348	$0.331
P-101-.290	.795	.636	.53	.424	.403
P-101-5/16"	.795	.636	.53	.424	.403
P-101-⅜"	.795	.636	.53	.424	.403
P-101-½"	.885	.708	.59	.472	.448

SERIES 101 SOCKETS

Brass base, bright nickel finish. Brass contact is silver plated. Insulation is of low loss natural color XXX Bakelite. Meets Navy specifications. Bakelite of No. S-101-D is recessed in the base. Two sides of base of No. S-101-D Mod are milled. Mounting Holes: No. S-101, #41 drill on 11/16" centers; all others, #30 drill on 13/16" centers.

C-J No.	Fig.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
S-101	B	$0.578	$0.462	$0.385	$0.308	$0.293
S-101-D	C	.885	.708	.59	.472	.448
S-101-D Mod	D	.885	.708	.59	.472	.448

MODEL 201-⅜ PLUG

Same as Series 101 but is of heavier stock and larger. Made in one size only with ⅜" ferrule. All metal parts are of brass. Same finish as Series 101 and wax impregnated ceramic insulation. Length, 1 9/16", overall. Prong diameter, 5/32". Fits only Series 201 socket.

MODEL S-201 SOCKET (FIG. C)

Similar to No. S-101-D except larger. Brass base is bright nickel finish. Brass contact is silver plated. Insulation is low loss natural color XXX Bakelite. Mounting holes, #30 drill on 1" centers. Thread, ¾"-27.

QUANTITY PRICES FOR 201 SERIES PLUG AND SOCKET

C-J No.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
P-201-⅜"	$1.02	$0.816	$0.68	$0.544	$0.517
S-201	1.095	.876	.73	.584	.555

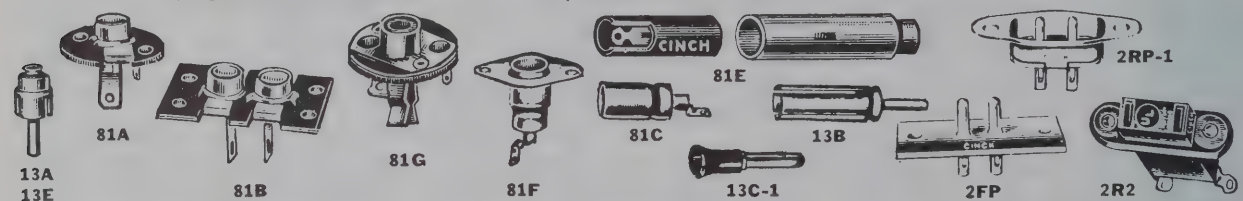
SERIES 202 PLUGS AND SOCKETS

Made in two contacts only. Brass metal parts with bright nickel finish. Molded Bakelite insulation. Phosphor bronze "knife switch" type socket contacts engage both sides of flat brass plug contacts—double contact area. Formed fiber linings in caps. Polarized. Knurled nut has ¾"-27 thread. Socket mounting holes, #30 drill on 1" centers. No. S-202-CCT-THR, when used with No. P-202-CCT, will make an ideal microphone connector.

C-J No.	Fig.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
P-202-CCT	E	$0.81	$0.648	$0.54	$0.432	$0.41
S-202-CCT	E*	.825	.66	.55	.44	.418
P-202-FHT	E†	.653	.522	.435	.348	.331
S-202-FHT	E‡	.668	.534	.445	.356	.338
S-202-B	F	.96	.768	.64	.512	.486
P-202-B	F#	.923	.738	.615	.492	.467
S-202-CCT-THR	G	1.095	.876	.73	.584	.555

*Socket instead of plug. †Less cable clamp. ‡Socket instead of plug, less cable clamp. #Plug instead of socket.

JACKS AND PLUGS FOR RADIO, TV AND PHONOGRAPH APPLICATIONS



RCA TYPE PHONO CONNECTORS

C-J No. 13A Plug—9/16" long pin. List Price....7c*

C-J No. 13E Plug—11/16" long pin. List Price....7c*

C-J No. 81A Jack—Single jack for No. 13A. Mtg. ctrs., 11/16". List Price....21c*

C-J No. 81B Jack—Double jack for No. 13A. Mtg. ctrs., 1 3/16". Jacks spaced on 7/16" ctrs. Size, 1½" x 1". List Price...37.5c*

C-J No. 81G Jack—Normally connected; this connection breaks when plug is inserted, making plug connection. Brass mtg. plate. Mtg. holes, .136". List....69.5c*

ANTENNA CONNECTORS

C-J No. 81F Jack—Motorola type. Shielded. Sturdy steel flange, 15/16" mtg. ctrs. with .136" dia. mtg. holes. Mounts with screws or rivets. Mates 13B plug. List Price....36c*

C-J No. 81C Jack—Same as 81F less flange. May be soldered in position. Mates No. 13B. List Price....24c*

MOTOROLA TYPE ANTENNA PLUG

C-J No. 13B Plug—Has ⅛" pin extending 7/32" from shell whose eight cutting edges provide positive grounded connection when inserted in No. 81C or No. 81F. List Price....28.8c*

INSULATED PIN PLUG

C-J No. 13C1 Plug—Pin, ⅛" brass tube, 9/16" lg. Fiber insulator, 13/32" lg. Mates Nos. 81A and 81B phono jacks. List Price....22.5c*

SHIELDED EXTENSION JACK

C-J No. 81E Jack—Cadmium plated brass shell 2 7/16" long with black Bakelite insert providing insulation for heat treated steel, hot solder coated positive grip contact. Mates No. 13E plug.
Net Each, Lots of 1-99, **29.2c**; 100-999, **14.6c**

MODEL 2FP CONNECTOR PLUG

Consists of two prongs mounted on a Bakelite board. One piece contact. Mounting plate is of 1/16" natural XP Bakelite 1 5/8" lg. x ¾" w. The .135/.140" mounting holes are on 1¼" centers. An inexpensive current supply connector for TV sets.
C-J No. 2FP—List Price....14.4c*

MODEL 2RP-1 RECESSED PLUG

Recessed sub-panel mounting type plug. One piece contact. Perfect for current supply for TV sets. Rated at 125 v., 7 amps. Size: ⅜" w. x 1 5/8" lg., overall. Body Depth: 5/16". Mounting Centers: .140/.145". U/L Approved.
C-J No. 2RP-1—List Price....19.7c*

MODEL 2R2 110-250 VOLT SOCKET

Rated at 15 amps, 110 v., or 10 amps, 250 v. Accepts any standard 2-prong electric plug. Mounts in 25/64" x 25/32" hole. Ideal for radio and TV chassis. Underwriters Listed.
C-J No. 2R2—
Net Each, Lots of 1-99, **18.9c**; 100-999, **9.5c**

MOLDED CONNECTOR PLUGS AND SOCKETS



MODEL 8PB 8 CONTACT PLUG (FIG. A)

Molded from high dielectric black Bakelite. Pins are nickel-plated and have tapered ends for easy insertion. Mounts on 1/16" chassis using No. 8RO retaining ring, or can be used with No. 16F cap. Will fit any standard octal socket.
C-J No. 8PB—Net Each, Lots of 1–99..**19.5c**; 100–999..**9.8c**

MODEL 11PB 11 CONTACT PLUG (FIG. B)

Molded from high dielectric black Bakelite. Pins are nickel-plated and have tapered ends for easy insertion. Mounts on 1/16" chassis using No. 8RO retaining ring. Can be used with No. 16F cap. Will fit No. 11RB socket.
C-J No. 11PB—Net Each, Lots of 1–99..**27c**; 100–999..**13.5c**

MODEL 11RB 11 CONTACT SOCKET (FIG. C)

Molded from high dielectric black Bakelite. Solder coated brass contacts. Mounts on 1/16" chassis using No. 8RO retaining ring. Can be used with No. 16F cap. Mates with No. 11PB plug.
C-J No. 11RB—Net Each, Lots of 1–99..**31.8c**; 100–999..**15.9c**

MODEL 16F PLUG CAP (FIG. D)

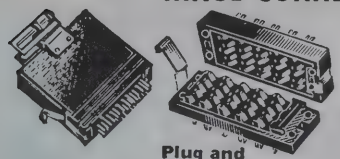
Cadmium plated steel plug cap for snapping on 8 or 11 prong sockets grooved for 1/16" chassis. Screwdriver slot at bottom to facilitate removal. Rubber grommet has 25/64" dia. hole.
C-J No. 16F—List Price....92.5c*

★CONTACT DISTRIBUTOR FOR QUANTITY PRICES

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Cinch Jones Hinge Connectors & Barriers

HINGE CONNECTORS



Plug and socket bodies showing contact arrangement.

No contact damage due to insertion and extraction. Maximum contact in minimum space; engaged with normal pressure. Simple locking device insures positive contact. Spring action contacts separate units after releasing the lock. Wiping contact action for clean contacts at all times. Castings are of black Bakelite, type CFG. Contacts are of phosphor bronze, cadmium plated (.0001). Current rating is 4.5 amps. **Alternate Lock:** For more secure locking, order Alternate Lock No. 37AL separately. It has a special device to prevent accidental unlocking. **Caps:** Formed fiber liners, nickel-plated cable clamps. Designed to take the alternate lock when required. Black wrinkle finish.

PLUG WITH LOCK

C-J No.	Contacts	Mtg. Ctrs. In.	Overall Size, In.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
37-M20L	20	1.375	1.750	$2.25	$1.80	$1.50	$1.20	$1.14
37-M30L	30	1.812	2.187	2.663	2.13	1.775	1.42	1.349
37-M40L	40	2.250	2.625	3.075	2.46	2.05	1.64	1.558
37-M50L	50	2.687	3.026	3.488	2.79	2.325	1.86	1.767
37-M60L	60	3.125	3.500	3.90	3.12	2.60	2.08	1.976
37-M70L	70	3.562	3.937	4.313	3.45	2.875	2.30	2.185
37-M80L	80	4.000	4.375	4.725	3.78	3.15	2.52	2.394
37-M90L	90	4.438	4.812	5.138	4.11	3.425	2.74	2.603
37-M100L	100	4.875	5.250	5.55	4.44	3.70	2.96	2.812

SOCKET WITH LOCK

C-J No.	Contacts	Mtg. Ctrs. In.	Overall Size, In.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
37-F20L	20	1.375	1.750	$2.25	$1.80	$1.50	$1.20	$1.14
37-F30L	30	1.812	2.187	2.663	2.13	1.775	1.42	1.349
37-F40L	40	2.250	2.625	3.075	2.46	2.05	1.64	1.558
37-F50L	50	2.687	3.062	3.488	2.79	2.325	1.86	1.767
37-F60L	60	3.125	3.500	3.90	3.12	2.60	2.08	1.976
37-F70L	70	3.562	3.937	4.313	3.45	2.875	2.30	2.185
37-F80L	80	4.000	4.375	4.725	3.78	3.15	2.52	2.394
37-F90L	90	4.438	4.812	5.138	4.11	3.425	2.74	2.603
37-F100L	100	4.875	5.250	5.55	4.44	3.70	2.96	2.812

PLUG WITHOUT LOCK

C-J No.	Contacts	Mtg. Ctrs. In.	Overall Size, In.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
37-M20	20	1.375	1.750	$2.025	$1.62	$1.35	$1.08	$1.026
37-M30	30	1.812	2.187	2.438	1.95	1.625	1.30	1.235
37-M40	40	2.250	2.625	2.85	2.28	1.90	1.52	1.444
37-M50	50	2.687	3.062	3.263	2.61	2.175	1.74	1.653
37-M60	60	3.125	3.500	3.675	2.94	2.45	1.96	1.862
37-M70	70	3.562	3.937	4.088	3.27	2.725	2.18	2.071
37-M80	80	4.000	4.375	4.50	3.60	3.00	2.40	2.28
37-M90	90	4.438	4.812	4.913	3.93	3.275	2.62	2.489
37-M100	100	4.875	5.250	5.325	4.26	3.55	2.84	2.698

SOCKET WITHOUT LOCK

C-J No.	Contacts	Mtg. Ctrs. In.	Overall Size, In.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
37-F20	20	1.375	1.750	$2.025	$1.62	$1.35	$1.08	$1.026
37-F30	30	1.812	2.187	2.438	1.95	1.625	1.30	1.235
37-F40	40	2.250	2.625	2.85	2.28	1.90	1.52	1.444
37-F50	50	2.687	3.062	3.263	2.61	2.175	1.74	1.653
37-F60	60	3.125	3.500	3.675	2.94	2.45	1.96	1.862
37-F70	70	3.562	3.937	4.088	3.27	2.725	2.18	2.071
37-F80	80	4.000	4.375	4.50	3.60	3.00	2.40	2.28
37-F90	90	4.438	4.812	4.913	3.93	3.275	2.62	2.489
37-F100	100	4.875	5.250	5.325	4.26	3.55	2.84	2.698

C-J No. 37AL Alternate Lock—For above series.
Net Each, Lots of 1-24.....45c; 25-49.....36c; 50-99.....30c; 100-249.....24c; 250-499.....22.8c

CAPS FOR PLUGS OR SOCKETS

C-J No.	For Casting with No. of Contacts	Hole Size, Inches	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
37-C20	20	¾	$3.15	$2.52	$2.10	$1.68	$1.596
37-C30	30	13/16 x 1	3.188	2.55	2.125	1.70	1.615
37-C40	40	13/16 x 1	3.225	2.58	2.15	1.72	1.634
37-C50	50	13/16 x 1	3.263	2.61	2.175	1.74	1.653
37-C60	60	13/16 x 1½	3.30	2.64	2.20	1.76	1.672
37-C70	70	13/16 x 1½	3.338	2.67	2.225	1.78	1.691
37-C80	80	13/16 x 1½	3.375	2.70	2.25	1.80	1.71
37-C90	90	13/16 x 1½	3.413	2.73	2.275	1.82	1.729
37-C100	100	13/16 x 1½	3.45	2.76	2.30	1.84	1.748

170 SERIES SOLDER TERMINAL STRIPS



Heavy solder terminals are made of .032" brass, hot solder coated; mounted on ⅜" centers. Black molded Bakelite. Size, 5/16" w. x ¼" thick. Mounting holes, ⅜" from center of end terminals.

C-J No.	Terminals	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
1-170	1	19.5c	15.6c	13c	10.4c	9.9c
2-170	2	24.8c	19.8c	16.5c	13.2c	12.5c
3-170	3	28.5c	22.8c	19c	15.2c	14.4c
4-170	4	33.8c	27c	22.5c	18c	17.1c
5-170	5	39.8c	31.8c	26.5c	21.2c	20.1c
6-170	6	44.3c	35.4c	29.5c	23.6c	22.4c
7-170	7	48c	38.4c	32c	25.6c	24.3c
8-170	8	52.5c	42c	35c	28c	26.6c
9-170	9	58.5c	46.8c	39c	31.2c	29.6c
10-170	10	62.3c	49.8c	41.5c	33.2c	31.5c



140-141-142 Series (2-140, 2-141, 2-142)



171 Series (6-171)

"JONES" 140-141-142 SERIES BARRIER TERMINAL BLOCKS

Increased insulation is provided by having barriers placed between each terminal. These barriers follow around the edge of the strips and terminate at the base. They not only make a long leakage path but prevent direct shorts from frayed wires at terminals. **Size:** 140 Series—Base, 7/8" w. x 13/32" h.; term. centers, ⅜". 141 Series—Base, 1⅛" w. x ½" h.; term. centers, 7/16". 142 Series—Base, 1 5/16" w. x ⅝" h.; term. centers, 9/16".

140 SERIES

C-J No.	Contacts	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499	500-999
1-140	1	$0.113	$0.09	$0.075	$0.60	$0.057	$0.05
2-140	2	.18	.144	.12	.096	.091	.079
3-140	3	.248	.198	.165	.132	.125	.109
4-140	4	.315	.252	.21	.168	.16	.139
5-140	5	.383	.306	.255	.204	.194	.168
6-140	6	.443	.354	.295	.236	.224	.195
7-140	7	.51	.408	.34	.272	.258	.224
8-140	8	.578	.462	.385	.308	.293	.254
9-140	9	.645	.516	.43	.344	.327	.284
10-140	10	.713	.57	.475	.38	.361	.314
11-140	11	.773	.618	.515	.412	.391	.34
12-140	12	.84	.672	.56	.448	.426	.37
13-140	13	.908	.726	.605	.484	.46	.399
14-140	14	.983	.786	.655	.524	.498	.432
15-140	15	1.05	.84	.70	.56	.532	.462
16-140	16	1.118	.894	.745	.596	.566	.492
17-140	17	1.178	.942	.785	.628	.597	.518
18-140	18	1.245	.996	.83	.664	.631	.548
19-140	19	1.313	1.05	.875	.70	.665	.578
20-140	20	1.38	1.104	.92	.736	.699	.607
21-140	21	1.448	1.158	.965	.772	.733	.637

141 SERIES

1-141	1	$0.15	$0.12	$0.10	$0.08	$0.076	$0.066
2-141	2	.233	.186	.155	.124	.118	.102
3-141	3	.315	.252	.21	.168	.16	.139
4-141	4	.405	.324	.27	.216	.205	.178
5-141	5	.488	.39	.325	.26	.247	.216
6-141	6	.563	.45	.375	.30	.285	.248
7-141	7	.66	.528	.44	.352	.334	.29
8-141	8	.743	.594	.495	.396	.376	.327
9-141	9	.825	.66	.55	.44	.418	.363
10-141	10	.915	.732	.61	.488	.464	.403
11-141	11	.998	.798	.665	.532	.505	.439
12-141	12	1.08	.864	.72	.576	.547	.475
13-141	13	1.17	.936	.78	.624	.593	.515
14-141	14	1.253	1.002	.835	.668	.635	.551
15-141	15	1.335	1.068	.89	.712	.676	.587
16-141	16	1.425	1.14	.95	.76	.722	.627
17-141	17	1.508	1.206	1.005	.804	.764	.663
18-141	18	1.59	1.272	1.06	.848	.806	.70
19-141	19	1.68	1.344	1.12	.896	.851	.739
20-141	20	1.763	1.41	1.175	.94	.893	.776

142 SERIES

1-142	1	$0.173	$0.138	$0.115	$0.092	$0.087	$0.076
2-142	2	.27	.216	.18	.144	.137	.119
3-142	3	.383	.306	.255	.204	.194	.168
4-142	4	.488	.39	.325	.26	.247	.215
5-142	5	.585	.468	.39	.312	.296	.257
6-142	6	.69	.552	.46	.368	.35	.304
7-142	7	.803	.642	.535	.428	.407	.353
8-142	8	.90	.72	.60	.48	.456	.396
9-142	9	1.005	.804	.67	.536	.509	.442
10-142	10	1.118	.894	.745	.596	.566	.492
11-142	11	1.215	.972	.81	.648	.616	.535
12-142	12	1.32	1.056	.88	.704	.669	.581
13-142	13	1.425	1.14	.95	.76	.722	.627
14-142	14	1.53	1.224	1.02	.816	.775	.673
15-142	15	1.635	1.308	1.09	.872	.828	.719
16-142	16	1.74	1.392	1.16	.928	.882	.766
17-142	17	1.838	1.47	1.225	.98	.931	.809

"JONES" 171 SERIES BARRIER TERMINAL BLOCKS

Miniature barrier type terminal blocks with single-screw terminals. Size, 13/32" w. x 5/16" h., overall. Binder head screws, 2-56 x 3/16". Mounting holes, ⅛" dia.

C-J No.	Contacts	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499	500-999
2-171	2	$0.18	$0.144	$0.12	$0.096	$0.091	$0.079
3-171	3	.248	.198	.165	.132	.125	.109
4-171	4	.315	.252	.21	.168	.16	.136
5-171	5	.383	.306	.255	.204	.194	.168
6-171	6	.45	.36	.30	.24	.228	.198
7-171	7	.518	.414	.345	.276	.262	.228
8-171	8	.585	.468	.39	.312	.296	.257

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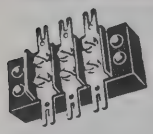
Barrier Terminal Blocks

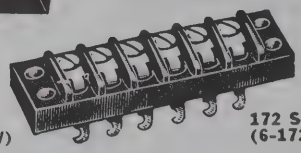

172 Series (6-172)

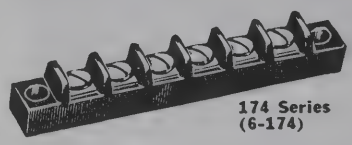

"Y" Solder Terminal


"W" Terminal


"¾ W" Terminal


172 Series (3-172-W)


172 Series (6-172-Y)


174 Series (6-174)


500 Series (2-540)

"JONES" 172 SERIES BARRIER TERMINAL BLOCKS

WITH CONVENTIONAL TERMINALS

Double screw terminals mounted on ¼" centers with 2-56 x 3/16" binder head screws. Mounting holes, ⅛" dia.

C-J No.	Contacts	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499	500-999
2-172	2	$0.428	$0.342	$0.285	$0.228	$0.217	$0.188
3-172	3	.548	.438	.365	.292	.277	.241
4-172	4	.668	.534	.445	.356	.338	.294
5-172	5	.788	.63	.525	.42	.399	.347
6-172	6	.90	.72	.60	.48	.456	.396
7-172	7	1.02	.816	.68	.544	.517	.449
8-172	8	1.14	.912	.76	.608	.578	.502
9-172	9	1.26	1.008	.84	.672	.638	.554
10-172	10	1.38	1.104	.92	.736	.699	.607
11-172	11	1.508	1.206	1.005	.804	.764	.663
12-172	12	1.628	1.302	1.085	.868	.825	.716
13-172	13	1.74	1.392	1.16	.928	.882	.766
14-172	14	1.86	1.488	1.24	.992	.942	.818

WITH "Y", "W" OR "¾W" TERMINALS

Series 172 barrier type terminal blocks also available with "Y", "W" or "¾ W" terminals. For blocks with "W" terminals, change suffix "Y" to "W", for blocks with "¾ W" terminals, change suffix "Y" to "¾ W" (2-172-**W**, 2-172-**¾ W**, etc.); same price.

C-J No.	Contacts	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499	500-999
2-172-Y	2	$0.48	$0.384	$0.32	$0.256	$0.243	$0.211
3-172-Y	3	.63	.504	.42	.336	.319	.277
4-172-Y	4	.78	.624	.52	.416	.395	.343
5-172-Y	5	.93	.744	.62	.496	.471	.409
6-172-Y	6	1.08	.864	.72	.576	.547	.475
7-172-Y	7	1.23	.984	.82	.656	.623	.541
8-172-Y	8	1.38	1.104	.92	.736	.699	.607
9-172-Y	9	1.53	1.224	1.02	.816	.775	.673
10-172-Y	10	1.68	1.344	1.12	.896	.851	.739
11-172-Y	11	1.83	1.464	1.22	.976	.927	.805
12-172-Y	12	1.98	1.584	1.32	1.056	1.003	.871
13-172-Y	13	2.13	1.704	1.42	1.136	1.079	.937
14-172-Y	14	2.28	1.824	1.52	1.216	1.155	1.003

"JONES" 174 SERIES BARRIER TERMINAL BLOCKS

Single screw terminals mounted on ⅜" centers. Size, ⅜" w. x ½" h., overall. Brass binder head screws, 4-40 x 5/16". Mounting holes, 5/32" dia.

C-J No.	Contacts	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499	500-999
2-174	2	$0.18	$0.144	$0.12	$0.096	$0.091	$0.079
3-174	3	.248	.198	.165	.132	.125	.109
4-174	4	.315	.252	.21	.168	.16	.136
5-174	5	.383	.306	.255	.204	.194	.168
6-174	6	.45	.36	.30	.24	.228	.198
7-174	7	.518	.414	.345	.276	.262	.228
8-174	8	.585	.468	.39	.312	.296	.257
9-174	9	.653	.522	.435	.348	.331	.287
10-174	10	.72	.576	.48	.384	.365	.317

"JONES" 500 SERIES BARRIER TERMINAL BLOCKS

Barrier type terminal blocks designed for applications where electrical and mechanical performance requirements are especially critical. Closed bottoms eliminate additional insulating strips. Knockouts are molded into the base so that "Y" terminals can be accommodated if desired. Top-mounted marker strip available.

540 TERMINAL BLOCKS

Terminals are mounted on ⅜" centers with 5-40 binder head screws. Size, 1⅛" w. x 19/64" h. Creepage distance, 1/32". Rating: 2300 v. rms, 15 amps.

C-J No.	Contacts	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
1-540	1	$0.128	$0.102	$0.085	$0.068	$0.065
2-540	2	.195	.156	.13	.104	.099
3-540	3	.27	.216	.18	.144	.137
4-540	4	.345	.276	.23	.184	.175
5-540	5	.42	.336	.28	.224	.213
6-540	6	.488	.39	.325	.26	.247
7-540	7	.563	.45	.375	.30	.285
8-540	8	.638	.51	.425	.34	.323
9-540	9	.713	.57	.475	.38	.361
10-540	10	.788	.63	.525	.42	.399
11-540	11	.848	.678	.565	.452	.429
12-540	12	.923	.738	.615	.492	.467
13-540	13	.998	.798	.665	.532	.505
14-540	14	1.08	.864	.72	.576	.547

540 TERMINAL BLOCKS (CONT'D)

C-J No.	Contacts	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
15-540	15	$1.155	$0.924	$0.77	$0.616	$0.585
16-540	16	1.23	.984	.82	.656	.623
17-540	17	1.298	1.038	.865	.692	.657
18-540	18	1.373	1.098	.915	.732	.695
19-540	19	1.448	1.158	.965	.772	.733
20-540	20	1.515	1.212	1.01	.808	.768
21-540	21	1.59	1.272	1.06	.848	.806
22-540	22	1.665	1.332	1.11	.888	.844
23-540	23	1.74	1.392	1.16	.928	.882
24-540	24	1.808	1.446	1.205	.964	.916
25-540	25	1.883	1.506	1.255	1.004	.954
26-540	26	1.958	1.566	1.305	1.044	.992
27-540	27	2.033	1.626	1.355	1.084	1.03
28-540	28	2.10	1.68	1.40	1.12	1.064
29-540	29	2.175	1.74	1.45	1.16	1.102
30-540	30	2.25	1.80	1.50	1.20	1.14
31-540	31	2.325	1.86	1.55	1.24	1.178

541 TERMINAL BLOCKS

Terminals are mounted on 7/16" centers with 6-32 binder head screws. Size, 1⅜" w. x 11/16" h. Creepage distance, 5/32". Rating: 2800 v. rms, 20 amps.

C-J No.	Contacts	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
1-541	1	$0.165	$0.132	$0.11	$0.088	$0.084
2-541	2	.255	.204	.17	.136	.129
3-541	3	.345	.276	.23	.184	.175
4-541	4	.443	.354	.295	.236	.224
5-541	5	.54	.432	.36	.288	.274
6-541	6	.623	.498	.415	.332	.315
7-541	7	.728	.582	.485	.388	.369
8-541	8	.818	.654	.545	.436	.414
9-541	9	.908	.726	.605	.484	.46
10-541	10	1.005	.804	.67	.536	.509
11-541	11	1.095	.876	.73	.584	.555
12-541	12	1.185	.948	.79	.632	.60
13-541	13	1.29	1.032	.86	.688	.654
14-541	14	1.38	1.104	.92	.736	.699
15-541	15	1.47	1.176	.98	.784	.745
16-541	16	1.568	1.254	1.045	.836	.794
17-541	17	1.658	1.326	1.105	.884	.84
18-541	18	1.748	1.398	1.165	.932	.885
19-541	19	1.845	1.476	1.23	.984	.935
20-541	20	1.943	1.554	1.295	1.036	.984
21-541	21	2.033	1.626	1.355	1.084	1.03
22-541	22	2.123	1.698	1.415	1.132	1.075
23-541	23	2.213	1.77	1.475	1.18	1.121
24-541	24	2.31	1.848	1.54	1.232	1.17
25-541	25	2.40	1.92	1.60	1.28	1.216
26-541	26	2.49	1.992	1.66	1.328	1.262
27-541	27	2.58	2.064	1.72	1.376	1.307
28-541	28	2.67	2.136	1.78	1.424	1.353
29-541	29	2.768	2.214	1.845	1.476	1.402
30-541	30	2.858	2.286	1.905	1.524	1.448

542 TERMINAL BLOCKS

Terminals are mounted on 9/16" centers with 8-32 binder head screws. Size, 1⅜" w. x ⅜" h. Creepage distance, ¾". Rating: 4000 v. rms, 30 amps.

C-J No.	Contacts	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
1-542	1	$0.188	$0.15	$0.125	$0.10	$0.095
2-542	2	.30	.24	.20	.16	.152
3-542	3	.42	.336	.28	.224	.213
4-542	4	.54	.432	.36	.288	.274
5-542	5	.645	.516	.43	.344	.327
6-542	6	.758	.606	.505	.404	.384
7-542	7	.885	.708	.59	.472	.448
8-542	8	.99	.792	.66	.528	.502
9-542	9	1.103	.882	.735	.588	.559
10-542	10	1.23	.984	.82	.656	.623
11-542	11	1.335	1.068	.89	.712	.676
12-542	12	1.455	1.164	.97	.776	.737
13-542	13	1.568	1.254	1.045	.836	.794
14-542	14	1.68	1.344	1.12	.896	.851
15-542	15	1.80	1.44	1.20	.96	.912
16-542	16	1.913	1.53	1.275	1.02	.969
17-542	17	2.025	1.62	1.35	1.08	1.026
18-542	18	2.145	1.716	1.43	1.144	1.087
19-542	19	2.258	1.806	1.505	1.204	1.144
20-542	20	2.37	1.896	1.58	1.264	1.201
21-542	21	2.49	1.992	1.66	1.328	1.262
22-542	22	2.603	2.082	1.735	1.388	1.319
23-542	23	2.715	2.172	1.81	1.448	1.376
24-542	24	2.835	2.268	1.89	1.512	1.436
25-542	25	2.948	2.358	1.965	1.572	1.493
26-542	26	3.06	2.448	2.04	1.632	1.55

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Cinch Jones Marker and Fanning Strips

MARKER STRIPS FOR BARRIER TERMINAL BLOCKS



MS-8-140



MSX-4-540 (Installed)

140 AND 160 SERIES MARKER STRIPS

For labelling terminal positions on barrier terminal blocks and insulating exposed portions of terminals from metallic mounting surface. Mounting holes correspond with those on appropriate barrier terminal block. Made of 1/16" vulcanized fiber and numbered sequentially from 1 with legible white numerals.

MARKER STRIPS FOR 140, 140W, 140-¾ W, 164, 164W and 164-¾ W

C-J No.	Term.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
MS-2-140	2	6.6c	5.3c	4.4c	3.5c	3.3c
MS-3-140	3	7.3c	5.8c	4.9c	3.9c	3.7c
MS-4-140	4	8c	6.4c	5.4c	4.3c	4.1c
MS-5-140	5	8.7c	7c	5.8c	4.6c	4.4c
MS-6-140	6	9.5c	7.6c	6.3c	5c	4.8c
MS-7-140	7	10.1c	8.1c	6.8c	5.4c	5.1c
MS-8-140	8	10.9c	8.7c	7.3c	5.8c	5.5c
MS-9-140	9	11.6c	9.2c	7.7c	6.2c	5.9c
MS-10-140	10	16.1c	12.8c	10.7c	8.6c	8.1c
MS-11-140	11	16.7c	13.4c	11.2c	8.9c	8.5c
MS-12-140	12	17.5c	14c	11.7c	9.3c	8.9c
MS-13-140	13	18.2c	14.5c	12.1c	9.7c	9.2c
MS-14-140	14	18.9c	15.1c	12.6c	10.1c	9.6c
MS-15-140	15	19.6c	15.7c	13.1c	10.4c	9.9c
MS-16-140	16	24.1c	19.3c	16.1c	12.8c	12.2c
MS-17-140	17	24.8c	19.8c	16.5c	13.2c	12.5c
MS-18-140	18	25.5c	20.4c	17c	13.6c	12.9c
MS-19-140	19	26.2c	20.9c	17.5c	14c	13.3c
MS-20-140	20	30.7c	24.5c	20.5c	16.4c	15.5c
MS-21-140	21	31.4c	25.1c	20.9c	16.7c	15.9c

MARKER STRIPS FOR 141, 141W AND 141-¾ W

MS-2-141	2	7.1c	5.6c	4.7c	3.8c	3.6c
MS-3-141	3	8c	6.4c	5.4c	4.3c	4.1c
MS-4-141	4	9c	7.2c	6c	4.8c	4.6c
MS-5-141	5	9.9c	7.9c	6.6c	5.3c	5c
MS-6-141	6	10.9c	8.7c	7.3c	5.8c	5.5c
MS-7-141	7	11.9c	9.5c	7.9c	6.3c	6c
MS-8-141	8	12.8c	10.2c	8.5c	6.8c	6.5c
MS-9-141	9	13.7c	11c	9.2c	7.3c	7c
MS-10-141	10	18.4c	14.7c	12.3c	9.8c	9.3c
MS-11-141	11	19.4c	15.5c	12.9c	10.3c	9.8c
MS-12-141	12	20.3c	16.3c	13.6c	10.8c	10.3c
MS-13-141	13	21.2c	17c	14.2c	11.3c	10.8c
MS-14-141	14	22.2c	17.8c	14.8c	11.8c	11.3c
MS-15-141	15	26.9c	21.5c	18c	14.4c	13.6c
MS-16-141	16	27.8c	22.3c	18.6c	14.8c	14.1c
MS-17-141	17	28.8c	23c	19.2c	15.4c	14.6c
MS-18-141	18	29.8c	23.8c	19.9c	15.9c	15.1c
MS-19-141	19	34.4c	27.5c	23c	18.4c	17.4c
MS-20-141	20	35.4c	28.3c	23.6c	18.9c	17.9c

MARKER STRIPS FOR 142, 142W AND 142-¾ W

MS-2-142	2	7.6c	6.1c	5.1c	4c	3.8c
MS-3-142	3	8.7c	7c	5.8c	4.6c	4.4c
MS-4-142	4	9.9c	7.9c	6.6c	5.3c	5c
MS-5-142	5	11.1c	8.9c	7.4c	5.9c	5.6c
MS-6-142	6	12.3c	9.8c	8.2c	6.6c	6.2c
MS-7-142	7	13.5c	10.8c	9c	7.2c	6.8c
MS-8-142	8	14.6c	11.7c	9.8c	7.8c	7.4c
MS-9-142	9	15.8c	12.7c	10.6c	8.4c	8c
MS-10-142	10	20.8c	16.6c	13.9c	11.1c	10.5c
MS-11-142	11	22c	17.6c	14.7c	11.7c	11.1c
MS-12-142	12	23.2c	18.5c	15.5c	12.4c	11.7c
MS-13-142	13	24.4c	19.5c	16.3c	13c	12.4c
MS-14-142	14	25.5c	20.4c	17c	13.6c	12.9c
MS-15-142	15	30.5c	24.4c	20.3c	16.2c	15.4c
MS-16-142	16	31.7c	25.3c	21.1c	16.9c	16c
MS-17-142	17	32.9c	26.3c	21.9c	17.5c	16.6c

500 SERIES MARKER STRIPS

For labelling terminal positions on "500" series barrier terminal blocks. Made of 1/16" XP Bakelite, ¼" wide. Numbered sequentially from 1 with ⅛" legible white numerals. Mounted on top of terminal block as illustrated. Mounting screws furnished.

SERIES 162 FANNING STRIPS FOR CONNECTING TO SERIES 142 BARRIER BLOCKS



Terminals are of .032" brass, cadmium plated. Bakelite strips furnished with a hole in either the right or left end for fastening the cable with a clamp or lacing twine. Simplifies cable or harness wiring, assuring positive connections. Terminals mounted on 3/32" Bakelite, ⅝" w. and on 9/16" ctrs. **L**, cable clamp on left, **R**, right. Fanning strips for 140, 141 series barrier blocks available.

C-J No.	C-J No.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
2-162-L	2-162-R	$0.143	$0.114	$0.095	$0.076	$0.072
3-162-L	3-162-R	.188	.15	.125	.10	.095
4-162-L	4-162-R	.24	.192	.16	.128	.122
5-162-L	5-162-R	.293	.234	.195	.156	.148
6-162-L	6-162-R	.353	.282	.235	.188	.179

MARKER STRIPS FOR 540

C-J No.	Term.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
MSX-2-540	2	11.3c	9c	7.5c	6c	5.7c
MSX-3-540	3	12c	9.6c	8c	6.4c	6.1c
MSX-4-540	4	12c	9.6c	8c	6.4c	6.1c
MSX-5-540	5	12c	9.6c	8c	6.4c	6.1c
MSX-6-540	6	12.8c	10.2c	8.5c	6.8c	6.5c
MSX-7-540	7	12.8c	10.2c	8.5c	6.8c	6.5c
MSX-8-540	8	12.8c	10.2c	8.5c	6.8c	6.5c
MSX-9-540	9	12.8c	10.2c	8.5c	6.8c	6.5c
MSX-10-540	10	16.5c	13.2c	11c	8.8c	8.4c
MSX-11-540	11	17.3c	13.8c	11.5c	9.2c	8.7c
MSX-12-540	12	17.3c	13.8c	11.5c	9.2c	8.7c
MSX-13-540	13	17.3c	13.8c	11.5c	9.2c	8.7c
MSX-14-540	14	18.8c	15c	12.5c	10c	9.5c
MSX-15-540	15	22.5c	18c	15c	12c	11.4c
MSX-16-540	16	22.5c	18c	15c	12c	11.4c
MSX-17-540	17	24.8c	19.8c	16.5c	13.2c	12.5c
MSX-18-540	18	26.3c	21c	17.5c	14c	13.3c
MSX-19-540	19	26.3c	21c	17.5c	14c	13.3c
MSX-20-540	20	30c	24c	20c	16c	15.2c
MSX-21-540	21	30c	24c	20c	16c	15.2c
MSX-22-540	22	31.5c	25.2c	21c	16.8c	16c
MSX-23-540	23	31.5c	25.2c	21c	16.8c	16c
MSX-24-540	24	31.5c	25.2c	21c	16.8c	16c
MSX-25-540	25	35.3c	28.2c	23.5c	18.8c	17.9c
MSX-26-540	26	35.3c	28.2c	23.5c	18.8c	17.9c
MSX-27-540	27	35.3c	28.2c	23.5c	18.8c	17.9c
MSX-28-540	28	35.3c	28.2c	23.5c	18.8c	17.9c
MSX-29-540	29	35.3c	28.2c	23.5c	18.8c	17.9c
MSX-30-540	30	42c	33.6c	28c	22.4c	21.3c
MSX-31-540	31	42c	33.6c	28c	22.4c	21.3c

MARKER STRIPS FOR 541

MSX-2-541	2	12c	9.6c	8c	6.4c	6.1c
MSX-3-541	3	12c	9.6c	8c	6.4c	6.1c
MSX-4-541	4	12.8c	10.2c	8.5c	6.8c	6.5c
MSX-5-541	5	12.8c	10.2c	8.5c	6.8c	6.5c
MSX-6-541	6	12.8c	10.2c	8.5c	6.8c	6.5c
MSX-7-541	7	12.8c	10.2c	8.5c	6.8c	6.5c
MSX-8-541	8	13.5c	10.8c	9c	7.2c	6.8c
MSX-9-541	9	13.5c	10.8c	9c	7.2c	6.8c
MSX-10-541	10	17.3c	13.8c	11.5c	9.2c	8.7c
MSX-11-541	11	17.3c	13.8c	11.5c	9.2c	8.7c
MSX-12-541	12	18.8c	15c	12.5c	10c	9.5c
MSX-13-541	13	18.8c	15c	12.5c	10c	9.5c
MSX-14-541	14	18.8c	15c	12.5c	10c	9.5c
MSX-15-541	15	26.3c	21c	17.5c	14c	13.3c
MSX-16-541	16	26.3c	21c	17.5c	14c	13.3c
MSX-17-541	17	26.3c	21c	17.5c	14c	13.3c
MSX-18-541	18	26.3c	21c	17.5c	14c	13.3c
MSX-19-541	19	27.8c	22.2c	18.5c	14.8c	14.1c
MSX-20-541	20	31.5c	25.2c	21c	16.8c	16c
MSX-21-541	21	31.5c	25.2c	21c	16.8c	16c
MSX-22-541	22	31.5c	25.2c	21c	16.8c	16c
MSX-23-541	23	31.5c	25.2c	21c	16.8c	16c
MSX-24-541	24	31.5c	25.2c	21c	16.8c	16c
MSX-25-541	25	35.3c	28.2c	23.5c	18.8c	17.9c
MSX-26-541	26	38.3c	30.6c	25.5c	20.4c	19.4c
MSX-27-541	27	38.3c	30.6c	25.5c	20.4c	19.4c
MSX-28-541	28	38.3c	30.6c	25.5c	20.4c	19.4c
MSX-29-541	29	38.3c	30.6c	25.5c	20.4c	19.4c
MSX-30-541	30	42c	33.6c	28c	22.4c	21.3c

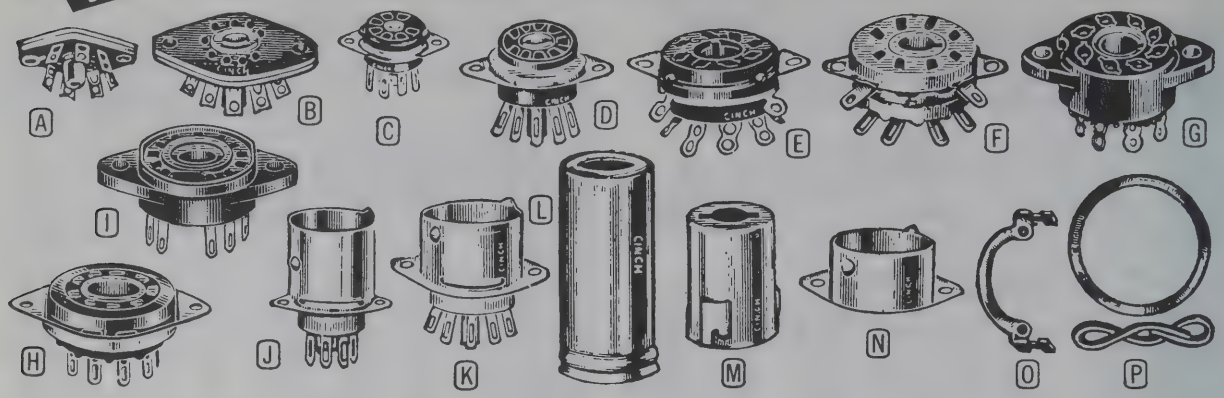
MARKER STRIPS FOR 542

MSX-2-542	2	12c	9.6c	8c	6.4c	6.1c
MSX-3-542	3	12.8c	10.2c	8.5c	6.8c	6.1c
MSX-4-542	4	12.8c	10.2c	8.5c	6.8c	6.1c
MSX-5-542	5	12.8c	10.2c	8.5c	6.8c	6.1c
MSX-6-542	6	12.8c	10.2c	8.5c	6.8c	6.1c
MSX-7-542	7	13.5c	10.8c	9c	7.2c	6.8c
MSX-8-542	8	13.5c	10.8c	9c	7.2c	6.8c
MSX-9-542	9	15c	12c	10c	8c	7.6c
MSX-10-542	10	18.8c	15c	12.5c	10c	9.5c
MSX-11-542	11	18.8c	15c	12.5c	10c	9.5c
MSX-12-542	12	22.5c	18c	15c	12c	11.4c
MSX-13-542	13	22.5c	18c	15c	12c	11.4c
MSX-14-542	14	22.5c	18c	15c	12c	11.4c
MSX-15-542	15	27.8c	22.2c	18.5c	14.8c	14.1c
MSX-16-542	16	27.8c	22.2c	18.5c	14.8c	14.1c
MSX-17-542	17	27.8c	22.2c	18.5c	14.8c	14.1c
MSX-18-542	18	27.8c	22.2c	18.5c	14.8c	14.1c
MSX-19-542	19	27.8c	22.2c	18.5c	14.8c	14.1c
MSX-20-542	20	34.5c	27.6c	23c	18.4c	17.5c
MSX-21-542	21	34.5c	27.6c	23c	18.4c	17.5c
MSX-22-542	22	34.5c	27.6c	23c	18.4c	17.5c
MSX-23-542	23	34.5c	27.6c	23c	18.4c	17.5c
MSX-24-542	24	34.5c	27.6c	23c	18.4c	17.5c
MSX-25-542	25	38.3c	30.6c	25.5c	20.4c	19.4c
MSX-26-542	26	38.3c	30.6c	25.5c	20.4c	19.4c

C-J No.	C-J No.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
7-162-L	7-162-R	$0.398	$0.318	$0.265	$0.212	$0.201
8-162-L	8-162-R	.458	.366	.305	.244	.232
9-162-L	9-162-R	.503	.402	.335	.268	.255
10-162-L	10-162-R	.563	.45	.375	.30	.285
11-162-L	11-162-R	.608	.486	.405	.324	.308
12-162-L	12-162-R	.66	.528	.44	.352	.334
13-162-L	13-162-R	.713	.57	.475	.38	.361
14-162-L	14-162-R	.773	.618	.515	.412	.391
15-162-L	15-162-R	.818	.654	.545	.436	.414
16-162-L	16-162-R	.878	.702	.585	.468	.445
17-162-L	17-162-R	.915	.732	.61	.488	.464

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Tube Sockets, Accessories



WAFER TYPE SOCKETS

Cadmium-plated brass contacts; hot-solder-coated center shield.

C-J No.	Fig.	Description	Mtg. Ctrs.	Net Ea., Lots 1-99	Net Ea., Lots 100-999
7W2A	A	7-pin miniature. Chocolate XP Bakelite* laminations.	7/8"	6.8c	3.4c
7WL2	A		1"	6.8c	3.4c
7WL4	A		1 3/8"	8c	4c
9W1	B	9-pin miniature	1 3/8"	8.4c	4.2c
9W2	B	9-pin miniature	1 5/16"	9.3c	4.7c

*Bakelite Corp. trademark.

SADDLE TYPE SOCKETS

C-J No.	Fig.	Description	Mtg. Centers	Mounting	Net Each, Lots of 1-99	Net Each, Lots of 100-999
7EB	C	Black	7/8"	Bottom	9.4c	4.7c
7EC	C	Ceramic	7/8"	Bottom	.....	17.5c
7EM	C	Mica	7/8"	Bottom	11.3c	5.6c
7AB1	C	Black	7/8"	Top	List...	15.5c
7AM1	C	Mica	7/8"	Top	11.3c	5.6c
9EB	D	Black	1 1/8"	Bottom	12.5c	6.2c
9EM	D	Mica	1 1/8"	Bottom	14.5c	7.2c
9AB	D	Black	1 1/8"	Top	List....	19.9c*
9AM	D	Mica	1 1/8"	Top	List....	24c*
8AB	E	Black	1 5/16"	Bottom	List....	15c*
8AM	E	Mica	1 5/16"	Bottom	List....	20.1c*
8EB	E	Black	1 1/2"	Bottom	10.2c	5.1c
8EM	E	Mica	1 1/2"	Bottom	12.9c	6.5c

MIL-S-12883A SADDLE TYPE SOCKETS

MIL Type: 7-pin, TS102P03 (MFE), TS102C03 (ceramic); 9-pin, TS103P03 (MFE), TS103C03 (ceramic). Bottom mounting.

C-J No.	Fig.	Description	Mtg. Ctrs.	Mounting Holes	Net Each, Lots of 100-999
7JM-3	C	MFE	7/8"	.125" dia.	8.3c
7JC-3	C	Ceramic	7/8"	.125" dia.	14.3c
9JM-3	D	MFE	1 1/8"	.125" dia.	9.8c
9JC-3	D	Ceramic	1 1/8"	.125" dia.	16.5c

MIL MOLDED OCTAL SOCKETS (FIG. F)

Castings of molded thermosetting plastic (MFE). Silver-plated phosphor bronze contacts, with heavy tinned tails. Heavy brass saddle, hot-soldered-coated, with four hot tinned ground lugs. Mounting centers, 1 1/2".

C-J No.	MIL-S-12883A No.	Mtg. Hole, In.	Net Each, Lots of 1-99	Net Each, Lots of 100-999
8JM-2	TS101P01	.156 dia.	35.4c	17.7c
8JMN-2	TS101P02	6-32 tap	54c	27c

ALL-MOLDED OCTAL SOCKETS (FIG. G)

All-molded octal socket offers complete one-piece construction; the saddle and body are a single casting. The standard socket is molded of high dielectric black Bakelite. Contacts are brass, cadmium plated. No. 8XM mica filled phenolic insulation, prevents loss from leakage. Mounting holes, .144" dia. on 1 5/16" centers.

C-J No. 8XM Socket—Mica.
Net Each, Lots of 1-99.....**13.2c**; 100-999.....**6.6c**

C-J No. 8XB Socket—Black. List Price.....**14.5c***

NOVAR SOCKETS (FIG. H)

Molded from high dielectric black phenolic (CFG) or mica-filled, low loss phenolic. Top or bottom mounting. Cadmium-plated brass contacts. Mounting centers, 1 1/2".

Bottom Mounting			Top Mounting		
C-J No.	Type	List Pr.*	C-J No.	Type	List Pr.*
9NS-B	Black	22.5c	9NS-B1	Black	25.0c
9NS-M	Mica	27.5c	9NS-M1	Mica	30.0c

MODEL 8RO RETAINER RING (FIG. P)

A crimped retaining ring formed of .020" spring steel. Will securely anchor sockets designed for ring mounting. Standard finish is cadmium.

C-J No. 8RO—Net Each, Lots of 1-99..**3.5c**; 100-999....**1.7c**

COMPACTRON SOCKETS (FIG. I)

All-molded sockets for compactron tubes. High dielectric black phenolic (CFG) or mica-filled, low loss phenolic. Available in 12-contact or high voltage eight contact sizes. Mtg. ctrs., 1 5/16".

C-J No.	No. of Contacts	Description	Net Each, Lots of 50-99	Net Each, Lots of 100-249	Net Each, Lots of 250-499
8CS-B	8	Black	29.5c	23.6c	22.4c
8CS-M	8	Mica	32c	25.6c	23c
12CS-B	12	Black	36c	28.8c	27.4c
12CS-M	12	Mica	38.5c	30.8c	29.3c

SHIELD BASE TYPE SOCKETS

MINIATURE AND NOVAL TYPES

Miniature (Fig. J): Mtg. holes, .125" dia. on 7/8" mounting centers.
Noval (Fig. K): Mtg. holes, .093" dia. on 1 1/8" mounting centers.

Description	C-J No.	Fig.	Net Ea., Lots of 1-99	Net Ea., Lots of 100-999	C-J No.	Fig.	Net Ea., Lots of 1-99	Net Ea., Lots of 100-999
Black	7XB1	J	List...	25.5c*	9XB	K	20.9c	10.4c
Mica	7XM1	J	19.3c	9.6c	9XM	K	List...	37.8c*
Ceramic	7XC	J	33c	16.5c	9XC	K	35.7c	17.9c

MIL-S-12883A TYPE SOCKETS

Mounting centers, 7/8"; 9-pin, 1 1/8".

C-J No.	Fig.	MIL-S-12883A No.	Description	Net Each, Lots of 100-999
7JC-2	J	TS102C01	Ceramic	11.6c
7JMN-1	C	TS102P02	MFE	8.3c
7JM-2	J	TS102P01	MFE	9.8c
7JCN-1	C	TS102C02	Ceramic	14.3c
9JM-2	K	TS103P01	MFE	12.6c
9JMN-1	D	TS103P02	MFE	9.8c
9JC-2	K	TS103C01	Ceramic	19.4c
9JCN-1	D	TS103C02	Ceramic	16.5c

J-SLOT TUBE SHIELDS (FIG. M)

C-J No.	Description	Length, Inches	Net Each, Lots of 1-99	Net Each, Lots of 100-999
7S2	Steel	1 3/8	11c	5.5c
7S3	Steel	1 3/4	11.6c	5.8c
7S4	Steel	2 1/4	17.8c	8.9c
7SJ2-1	MIL*, brass	1 3/8	14.3c	7.2c
7SJ3-1	MIL*, brass	1 3/4	16.1c	8c
7SJ4-1	MIL*, brass	2 1/4	17.8c	8.9c
9S1	Steel	1 1/2	16.3c	8.2c
9S2	Steel	1 15/16	16.4c	8.2c
9S3	Steel	2 3/8	29.9c	15c
9SJ1-1	MIL*, brass	1 1/2	17.6c	8.8c
9SJ2-1	MIL*, brass	1 15/16	19.3c	9.7c
9SJ3-1	MIL*, brass	2 3/8	21.1c	10.5c

*JAN-S-28A.

SNAP ON TYPE TUBE SHIELD (FIG. L)

C-J No. 7S1—Size: 1 13/64" h.
Net Each, Lots of 1-99.....**9c**; 100-999.....**4.5c**

SHIELD BASES

C-J No.	Fig.	Dimensions, In. H.	Mtg. Hole	Mtg. Ctrs.	Material	Net Each, Lots of 1-99	Net Each, Lots of 100-999
7SB1	N	5/8	.125 dia.	7/8	Steel	5.4c	2.7c
7SB2	N	5/8	.125 dia.	7/8	Brass	7.2c	3.6c
9SB1	N	....	1/8 dia.	1 1/8	Steel	7.2c	3.6c

STRAP NUTS (FIG. O)

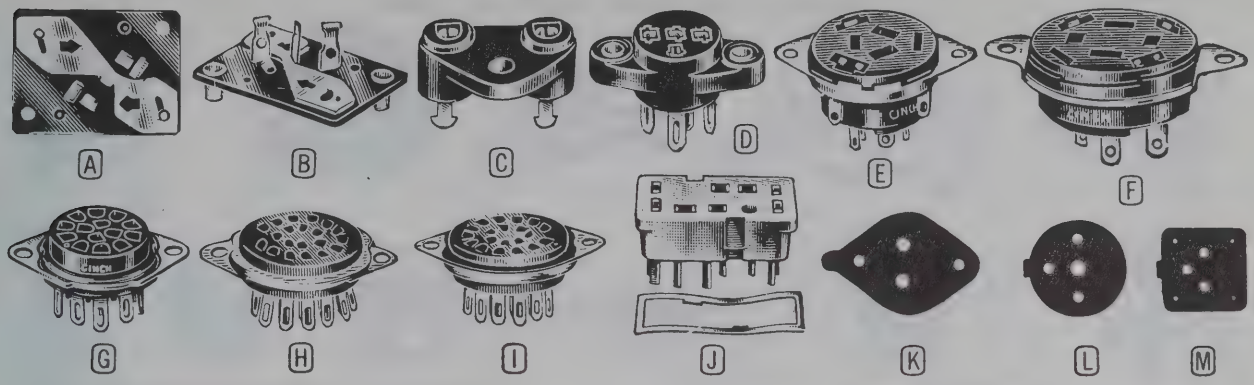
C-J No. 7SN—Cadmium-plated brass strap nuts for use in mounting sockets with saddles or shield bases. One strap nut takes the place of two conventional type nuts. Mounting centers, 7/8". For 7-contact sockets. Ground lugs are hot-solder-dipped.
Net Each, Lots of 1-99.....**16.8c**; 100-999.....**8.4c**

C-J No. 9SN—Same as Model 7SN except mounting centers are 1 1/8" and are for 9-contact sockets.
Net Each, Lots of 1-99.....**18.3c**; 100-999.....**9.2c**

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Cinch Jones Sockets for All Purposes



POWER TRANSISTOR SOCKETS

LAMINATED TYPE

C-J No. 2TS-1 (Fig. A)—Top and bottom plates are of natural XP Bakelite*, vacuum wax impregnated. Contacts are of brass, cadmium plated. Formed thread for 6-20 screw. Has .104/.110" dia. hole in CR steel plate. Provides easy attachment to a heat sink. List Price..... **15c***

C-J No. 2TS-2 (Fig. B)—Identical with above except equipped with integral eyelets for easy assembly to chassis.
Net Each, Lots of 1–99..... **10.7c**; 100–999..... **5.4c**
*Bakelite Corp. trademark.

MODEL 2TS-3 MOLDED TYPE (FIG. C)

Molded power transistor socket. Casting is molded of general purpose Bakelite. Contacts are phosphor bronze, cadmium plated. Mounting holes are .098" dia.; mounting centers are .425/.435".
C-J No. 2TS-3—Net Each, Lots of 1–99, **9c**; 100–999, **4.5c**

MODEL 2TS-4 GENERAL PURPOSE (FIG. D)

This new transistor socket was originally designed for an all-transistor television set; however, its future applications are many. This socket may be used in industrial communications, test equipment, ham gear, etc. Socket has a triangular base layout with 0.2" by 0.1" (JETEC-30) contact centers, as well as three contacts in line (.048" by .192" contact centers). Casting is molded of general purpose Bakelite; contacts are phosphor bronze, cadmium plated. May be used with the following EIA base designations: E3-14, E3-15, E3-25, E3-32, E3-38, E3-39, E3-42, E3-43, E3-44, E3-51, E3-53, E4-13, E4-24, E4-31, E4-43, E4-52, ET-103-D.
C-J No. 2TS-4—List Price..... **25.5c***

CAPACITOR "PLUG-IN" SOCKETS

C-J No. 2C5 (Fig. E)—Designed for use with Mallory and Magnavox 1" FP type capacitors. Molded from high dielectric black Bakelite. Sturdy steel mounting saddle has four ground lugs. Mounting centers, 1½". Three recessed center contacts for extended prongs of capacitor and two outer contacts flush with surface for short prongs of capacitor. All contacts are cadmium plated for fast, easy soldering.
Net Each, Lots of 1–99..... **43.5c**; 100–999..... **21.8c**

C-J No. 2C7 (Fig. F)—Designed for use with Mallory and Magnavox 1¾" FP type capacitors. Molded from high dielectric black Bakelite. Sturdy cadmium-plated steel saddle has 1 27/64" mounting centers. Four recessed center contacts for extended prongs of capacitor and three outer contacts flush with surface for short prongs of capacitor. All contacts are cadmium plated.
Net Each, Lots of 1-99..... **67.8**; 100–999..... **33.9c**

RELAY SOCKETS

SERIES 14RS RELAY SOCKETS (FIG. G)

C-J No. 14RS—Bottom-mount, 14-contact type with mica-filled, low-loss Bakelite casting. Beryllium-copper contacts silver-plated with hot-tinned tails. Saddle length 1 11/64". Mounting centers, 1⅛". Net Each, Lots 1–99.... **$0.738**; 100–999..... **$0.369**
C-J No. 14RS-2—Same, but top mount instead of bottom mount.
Net Each, Lots of 250–999..... **$0.369**

MODEL 20RS TOP MOUNTED RELAY SOCKET (FIG. H)

A 20-pin top-mounted relay socket. Contacts are of beryllium copper, silver-plated with hot tinned tails. Steel saddle, cadmium plated; 1 5/16" mounting centers.
C-J No. 20RS—Net Each, Lots of 1–99, **$1.68**; 100–999, **$0.84**

BOTTOM-MOUNTED RELAY SOCKETS (FIG. I)

C-J No. 20RS-1—A 20-contact relay socket with mica-filled low-loss Bakelite casting. Contacts are of beryllium copper, silver-plated with hot-tinned tails. Mounting centers, 1 5/16".
Net Each, Lots of 1–99..... **$1.68**; 100–999..... **$0.84**

C-J No. 14RS-1—A 14-contact relay socket. Same as above except contacts 15 to 20 are omitted.
Net Each, Lots of 1–99..... **$1.32**; 100–999..... **$0.66**

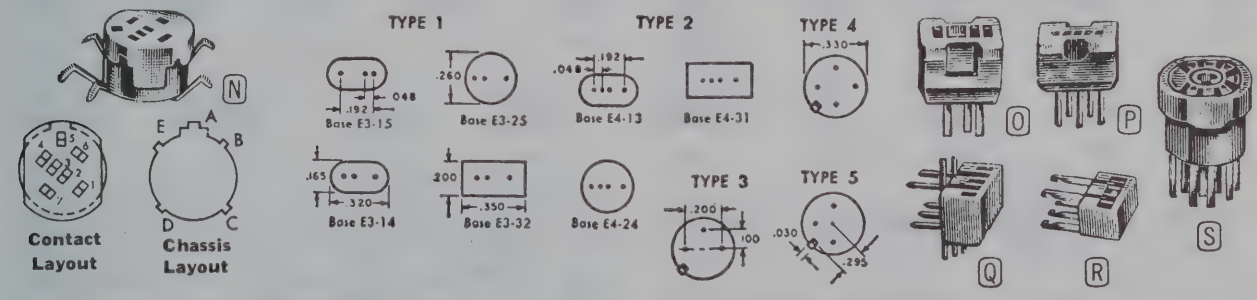
C-J No. 16RS-1—A 16-contact relay socket. Same as Model 20RS-1 except contacts 15, 17, 18 and 20 are omitted.
Net Each, Lots of 1–99..... **$1.44**; 100–999..... **$0.72**

MODEL 8RS RELAY SOCKET (FIG. J)

This relay socket is molded of mica filled phenolic and is attached to the chassis with a cold rolled steel clip that is cadmium plated. The contacts are beryllium copper, silver-plated. Mounting clip 20731 furnished with each socket. This socket fits the following relays: Advance MV-2C, AEMCO 95-3274, Brubaker K110A, Filtors P.26.A1.P.6A, G.E. D200A and G-203A, Potter & Brumfield SL and Ace Relay No. 50-6-A (single contact type).
C-J No. 8RS—Net Each, Lots of 1–99, **45c**; 100–999, **22.5c**

POWER TRANSISTOR HEAT SINKS

Hard anodized aluminum insulator wafers for use with power transistors. Feature high thermal conductivity, high dielectric resistance, high abrasion resistance and high corrosion resistance.
C-J No. 2W-1 (Fig. K)—For Motorola transistors 2N179, 2N176 and 2N554.
C-J No. 2W-2 (Fig. L)—For Delco transistor 2N174.
C-J No. 2W-3 (Fig. M)—For Texas Instruments transistor 2N389.
Any Model Listed Above—Net Each, Lots of 1–24, **31.5c**; 25–49, **25.2c**; 50–99, **21c**; 100–249, **16.8c**; 250–499, **16c**; 500–999, **15.1c**



UNIVERSAL TRANSISTOR SOCKETS (FIG. N)

Universal transistor socket that can be used with all transistor bases shown in illustration above. Casting is of mica-filled phenolic (MFE). Contacts are beryllium copper and are gold plated. Contacts may be used with either one or two-sided 1/16" printed circuit boards.

C-J No.	Base Types	Tabs Used (See Diag.)	Cont. Pos. Used	Net Ea., Lots of 1-99	Net Ea., Lots of 100-999
7UTS	All	A, B, C, D, E	1, 3, 4, 7	67.5c	33.8c
7UTS-1	1 and 3	C, D, E	1, 3, 4, 7	45c	22.5c
7UTS-3	3	C, D, E	1, 4, 7	40.5c	20.25c
7UTS-4	4	A, B, C, D, E	1, 4, 5, 6, 7	54c	27c
7UTS-5	5	B, D, E	1, 6, 7	40.5c	20.25c
7UTS-6	1 and 3	C, D, E	1, 3, 4, 7	45c	22.5c

SUBMINIATURE TUBE SOCKETS

Use extensively for hearing aids, radios and other electronic apparatus. Molded from mica-filled low loss Bakelite with silver-plated beryllium copper contacts. No. 2H5 can be used for four prong tube or as a transistor socket. No. 5PC for printed circuits. No. 5WC for wired circuits.

C-J No.	Pin	Fig.	Net Ea., Lots of 1-99	Net Ea., Lots of 100-999	C-J No.	Pin	Fig.	Net Ea., Lots of 1-99	Net Ea., Lots of 100-999
2H3*	3	O	20.8c	10.4c	5PC	5	Q	39.6c	19.8c
2H5*	5	P	22.4c	11.2c	5WC	5	R	37.6c	18.8c
2H6*	6	...	29.8c	14.9c	8SM*	8	S	42c	21c
2H7*	7	...	31c	15.5c	8SM-P†	8	...	54c	27c

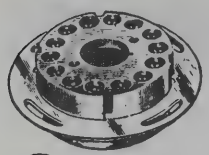
*Mounting ring included. †No. 8SM with a mounting plate.

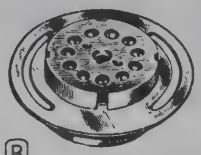
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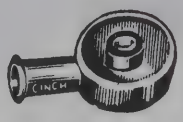
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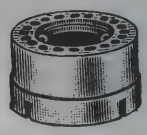
SOCKETS FOR SPECIAL PURPOSE TUBES

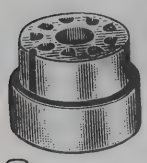

A


B


C


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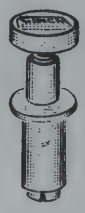

F


G


H


I


J


K

14-PRONG DIHEPTAL (FIG. A)

Molded from high dielectric black Bakelite* or mica-filled low loss Bakelite. Same features as No. 3M11. Size: 2 1/32" w. x 1 1/8" h.
*Bakelite Corp. trademark.

C-J No. 3B14—Black Bakelite diheptal socket.
C-J No. 3M14—Mica-filled Bakelite diheptal socket.

MODEL 3M11 11-PRONG MAGNAL (FIG. B)

Molded from mica-filled low loss Bakelite. Full floating silver-plated beryllium copper contacts insure easy insertion of tubes and provide excellent electrical connections. For use with 5BP1 and 2AP1 cathode ray tubes. Size: 1 23/32" w. x 1 1/64" h.

MOUNTING RINGS

C-J No. 3R11—Steel mounting ring for No. 3M11.
C-J No. 3R14—Steel mounting ring for Nos. 3B14 and 3M14.

MODEL 3A1 SECOND ANODE CONNECTOR (FIG. C)

Snap over .096" dia. prong on side of diheptal tubes. Cadmium-plated brass contact surrounded by rubber insulator. Size, 3/4" w. x 1 3/16" lg.

12-PRONG DUODECAL (FIG. D)

Slightly larger in diameter than the tube base and only slightly longer than the tube pin. Integral wire strain relief contact. For use with 10BP4, 2BP1, 5TP4, etc. type tubes. Also RCA 6199 tube.
C-J No. 3B12—Bakelite duodecal socket.
C-J No. 3M12—Mica duodecal socket.

MODEL 20-PM PHOTO-MULTIPLIER (FIG. E)

Twenty-contact socket for RCA photo-multiplier tube Nos. 6810, C7187A, C7122 and 7265. Casting material is MAI-60 Alkyd Glass Fiber, JETEC No. is 20-120. Contacts are cadmium-plated brass.

MODEL 7-VT VIDICON (FIG. F)

Seven-contact socket for RCA vidicon tube Nos. 6198 and 7038. Casting material is mica. Contacts are silver-plated phosphor bronze. JETEC No. is E8-11.

MODEL 8-VT VIDICON (FIG. F)

Same as Model 7-VT, except eight-contact size.

NUVISTOR SOCKETS

Five-contact sockets. Socket body is of low-loss phenolic insulation (MFE). Cadmium-plated cold-rolled steel saddle. Contacts are of copper alloy with cadmium plating.
C-J No. 5NS (Fig. G)—Crimp-mounting type. Fastened to chassis by two tabs.
C-J No. 5NS-1 (Fig. H)—Conventional-mounting type. Mounts with screws, eyelets, rivets or self-tapping screws. Any #2 screw or 1/32" dia. rivet with head dia. of up to .190" may be used.
C-J No. 5NS-2 (Fig. I)—Standoff type. For printed circuit applications. Has two grounding terminals.
C-J No. 5NS-3 (Fig. J)—Heat dissipating type. Has fingered-style base. Reduces envelope temperature.

MODEL TP-1 NUVISTOR TUBE PULLER* (FIG. K)

Unique device for removing Nuvistor tubes from their sockets without scratching them. Size: Approximately 2 1/2" h. x 1" w.
*Patent Pending.

PRICING FOR SOCKETS AND PULLER

C-J No.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
3A1	List Price				$0.90*
3B12	$0.60	$0.48	$0.40	$0.32	.304
3B14			1.05	.84	.798
3M11	4.50	3.60	3.00	2.40	2.28
3M12	1.80	1.44	1.20	.96	.912
3M14			1.10	.88	.836
3R11	.30	.24	.20	.16	.152
3R14					.266
5NS	.138	.138	.138	.069	.069
5NS-1	.213	.213	.213	.1065	.1065
5NS-2	List Price				.70*
5NS-3				.0743	.0743
7-VT	2.10	1.68	1.40	1.12	1.064
8-VT	List Price				2.80*
20-PM	5.003	4.002	3.335	2.668	2.535
TP-1	.79	.79	.79	.79	.79

LUG-TYPE TERMINAL STRIPS


51


51A


51B


51C


51F


51L


51R


51T


52


52A


52B


52C


52R


52T


53


53A


53B


53C


53E


53F


53T

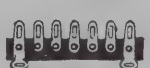

54


54A


54B


54C


55


55A


55B


55C

56

56A

56B

56C

These terminal strips are handy for neatly supporting resistors, capacitors, etc. in circuit wiring. Cadmium-plated steel lugs are spaced on 3/8" centers with 0.140" dia. mounting holes. Chocolate-colored phenolic is used. Strips are 1/16" thick and 3/8" wide.

C-J No.	Mounting Centers	List Price*	C-J No.	Mounting Centers	List Price*
51		$0.065	53C	3/4"	$0.13
51A		.065	53E		.10
51B		.065	53F		.10
51C		.065	53T		.19
51F		.075	54	1 7/8"	.155
51L		.085	54A	1 7/8"	.17
51R		.085	54B		.12
51T		.08	54C		.11
52		.075	55	2 1/4"	.15
52A		.075	55A	2 1/4"	.15
52B		.075	55B	1 1/2"	.165
52C		.075	55C	1 1/2"	.165
52R		.08	56	2 5/8"	.245
52T		.155	56A	2 5/8"	.18
53	1 1/2"	.145	56B	1 7/8"	.18
53A	1 1/2"	.16	56C	1 7/8"	.18
53B	3/4"	.13			

*CONTACT DISTRIBUTOR FOR QUANTITY PRICES

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PC Sockets and Connectors

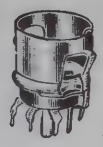
PRINTED CIRCUIT SOCKETS


A


B


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PRINTED CIRCUIT MINIATURE SOCKETS

C-J No. 7PC-B (Fig. A)—Seven-pin, brass contacts with hot-solder-coated finish. General purpose black phenolic casting. Special tabs prevent tube shields from contacting the printed wire chassis. Center shields provide mechanical retention of the socket in the chassis.
Net Each, Lots of 1-99.....**6.3c**; 100-999.....**3.15c**

C-J No. 7PC-B1 (Fig. A)—Same as 7PC-B but without center shield or tabs.
Net Each, Lots of 1-99.....**7.1c**; 100-999.....**3.5c**

C-J No. 7PC-B4 (Fig. B)—Seven-pin, brass contacts with hot-solder-dipped finish. Molded of general purpose black phenolic. No center shield. List Price.....**16.5c***

C-J No. 7PC-M4 (Fig. B)—Same as 7PC-B4, except molded of mica-filled, low-loss phenolic. List Price.....**16c***

C-J No. 7PC-B5 (Fig. B)—Same as 7PC-B4, except has brass center shield, hot-solder-dipped. List Price.....**16.5c***

C-J No. 7PC-M5 (Fig. B)—Same as 7PC-M4, except has brass center shield, hot-solder-dipped. List Price.....**23c***

PRINTED CIRCUIT NOVAL SOCKETS

C-J No. 9PC-B (Fig. C)—Same as 7PC-B but 9-pin noval.
Net Each, Lots of 1-99.....**8.58c**; 100-999.....**4.29c**

C-J No. 9PC-B1 (Fig. C)—Same as 7PC-B1 but 9-pin noval.
Net Each, Lots of 1-99.....**9.5c**; 100-999.....**4.7c**

C-J No. 9PC-B4 (Fig. D)—Same as 7PC-B4, but 9-pin noval.
List Price.....**19c***

C-J No. 9PC-M4 (Fig. D)—Same as 7PC-M4, but 9-pin noval.
List Price.....**19.5c***

C-J No. 9PC-B5 (Fig. D)—Same as 7PC-B5, but 9-pin noval.
List Price.....**20.5c***

C-J No. 9PC-M5 (Fig. D)—Same as 7PC-M5, but 9-pin noval.
List Price.....**22c***

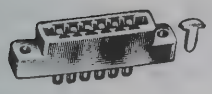
PRINTED CIRCUIT SOCKETS WITH SHIELD BASES

C-J No. 7PC-M2 (Fig. E)—Seven-pin miniature standoff socket. Has an attached bayonet type shield base with ground tab. For use with 1/16" printed circuit boards. Castings are low-loss mica-filled phenolic (MFE). Contacts are phosphor bronze with a hot-tinned finish. Center shield and ground tab are brass, hot-tinned and base, nickel-plated brass.
Net Each, Lots of 1-99.....**$0.948**; 100-999.....**$0.474**

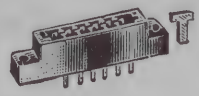
C-J No. 9PC-M2 (Fig. F)—Same as 7PC-M2 but 9-pin noval.
Net Each, Lots of 1-99.....**$1.17**; 100-999.....**$0.585**

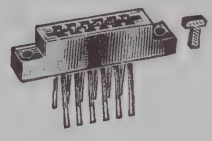
★CONTACT DISTRIBUTOR FOR QUANTITY PRICES

PRINTED CIRCUIT EDGE CONNECTORS


G


H


I


J

Designed for minimum printed circuit card wear, low insertion force and positive contact with the printed circuit board. Insulation is glass-filled diallyl phthalate, type SDG-F per MIL-M-14. Contacts are of phosphor bronze with .00003" minimum gold plated. Types 250, 251 and 252 utilize bifurcated contacts, permitting two flexing surfaces instead of one for positive contact.

Bifurcated contacts are especially recommended for added contact reliability where vibration or printed circuit board irregularities would otherwise cause trouble. Connectors meet requirements of MIL-C-21097A (Ships) where applicable. One plastic polarizing key furnished unassembled. Rating: 830 v. AC rms.

TYPE 250 (FIG. G)

Bifurcated contacts, single row. Conventional wiring tails.

C-J No.	Cont. Pos.	No. of Cont.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
50-6A-20	6	6	$1.125	$0.90	$0.75	$0.60	$0.57
50-10A-20	10	10	1.50	1.20	1.00	.80	.76
50-12A-20	12	12	1.688	1.35	1.125	.90	.855
50-15A-20	15	15	1.973	1.578	1.315	1.052	.999
50-18A-20	18	18	2.25	1.80	1.50	1.20	1.14
50-22A-20	22	22	2.625	2.10	1.75	1.40	1.33

TYPE 251 (FIG. H)

Bifurcated contacts, double row. Conventional wiring tails.

C-J No.	Cont. Pos.	No. of Cont.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
50-12A-30	6	12	$1.125	$0.90	$0.75	$0.60	$0.57
50-20A-30	10	20	1.50	1.20	1.00	.80	.76
50-24A-30	12	24	1.688	1.35	1.125	.90	.855
50-30A-30	15	30	1.973	1.578	1.315	1.052	.999
50-36A-30	18	36	2.25	1.80	1.50	1.20	1.14
50-44A-30	22	44	2.625	2.10	1.75	1.40	1.33

TYPE 252 (FIG. I)

Bifurcated contacts, double-row. Contact tails designed for dip soldering, and will fit into .051" diameter holes.

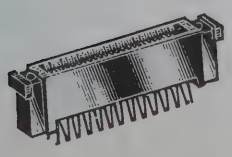
C-J No.	Cont. Pos.	No. of Cont.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
50-12B-10	6	12	$1.26	$1.008	$0.84	$0.672	$0.638
50-20B-10	10	20	1.74	1.392	1.16	.928	.882
50-24B-10	12	24	1.98	1.584	1.32	1.056	1.003
50-30B-10	15	30	2.34	1.872	1.56	1.248	1.186
50-36B-10	18	36	2.70	2.160	1.80	1.440	1.368
50-44B-10	22	44	3.18	2.544	2.12	1.696	1.611

TYPE 253 (FIG. J)

Standard contacts, double-row. Contact tails are for wire-wrapping.

C-J No.	Cont. Pos.	No. of Cont.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-499
50-12B-20	6	12	$1.913	$1.530	$1.275	$1.020	$0.969
50-20B-20	10	20	2.483	1.986	1.655	1.324	1.258
50-24B-20	12	24	2.768	2.214	1.845	1.476	1.402
50-30B-20	15	30	3.195	2.556	2.130	1.704	1.619
50-36B-20	18	36	3.623	2.898	2.415	1.932	1.835
50-44B-20	22	44	4.193	3.354	2.795	2.236	2.124

TYKON MINIATURE EDGE CONNECTORS



High density edge connectors with .050" centers for use with double-sided .062" printed circuit boards. Conventional wiring tails. Insulator is diallyl phthalate, type SDG-F per MIL-M-14. Contacts are phosphor bronze with .00003" gold plate. Carbon steel mounting clip for use in semi-flush printed circuit mounting, and cellulose acetate polarizing key available as separate items.

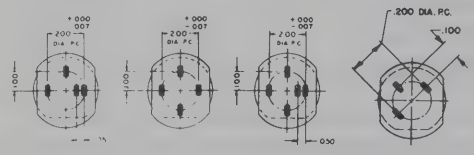
C-J No.	Cont. Pos.	No. of Cont.	Net Each, Lots of 1-24	25-49	50-99	100-249	250-299
50-12A-40	6	12	$3.22	$2.57	$2.15	$1.72	$1.63
50-20A-40	10	20	3.94	3.15	2.63	2.10	2.00
50-30A-40	15	30	4.79	3.83	3.20	2.56	2.43
50-40A-40	20	40	5.69	4.55	3.80	3.04	2.88
50-50A-40	25	50	6.58	5.26	4.39	3.51	3.33
50-MC	Mounting Clip		.038	.03	.025	.02	.019
50-PK	Polarizing key		.083	.066	.055	.044	.042

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TRANSISTOR SOCKETS



Multi-purpose for use with 3- or 4-pin inline, 3-pin circular, or 4-pin circular transistors. Low-loss mica-filled phenolic body; contacts gold flashed over silver-plated beryllium copper. Types 3324-3326 for .030" dia. pins. Others for .016" dia. pins.



PATTERN A PATTERN B PATTERN C PATTERN D

Model No.	Pin Pattern	Mtg. Type	Per 1000 1-499	Per 1000 500-1499	Per 1000 1500-4999
05-3301	A	Saddle	176.90	111.70	98.30
05-3304	A	Ring	143.55	90.65	79.75
05-3303	A	P.C.	144.54	91.25	80.30
05-3305	A	P.C.	144.13	91.00	80.10
05-3307	B	Ring	172.44	108.90	95.80
05-3308	B	P.C.	170.05	107.40	94.50
05-3313	C	Ring	201.90	127.45	112.15
05-3324	D	Ring	159.50	90.65	79.75
05-3326	D	Saddle	263.34	166.25	146.30
55-47202	Mtg. Ring		19.80	11.25	9.90

SPECIFICATIONS

Current Rating — 1 Ampere
Contact Resistance — .03 Ohm Maximum
Contact Materials — Beryllium Copper, Gold Flashed over Silver Plate
Saddle and Mounting Ring — Brass, Nickel Plated



FIG. A FLAT-IN-LINE



FIG. B PRINTED CIRCUIT



FIG. C ROUND

Model No.	No. of Contacts	Insulator Material	Type	Figure
05-0799	3	Mica	1	A
05-0803	4	Mica	2	A
05-0786	3	Mica	1	B
05-0805	4	Mica	2	B
05-0788	5	Mica		B
05-0731-01	8	Mica		C
05-0731-02†	8	Mica		C

55-47202 Retainer for 05-0731-01 and 05-0731-02
55-47105 Retainer for 05-0799 and 05-0803

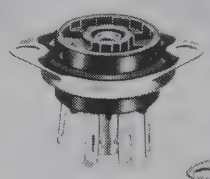
TYPES: 1. For Point Type and Junction Transistors.
2. For Linotetrar Type.

Model No.	Per 1000 1-499	Per 1000 500-1499	Per 1000 1500-4999
05-0799	103.95	68.25	63.00
05-0803	109.90	72.15	66.60
05-0786	118.80	75.00	69.00
05-0805	119.80	78.65	72.60
05-0788	122.76	77.50	68.20
05-0731-01	259.38	163.75	144.10
05-0731-02†	277.20	175.00	154.00
55-47202	19.80	11.25	9.90
55-47105	12.60	10.00	8.80

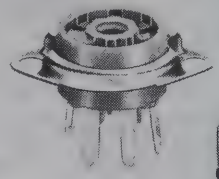
†With Center Shield

MINIATURE SOCKETS

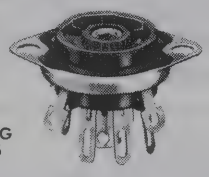
7- and 9-pin Sockets with saddles or shield-base. 7-pin have 7/8" mounting centers; 9-pin have 1 1/8" mounting centers. Contact Material: BR = Brass Cad. Plate; PH = Phosphor Bronze; SP = Silver Plate; TD = Tin Dipped; BC = Beryllium Copper; TL = Tin Lead. Insulator Materials: GP = General Purpose Phenolic; M = Mica.



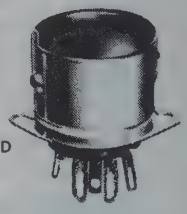
SADDLE TYPE BOTTOM MOUNTING



SADDLE TYPE TOP MOUNTING



SADDLE TYPE BOTTOM MOUNTING W/GROUND LUGS



BASE SHIELD TYPE

7-PIN RMA SADDLE TYPE — BOTTOM MOUNTING

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000 1-499	Per 1000 500-1499	Per 1000 1500-4999
04-702-01	GP	BR	Yes	.125	81.77	51.63	45.43
04-702-02	GP	BR	No	.125	71.08	44.88	39.49

7-PIN JAN SADDLE TYPE — TOP MOUNTING

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000 1-499	Per 1000 500-1499	Per 1000 1500-4999
04-711-01	Mica	PH	Yes	.093	107.91	68.13	59.95
04-711-02	Mica	BR	No	.093	68.31	43.13	37.95

7-PIN RMA SADDLE TYPE — TOP MOUNTING

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000 1-499	Per 1000 500-1499	Per 1000 1500-4999
04-701-02	Mica	PH	No	.125	81.87	51.69	45.48

7-PIN RMA SADDLE TYPE W/GROUND LUGS — BOTTOM MOUNTING

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000 1-499	Per 1000 500-1499	Per 1000 1500-4999
04-703-13	GP	BR	Yes	.125	84.55	53.38	46.97
04-703-02	Mica	BR	Yes	.125	84.15	53.15	46.75
04-703-14	GP	BR	No	.125	71.87	45.38	39.93
04-703-04	Mica	BR	No	.125	74.75	47.20	41.55
04-703-05	Mica	PH	No	.125	82.70	52.20	45.95
04-703-06	Mica	BC	No	.125	124.05	78.30	68.90

7-PIN ELCO SHIELD BASE TYPE — TOP MOUNTING

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000 1-499	Per 1000 500-1499	Per 1000 1500-4999
04-705-01	Mica	PH	Yes	.125	128.40	81.05	71.35
04-705-02	Mica	PH	No	.125	122.30	77.20	67.95

9-PIN RMA SADDLE TYPE — BOTTOM MOUNTING

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000 1-499	Per 1000 500-1499	Per 1000 1500-4999
04-902-01	GP	BR	Yes	.125	88.50	55.90	49.20
04-902-02	Mica	PH	Yes	.125	109.40	69.05	60.80
04-902-03	GP	BR	No	.093	75.15	47.45	41.75
04-902-04	Mica	BR	No	.093	85.15	53.75	47.30

9-PIN RMA SADDLE TYPE — BOTTOM MOUNTED W/GROUND LUGS

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000 1-499	Per 1000 500-1499	Per 1000 1500-4999
04-903-01	GP	BR	Yes	.125	89.70	56.65	49.85
04-903-02	Mica	PH	Yes	.125	121.77	76.88	67.65
04-903-03	Cer	BR	Yes	.093	229.20	144.70	127.35
04-903-04	GP	BR	No	.125	81.00	51.15	45.00
04-903-05	†Cer	BR	No	.093	219.00	138.25	121.65

†Not E-Z MATE

9-PIN RMA SADDLE TYPE — TOP MOUNTING

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000 1-499	Per 1000 500-1499	Per 1000 1500-4999
04-901-02	Mica	PH	Yes	.125	109.40	69.05	60.80
04-901-03	Mica	PH	No	.125	96.60	61.00	53.70

9-PIN JAN SADDLE TYPE — TOP MOUNTING

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000 1-499	Per 1000 500-1499	Per 1000 1500-4999
04-911-01	Mica	PH	Yes	.125	115.83	73.13	64.35
04-911-02	Mica	PH	Yes	.093	106.95	67.50	59.40
04-911-03	Mica	PH	No	.125	92.07	58.15	51.15

9-PIN RMA SHIELD BASE TYPE — TOP MOUNTING

Model No.	Insulator Material	Contact Material	Center Shield	Mtg. Hole	Per 1000 1-499	Per 1000 500-1499	Per 1000 1500-4999
04-905-01	GP	BR	Yes	.125	132.35	83.55	73.55
04-905-02	GP	BR	No	.125	118.65	74.90	65.90
04-905-03	Mica	PHSPTD	No	.125	188.75	107.25	94.40

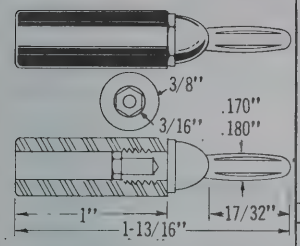
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GC ELECTRONICS

ELECTROCRAFT ELECTRONIC COMPONENTS

BANANA PLUGS

BANANA PLUG*

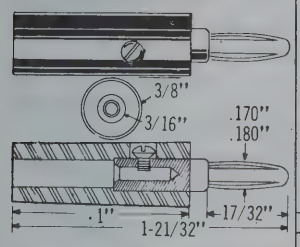


DESC: Hex brass body, separate internal brass stud for solderless or soldered connection.
RATING: 15 amps AC for 10 degrees C Temp. rise continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Four leaved, phosphor bronze nickel plated spring.

Net per C 22.00

No.	Color	No.	Color
33-000-BU	Red	33-002-BU	Blk

BANANA PLUG*

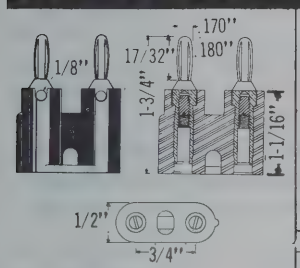


DESC: Lead wire connection with set screw through plastic handle.
RATING: 15 amps AC for 10 degrees C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Four leaved, phosphor bronze nickel plated spring.

Net per C 19.00

No.	Color	No.	Color
33-006-BU	Red	33-008-BU	Blk

DUAL BANANA PLUG

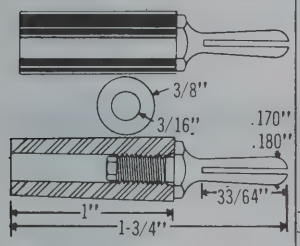


DESC: Brass, nickel plated plug. Mates with standard dual binding posts.
RATING: 15 amps AC for 10 degrees C Temp. rise, continuous duty.
BODY: Molded cycoloc plastic, per MIL-M-22544, type 4.
TIPS: Four leaved, phosphor bronze nickel plated springs.

Net per C 72.00

No.			
33-010-BU			

BANANA PLUG*

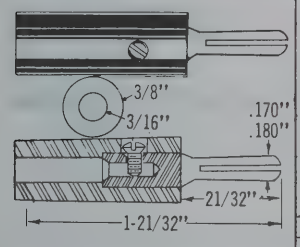


DESC: Separate internal brass stud for solderless or soldered connection.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Cross slotted, nickel plated brass.

Net per C 18.00

No.	Color	No.	Color
33-012-BU	Red	33-014-BU	Blk

BANANA PLUG*

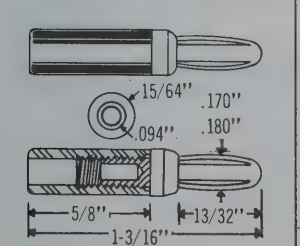


DESC: Lead wire connection with set screw through plastic handle.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Cross slotted, nickel plated brass..

Net per C 18.00

No.	Color	No.	Color
33-018-BU	Red	33-020-BU	Blk

BANANA PLUG

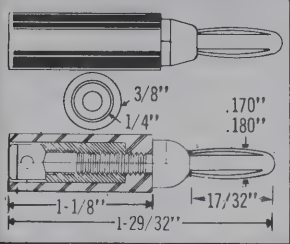


DESC: Midget type; lead wire connection solders to drilled body.
RATING: 10 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Four leaved, phosphor bronze, nickel plated spring.

Net per C 19.00

No.	Color	No.	Color
33-024-BU	Red	33-026-BU	Blk

BANANA PLUG

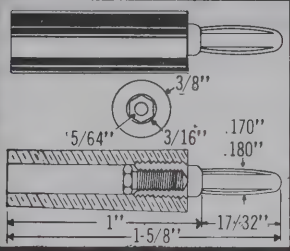


DESC: Lead wire connection with set screw through plastic handle.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Four leaved, nickel plated phosphor bronze spring.

Net per C 35.00

No.	Color	No.	Color
33-028-1BU	Red	33-028-2BU	Blk

BANANA PLUG*

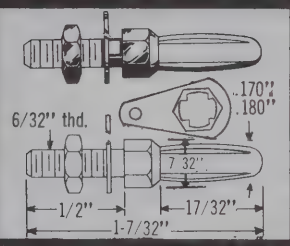


DESC: Wire solders to stud; or brass stud locks wire in place for solderless connection.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Four leaved, nickel plated, phosphor bronze spring.

Net per C 19.00

No.	Color	No.	Color
33-032-1BU	Red	33-032-2BU	Blk

BANANA PLUG

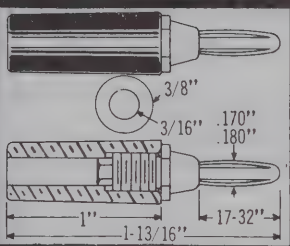


DESC: Threaded shank type, supplied with terminal lug and hex nut.
BODY: Brass, nickel plated.
TIP: Four leaved, phosphor bronze nickel plated spring.

Net per C 18.00

No.			
33-034-BU			

INSULATED BANANA PLUG

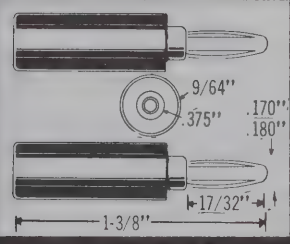


DESC: Nickel plated brass plug, fits standard Banana Jack.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Four leaved beryllium copper, nickel plated spring.

Net per C 16.00

No.	Color	No.	Color
33-036-1BU	Red	33-036-2BU	Blk

INSULATED BANANA PLUG*

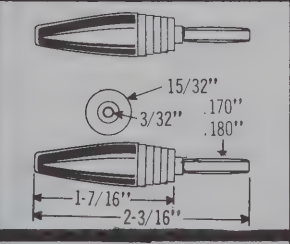


DESC: Solderless connection, nickel plated brass plug. Fits standard Banana Jack.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Nylon, per MIL-P-20693A.
TIP: Four leaved beryllium copper nickel plated spring.

Net per C 16.00

No.	Color	No.	Color
33-037-1BU	Red	33-037-2BU	Blk

BANANA PLUG

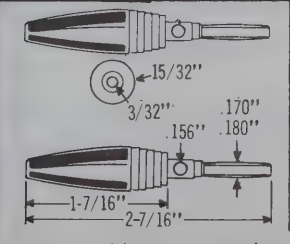


DESC: Flexible handle type.
HANDLE: Unbreakable, shockproof plastic.
TIP: Phosphor bronze, nickel plated spring.

Net per C 21.00

No.	Color	No.	Color
33-040-1BU	Red	33-040-2BU	Blk

BANANA PLUG



DESC: Flexible handle, stack type.
HANDLE: Unbreakable, shockproof plastic
TIP: Phosphor bronze, nickel plated spring.

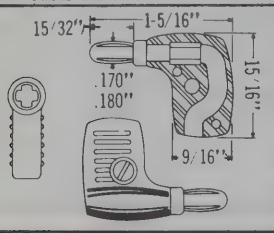
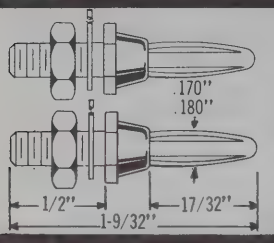
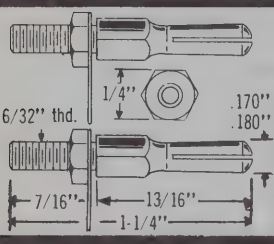
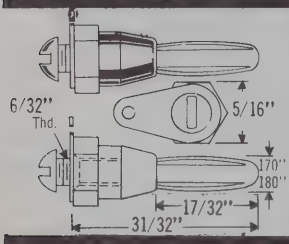
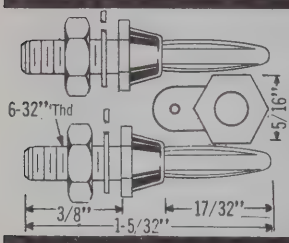
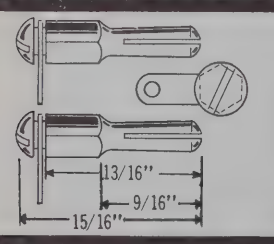
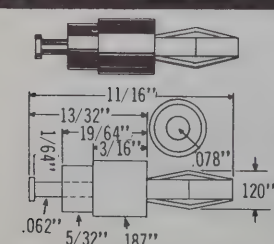
Net per C 23.00

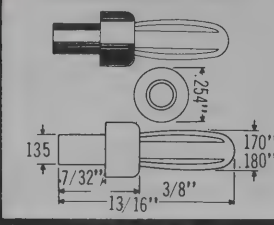
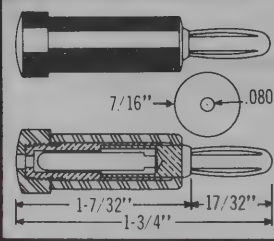
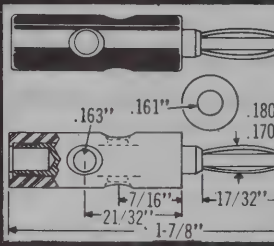
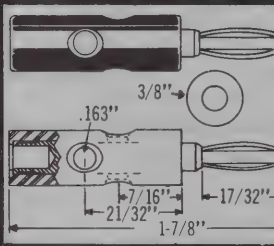
No..	Color	No.	Color
33-042-1BU	Red	33-042-2BU	Blk

Also available in Bulk quantities in yellow, green, or blue. To order: add to part number, "-3BU" for yellow, "-4BU" for green, "-5BU" for blue. Example: No. 33-000-3BU (for yellow).

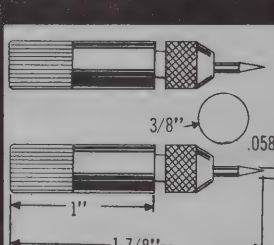
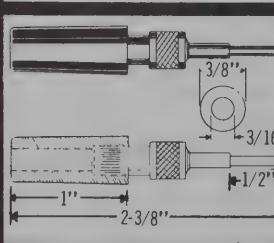
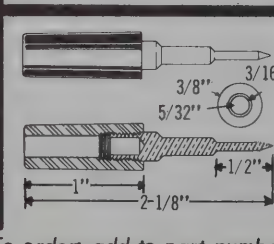
ELECTROCRAFT ELECTRONIC COMPONENTS

BANANA PLUGS

ILLUSTRATIONS	DESCRIPTION
	**BANANA PLUG** DESC: Right angle "Gun" Tip (meter plug), lead wire solders to body. RATING: 10 amps AC for 10 degree C Temp. rise, continuous duty. HANDLE: Molded plastic, per MIL-P-14 CFG. TIP: Four leaved, phosphor bronze, nickel plated springs. Net per C 36.00 No. 33-046-BU Color Red; No. 33-048-BU Color Blk
	**BANANA PLUG** DESC: All metal, threaded shank type, with terminal lug and hex nut. BODY: Brass, nickel plated. TIP: Four leaved, nickel plated phosphor bronze spring. Net per C 15.00 No. 33-058-BU
	**BANANA PLUG** DESC: Threaded shank type, supplied with terminal lug and hex nut. BODY: Brass, nickel plated. TIP: Cross slotted, brass, nickel plated. Net per C 14.00 No. 33-060-BU
	**BANANA PLUG** DESC: Panel mounting type, number 6-32 tapped body; with screw and terminal lug. BODY: Brass, nickel plated. TIP: Four leaved, phosphor bronze, nickel plated spring. Net per C 18.00 No. 33-062-BU
	**BANANA PLUG** DESC: Threaded shank type, with terminal lug and hex nut. BODY: Brass, nickel plated. TIP: Four leaved, phosphor bronze, nickel plated spring. Net per C 18.00 No. 33-064-BU
	**BANANA PLUG** DESC: Panel mounting type, tapped number 6-32, with screw and terminal lug. BODY: Brass, nickel plated. TIP: Cross slotted, brass, nickel plated. Net per C 15.00 No. 33-066-BU
	**BANANA PLUG** DESC: Printed circuit, sub-miniature rivet type, solder connection, fits jacks with .104 I.D. TIP: Four leaved, beryllium copper, silver plated spring. Net per C 18.00 No. 33-068-BU

ILLUSTRATIONS	DESCRIPTION
	**MIDGET BANANA PLUG** DESC: Rivet type, fits all standard Banana lacks. TIP: Four leaved phosphor bronze silver plated spring. Net per C 16.00 No. 33-069-BU
	**BANANA PLUG ADAPTOR** DESC: Adapts tip plug to banana plug, ends are standard tip jack and banana plug. RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty. HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. TIP: Standard tip jack one end; other end four leaved banana plug. Net per C 30.00 No. 33-072-BU Color Red; No. 33-074-BU Color Blk
	**STACK BANANA PLUG** DESC: Stack type, fits standard banana plugs in top and side. RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty. HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. TIP: Four leaved phosphor bronze, nickel plated spring. Net per C 30.00 No. 33-084-1BU Color Red; No. 33-084-2BU Color Blk
	**STACK BANANA PLUG** DESC: Stack type, fits standard banana plugs in top and side. RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty. HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. TIP: Four leaved beryllium copper, nickel plated spring. Net per C 33.00 No. 33-086-1BU Color Red; No. 33-086-2BU Color Blk

TIP PLUGS

	**PHONO NEEDLE TIP PLUG** DESC: Nickel plated brass body, chuck design to hold .058 replaceable phono needle. Wire solders to body. RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty. HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. TIP: Phono needle, brass alloy. Net per C 18.00 No. 33-100-BU Color Red; No. 33-102-BU Color Blk
	**INSULATED TIP PLUG*** DESC: Solderless type, wire tightens under knurled collar; machined brass body, nickel plated. RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty. HANDLE: Molded Butyrate per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. TIP: Phono needle, brass alloy. Net per C 15.00 No. 33-106-BU Color Red; No. 33-108-BU Color Blk
	**HEAVY DUTY PHONE TIP PLUG*** DESC: Standard tip, large diameter body for accepting heavy duty wire solder type. RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty. HANDLE: Molded Butyrate. per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. TIP: Brass, nickel plated phono needle. Net per C 15.00 No. 33-110-1BU Color Red; No. 33-110-2BU Color Blk

*Also available in Bulk quantities in yellow, green, or blue. To order: add to part number, "-3BU" for yellow, "-4BU" for green, "-5BU" for blue. Example: No. 33-000-3BU (for yellow).

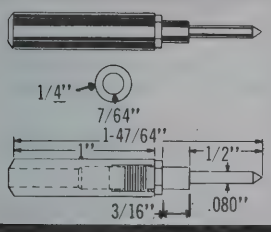
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GC ELECTRONICS

ELECTROCRAFT ELECTRONIC COMPONENTS

TIP PLUGS

ILLUSTRATIONS	DESCRIPTION

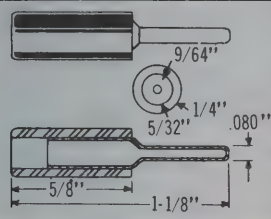


SUBMINIATURE PHONE TIP PLUG

DESC: Standard tip, extra-small diameter, nickel plated, brass body. Solder-type.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Fibre, Per MIL-F-1148-A type BH.
TIP: Brass, nickel plated

Net per C 18.00

No.	Color	No.	Color
33-112-BU	Red	33-114-BU	Blk

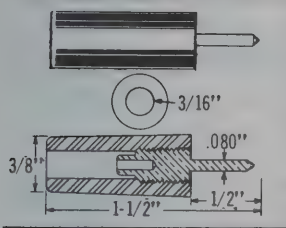


INSULATED HOLLOW PHONETIP

DESC: Drawn brass, nickel plated, solder type.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Hollow, brass, nickel plated.

Net per C 11.00

No.	Color	No.	Color
33-116-1BU	Red	33-116-2BU	Blk

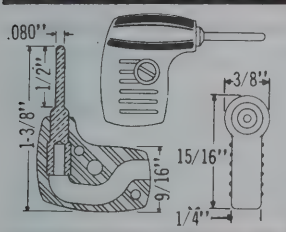


INSULATED SHORT TIP PLUG*

DESC: Specially designed where minimum amount of metal can be exposed. Solder type..
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Brass, nickel plated,

Net per C 12.00

No.	Color	No.	Color
33-118-BU	Red	33-120-BU	Blk

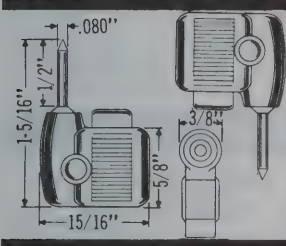


RIGHT ANGLE TIP PLUG

DESC: Right angle "gun" tip (meter plug). Lead wire solders to body.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Plastic, per MIL-P-14 CFG.
TIP: Brass, nickel plated.

Net per C 27.00

No.	Color	No.	Color
33-128-BU	Red	33-130-BU	Blk

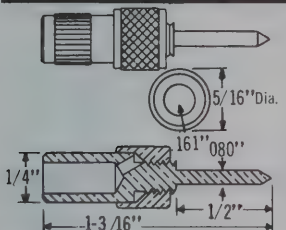


"TRIGGER-QUIK" TIP PLUG

DESC: Right angle plug, spring loaded solderless wire connection.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Plastic, per MIL-P-14 CFG.
TIP: Brass, nickel plated

Net per C 39.00

No.	Color	No.	Color
33-132-BU	Red	33-134-BU	Blk

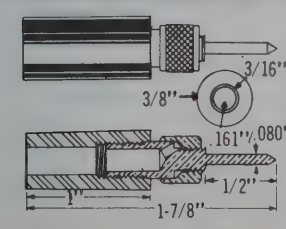


"JR." SOLDERLESS PHONE TIP

DESC: Press fit, nickel plated brass body; wire fastens under knurled collar.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
TIP: Brass, nickel plated..

Net per C 11.00

No.			
33-142-BU			



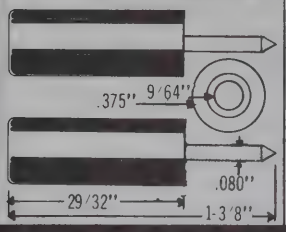
"JR." SOLDERLESS PHONE TIP*

DESC: Threaded nickel plated brass body. Wire fastens under knurled collar.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Brass, nickel plated.

Net per C 20.83

No.	Color	No.	Color
33-144-1BU	Red	33-144-2BU	Blk

ILLUSTRATIONS	DESCRIPTION

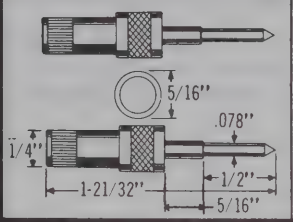


INSULATED TIP PLUG*

DESC: Short tip, nickel plated brass plug; fits standard phone tip jack. Solder type.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Nylon, per MIL-P-20693A.
TIP: Brass, nickel plated.

Net per C 10.50

No.	Color	No.	Color
33-145-1BU	Red	33-145-2BU	Blk

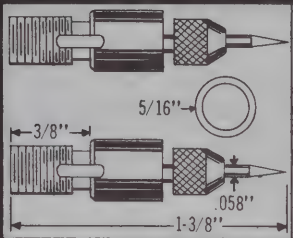


SOLDERLESS TIP PLUG

DESC: All metal;wire fastens under knurled collar.
BODY: Precision machined brass, nickel plated.
TIP: Brass, nickel plated.

Net per C 11.00

No.			
33-146-BU			

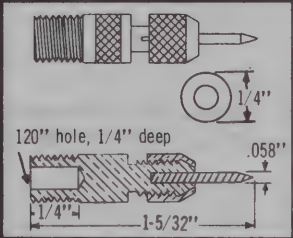


PHONO NEEDLE TIP PLUG

DESC: Threaded shank type with ¼-20 thread; chuck to hold phono needle.
BODY: Brass, nickel plated.
TIP: Steel, nickel plated phono needle.

Net per C 14.00

No.			
33-148-BU			

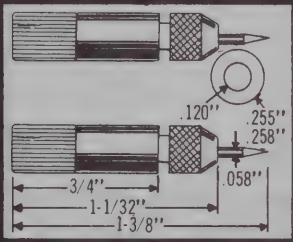


NEEDLE TIP AND CHUCK

DESC: Threaded shank type..Tip is removable for quick replacement.
BODY: Brass, nickel plated
TIP: Steel, nickel plated phono needle.

Net per C 13.20

No.			
33-149-BU			

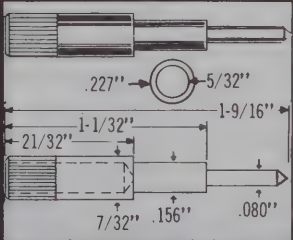


PUSH-ON NEEDLE CHUCK

DESC: Knurled body for press fit into Test Prod handles drilled with ⅛" hole.
BODY: Brass, nickel plated, solder connection.
TIP: Steel, nickel plated phono needle.

Net per C 13.20

No.			
33-150-BU			

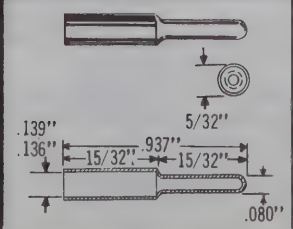


HEAVY DUTY PHONE TIP PLUG

DESC: Knurled shank for press fit into Test Prod handles, drilled with 7/32" hole; extra large well for lead wires up to No. 10 gauge; solder connection.
BODY: Brass, nickel plated.
TIP: Brass, nickel plated phone tip.

Net per C 11.00

No.			
33-152-BU			



STANDARD HOLLOW PHONE TIP

DESC: Solder type, hollow design.
BODY: Drawn brass, nickel plated.
TIP: Hollow, brass, nickel plated.

Net per C 1.85

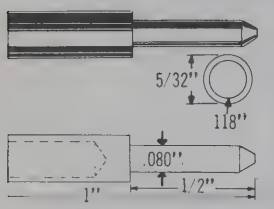
No.			
33-154-BU			

Also available in Bulk quantities in yellow, green, or blue. To order: add to part number, "-3BU" for yellow, "-4BU" for green, "-5BU" for blue. Example: No. 33-000-3BU (for yellow).

ELECTROCRAFT ELECTRONIC COMPONENTS

TIP PLUGS

ILLUSTRATIONS | DESCRIPTION

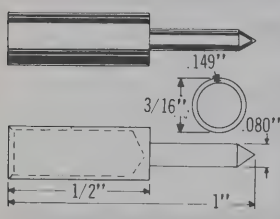


STANDARD SOLID PHONE TIP

DESC: Solder type, solid metal tip.
BODY: Brass, nickel plated.
TIP: Solid, brass, nickel plated.

Net per C 3.20

No.		
33-156-BU		

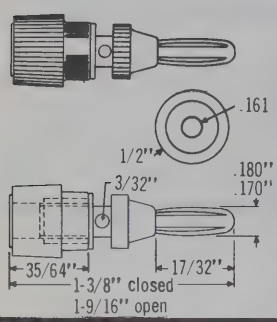


HEAVY DUTY PHONE TIP PLUG

DESC: Solder type. Solid metal tip for heavy duty applications.
BODY: Brass, nickel plated.
TIP: Solid, brass, nickel plated.

Net per C 3.85

No.		
33-158-BU		

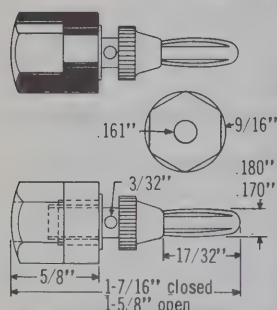


COMBINATION POST-PLUG

DESC: Captive head, type; for converting panel-mounted banana jack to 5-way binding post termination. Accepts solid or standard wire, spade lug, phone tip, banana plug or alligator clip. Brass, nickel plated body.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Nylon - Dupont Zytel No. 101, per MIL-M-20693A.
TIP: Four leaved, phosphor bronze, nickel plated spring.

Net per C 30.00

No.	Color	No.	Color
33-165-1BU	Red	33-165-2BU	Blk

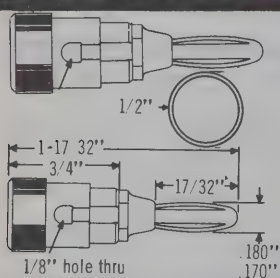


COMBINATION POST-PLUG*

DESC: Captive head, type; for converting panel-mounted banana jack to 5-way binding post termination. Accepts solid or standard wire, spade lug, phone tip, banana plug or alligator clip. Brass, nickel plated body.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Molded nylon, per MIL-M-20693A.
TIP: Four leaved, phosphor bronze, nickel plated spring.

Net per C 30.00

No.	Color	No.	Color
33-166-1BU	Red	33-166-2BU	Blk

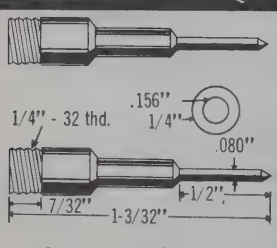


COMBINATION POST-PLUG

DESC: Captive head type. For converting panel-mounted banana jack to a spring-loaded push post. Accepts solid or stranded wire, standard phone tip which locks in place upon release of pressure on cap. Brass, nickel plated body.
HEAD: Molded styrene cap per MIL-L-416, type 1.
TIP: Four leaved phosphor bronze, nickel plated spring.

Net per C 42.00

No.		
33-167-BU		



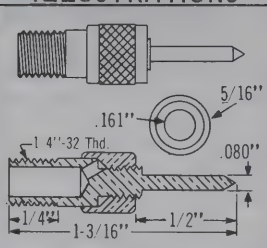
HEAVY DUTY PHONE TIP PLUG

DESC: All metal, nickel plated brass body is large enough to accept standard banana plug. Body is threaded to fit into plastic handle.

Net per C 12.00

No.		
33-170-BU		

ILLUSTRATIONS | DESCRIPTION

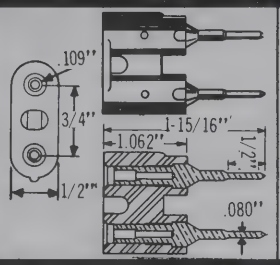


"JR" SOLDERLESS PHONE TIP "THREADED"

DESC: Threaded shank type. Wire fastens under knurled collar.
BODY: Brass, nickel plated.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
TIP: Brass, nickel plated phone tip.

Net per C 12.00

No.		
33-172-BU		

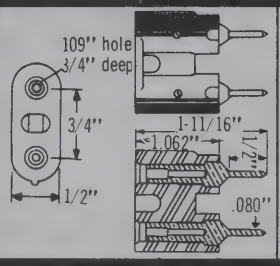


DUAL STANDARD TIP PLUG

DESC: Solderless type; brass, nickel plated body Designed mates with No. 33-206.
BODY: Molded Cycolac plastic, per MIL-M-22544, type 4.
TIPS: 2 brass, nickel plated tips on ¾" centers.

Net per C 74.00

No.		
33-174-BU		

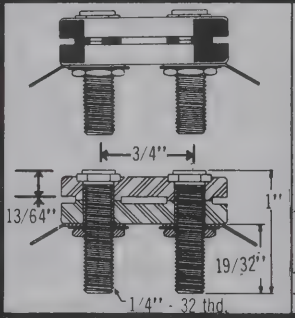


DUAL SHORT TIP PLUG SOLDERLESS TYPE

DESC: Brass, nickel plated body. Mates with No. 33-206.
BODY: Molded Cycolac plastic, per MIL-M-22544, type 4.
TIPS: 2 brass, nickel plated tips on ¾" centers.

Net per C 72.00

No.		
33-176-BU		



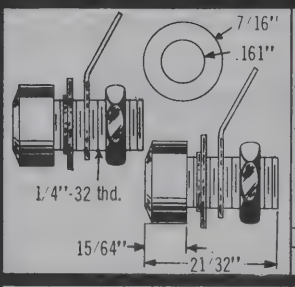
DUAL BANANA JACK

DESC: Mounts in 2 - 3/8" holes on 3/4" centers in panel up 1/4" thick. Accepts standard and dual banana plugs. Solder connection.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. Capacitance 2.0 mmfd. between conductors, 4.0 mmfd. to panel.
HEAD: Insulated, molded black styrene, per MIL-L-P416, type 1.
BODY: Brass, nickel plated.

Net per C 50.00

No.		
33-179-BU		

BANANA & TIP PLUG JACKS

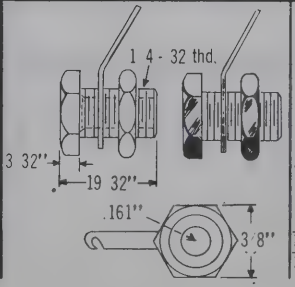


BANANA JACK *

DESC: Mounts in 5/16" hole. Fits panel up to 3/8" thick. Accepts Standard Banana Plug.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Melamine MIL-14F, type CMC.
BODY: Brass, nickel plated; with tinned solder lug.

Net per C 14.00

No.	Color	No.	Color
33-180-BU	Red	33-182-BU	Blk



BANANA JACK

DESC: Mounts in 1/4" hole and fits panel up to 3/8" thick Accepts standard banana plugs.
BODY: Brass, nickel plated; with tinned solder lug.

Net per C 11.00

No.		
33-184-BU		

*Also available in Bulk quantities in yellow, green, or blue. To order: add to part number, "-3BU" for yellow, "-4BU" for green, "-5BU" for blue. Example: No. 33-000-3BU (for yellow).

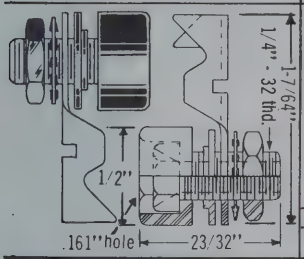
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GC ELECTRONICS ELECTROCRAFT ELECTRONIC COMPONENTS

BANANA & TIP PLUG JACKS

ILLUSTRATIONS | DESCRIPTION

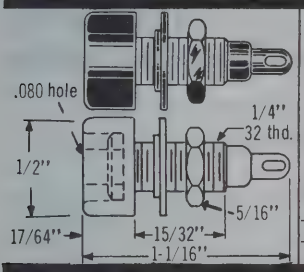
HEAVY DUTY BANANA JACK*



DESC: Exclusive hex design prevents turning in assembly; with fibre insulating washer.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Molded plastic per MIL-P-14 CFG.
BODY: Brass, nickel plated; with heavy duty solder lug.

		Net per C 16.00	
No.	Color	No.	Color
33-186-BU	Red	33-188-BU	Blk

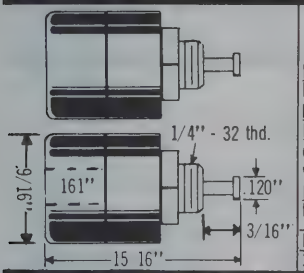
TIP JACK *



DESC: Positive-hold hex lock between molded head and jack body. Exclusive hex design prevents turning in assembly. Insulated.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Molded plastic, per MIL-P-14 CFG.
BODY: Brass, nickel plated.

		Net per C 15.00	
No.	Color	No.	Color
33-190-1BU	Red	33-190-2BU	Blk

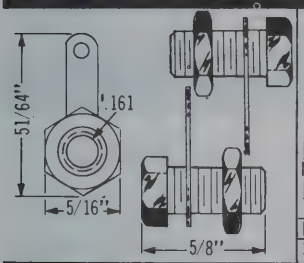
HIGH VOLTAGE NYLON BANANA JACK*



DESC: High voltage flashover to panel prevented by heavy molded nylon body and cup washer.
HANDLE: Molded nylon per MIL-P-20693A.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty. 5KV 60 cycle continuous working voltage. Millivolt drop per MIL-J-6751.
BODY: Brass, bright nickel plated per QQ-N-290, type V(FC).

		Net per C 45.00	
No.	Color	No.	Color
33-191-1BU	Red	33-191-2BU	Blk

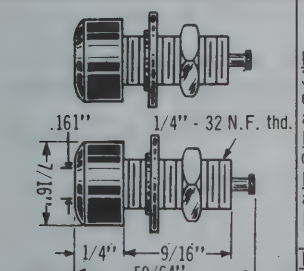
BANANA JACK



DESC: All metal body, with hex mounting nut. Mounts in 1/4" hole; fits panel up to 3/8".
BODY: Brass, nickel plated with tinned solder lug.

		Net per C 11.00	
No.			
33-192-BU			

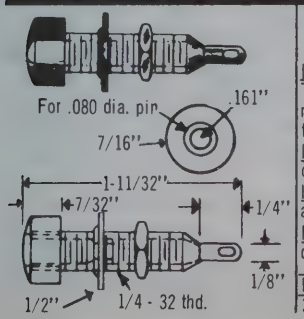
INSULATED BANANA JACK*



DESC: Mounts in 5/16" hole in panels up to 3/8" thick, solder direct to turret terminal. Supplied with hex nut and fibre washer. Accepts standard banana plugs.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: TB-30 Melamine-MIL-14F type CMG - red and black. Urea - LU-671 type 1 - colors.
BODY: Brass, nickel plated.

		Net per C 15.00	
No.	Color	No.	Color
33-193-1BU	Red	33-193-2BU	Blk

BANANA-TIP JACK COMBINATION*

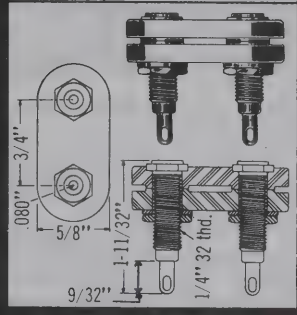


DESC: Accepts both Banana Plug and Standard Tip Plug; with extruded fibre washer and mounting nut. Mounts in 5/16" hole; fits panel up to 5/8" thick.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: TB-30 Melamine-MIL-14F type CMG - red and black. Urea - LU-671 type 1 - colors.
BODY: Brass, nickel plated; phosphor bronze contact..

		Net per C 17.00	
No.	Color	No.	Color
33-194-BU	Red	33-196-BU	Blk

ILLUSTRATIONS | DESCRIPTION

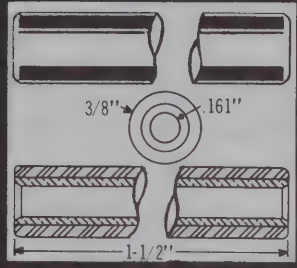
DUAL BANANA AND STANDARD TIP PLUG



DESC: Mounts in two 3/8" holes on 3/4" centers on panels up to 5/16" thick. Mates with dual banana plug No. 33-010 and dual tip plug 33-174; with two hex nuts and washers.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Molded black styrene body, per MIL-L-P 416, type 1.
BODY: Brass, nickel plated; phosphor bronze contacts.

		Net per C 73.00	
No.			
33-197-BU			

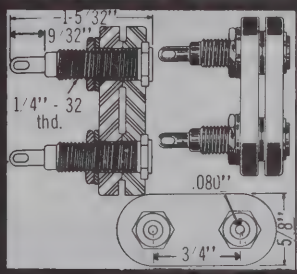
BANANA PLUG SPLICE



DESC: For coupling 2 standard Banana Plugs. For extending test leads, etc.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
BODY: Brass

			Net per C 26.66
No.	Color	No.	Color
33-200-BU	Red	33-202-BU	Blk

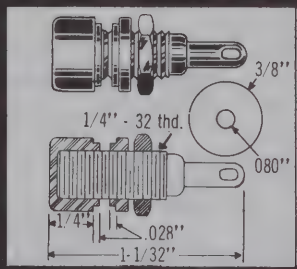
DUAL TIP JACK ASSEMBLY



DESC: Mounts in two 3/8" holes on 3/4" centers in panels up to 1/4" thick. Accepts phone tip plugs; with two hex nuts..
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD AND WASHER: Molded black styrene body, per MIL-L-P416, type 1..

		Net per C 54.00	
No.			
33-206-BU			

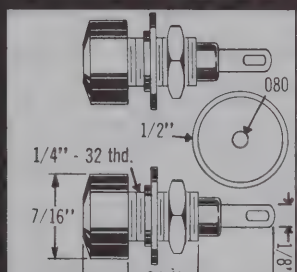
INSULATED TIP JACK*



DESC: Requires 5/16" hole; fits panels up to 1/4" thick; with hex nut.
HEAD: Dupont Nylon, per MIL-M-20693A.
BODY: Brass, nickel plated.

		Net per C 19.00	
No.	Color	No.	Color
33-208-1BU	Red	33-208-2BU	Blk

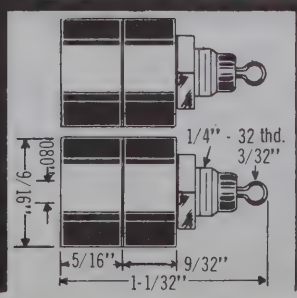
STANDARD TIP JACK*



DESC: Requires 5/16" mounting hole; fits panels up to 1/4" thick with insulating washer & hex nut.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Molded plastic, red and black per MIL-M-14F type CMG. Yellow, green and blue per LU-671 type 1.
BODY: Brass, nickel plated; phosphor bronze contact.

		Net per C 14.00	
No.	Color	No.	Color
33-210-BU	Red	33-212-BU	Blk

HIGH VOLTAGE NYLON PHONE TIP JACK*



DESC: High voltage flashover to panel prevented by heavy molded nylon body and cup washer. Colors conform to Federal Standard 595. Hex nuts and insert shell are nickel plated brass per QQ-N-290 type V (FC). Phosphor bronze contact, silver plated per QQ-S-365, overall gold plated. Withstands 100 hours salt spray test.
HANDLE: Molded nylon body per MIL-P-20693A.

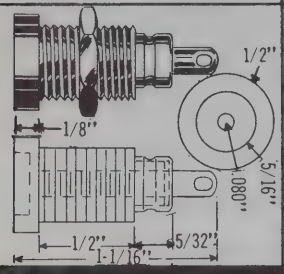
		Net per C 75.00	
No.	Color	No.	Color
33-214-1BU	Red	33-214-2BU	Blk

Also available in Bulk quantities in yellow, green, or blue. To order: add to part number, "-3BU" for yellow, "-4BU" for green, "-5BU" for blue. Example: No. 33-000-3BU (for yellow).

GC ELECTRONICS ELECTROCRAFT ELECTRONIC COMPONENTS

BANANA & TIP PLUG JACKS

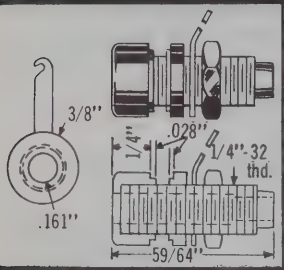
ILLUSTRATIONS | DESCRIPTION



TIP JACK, ALL-INSULATED*

DESC: Mounts in 3/8" hole; fits panel up to 5/16" thick; with mounting nut.
RATING: 10 amps AC for 10 degree C Temp. rise, continuous duty. 5K Volts 60 cycle AC continuous working voltage. Capacitance 3.0 mmfd.
BODY: Molded of nylon per MIL-M-20693A.
CONTACT: Phosphor bronze.

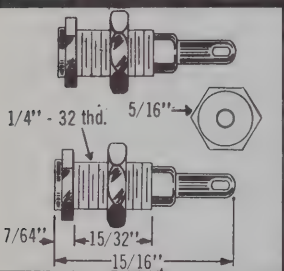
		Net per C 18.00	
No.	Color	No.	Color
33-216-BU	Red	33-218-BU	Blk



MINIATURE BANANA JACK*

DESC: Insulating washer provides isolation from panel. Fits 5/16" mounting hole; for panels up to 1/4" thick.
HEAD AND WASHER: Molded nylon per MIL-M-20693A.
BODY: Brass, nickel plated body; tinned solder lug.

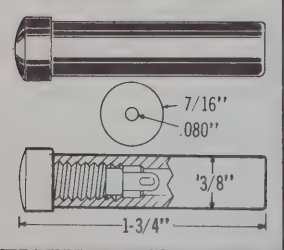
		Net per C 18.00	
No.	Color	No.	Color
33-220-1BU	Red	33-220-2BU	Blk



TIP JACK, ALL-METAL

DESC: Brass nickel plated body; mounts in 1/4" hole; fits panels up to 3/8" thick.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
TIP : Phosphor bronze contact.

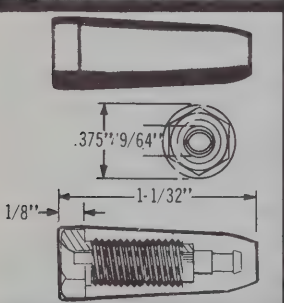
		Net per C 11.00	
No.			
33-226-BU			



TIP JACK, IN-LINE STYLE

DESC: Brass nickel plated body; mounts on end of cords. For test lead extensions, etc.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter, QUD4-59-4820 type 3.
CONTACT: Phosphor bronze.

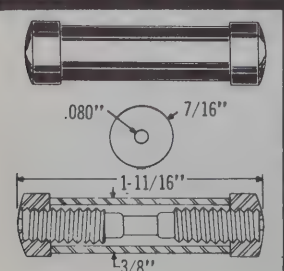
		Net per C 21.00	
No.	Color	No.	Color
33-228-BU	Red	33-230-BU	Blk



NYLON IN-LINE TIP JACK*

DESC: Accommodates all standard phone tip plugs; for extension cords or mounting on panel when wrap around terminal must be insulated in rear.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty. 5 KV 60 cycle AC continuous working voltage.
BODY: Molded nylon per MIL-P-20693A.
CONTACT: Heat-treated, gold plated, phosphor bronze.

		Net per C 30.00	
No.	Color	No.	Color
33-231-1BU	Red	33-231-2BU	Blk

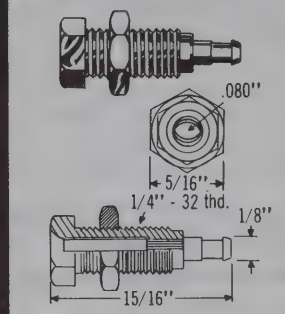


TIP PLUG SPLICE

DESC: Brass nickel plated body. For making extensions to test leads, etc.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
CONTACT: Phosphor bronze spring.

		Net per C 27.00	
No.	Color	No.	Color
33-232-BU	Red	33-234-BU	Blk

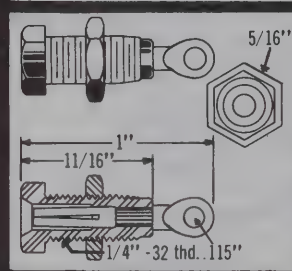
ILLUSTRATIONS | DESCRIPTION



NYLON TIP JACK (WRAP AROUND TYPE)*

DESC: Hex head for sure grip tightening. Mounts in 1/4" hole in panels up to 1/4" thickness.
SALT SPRAY TEST: 100 hours.
INSULATION RESISTANCE: 5000 Meg. Resistance Ohms.
RATED VOLTAGE & CURRENT: 1000 volts peak at 5 amp max.
OPERATING TEMPERATURE: -55 degree to + 150C
NOMINAL CAPACITY: -2.0 mmf
TEST VOLTAGE: 9000 volts DC peak.
BODY: Nylon per MIL-M-20693A.

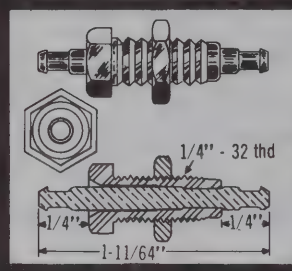
		Net per C 27.00	
No.	Color	No.	Color
33-240-BU	Red	33-242-BU	Blk



NYLON TIP JACK WITH SPADE TERMINAL*

DESC: Fits phone tip plugs. Mounts in 1/4" hole in panel up to 1/4" thick with hex nut.
BODY: Insulated molded nylon per MIL-M-20693A.
CONTACT: Spade terminal..

		Net per C 24.50	
No.	Color	No.	Color
33-245-1BU	Red	33-245-2BU	Blk

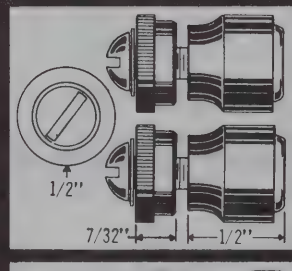


NYLON FEED-THRU JACK*

DESC: Feed-thru type. Fits all standard phone tip plugs. Mounts in 1/4" hole in panel up to 1/4" thick with hex nut.
BODY: Insulated nylon per MIL-M-20693A.
CONTACT: Brass, silver plated.

		Net per C 21.00	
No.	Color	No.	Color
33-247-1BU	Red	33-247-2BU	Blk

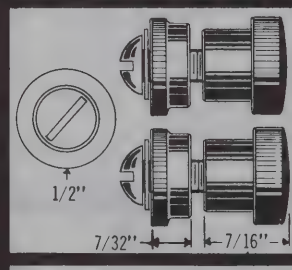
BINDING POSTS



BINDING POST

DESC: Brass nickel plated body, supplied with 8-32 mounting screw and lock washer.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Molded plastic.

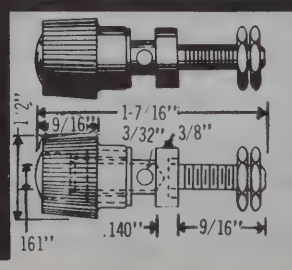
		Net per C 17.67	
No.	Color	No.	Color
33-250-BU	Red	33-252-BU	Blk



BINDING POST

DESC: Brass, nickel plated body, comes complete with 8-32 threaded screw- 1/2" long, nickel plated, brass lockwasher. Head diameter 1/2"
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Molded bakelite.

		Net per C 18.00	
No.	Color	No.	Color
33-254-BU	Red	33-255-BU	Blk



BINDING POST COMBINATION TYPE

DESC: Brass nickel plated body. Accepts banana plug, tip plug, bare wire, or spade lug. Threaded No. 8-32 mounting stud 1/2" long; supplied with 2 hex nuts.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Molded nylon per MIL-M-20693A.

		Net per C 18.00	
No.	Color	No.	Color
33-256-BU	Red	33-258-BU	Blk

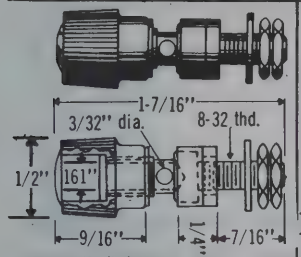
*Also available in Bulk quantities in yellow, green, or blue. To order: add to part number, "-3BU" for yellow, "-4BU" for green, "-5BU" for blue. Example: No. 33-000-3BU (for yellow).

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GC ELECTRONICS — ELECTROCRAFT ELECTRONIC COMPONENTS

BINDING POSTS

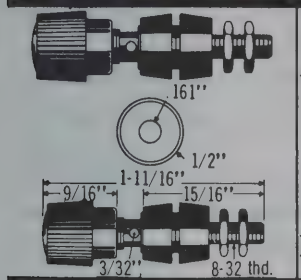
BINDING POST COMBINATION TYPE



DESC: Similar in design and construction as 33-256/8, except, supplied with molded shoulder-type plastic washers to insulate post from chassis.
RATING: 15 amps AC for 10 degree C Temp..rise, continuous duty.
HEAD: Molded nylon per MIL-M-20693A.

		Net per C 24.00	
No.	Color	No.	Color
33-260-BU	Red	33-262-BU	Blk

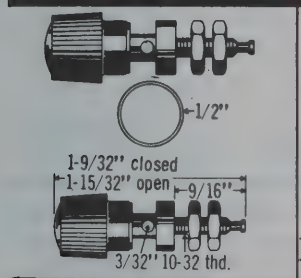
BINDING POST INSULATED UNIVERSAL TYPE



DESC: Brass, nickel-plated body with threaded No.8-32 mounting stud; accepts banana plug, tip plug, needle tip, spade lug, alligator clip or bare wire. Heavy duty spacers insulate post from chassis. Mounts in 5/16" hole.
RATING: 15 amps AC for 10 degree C Temp. rise continuous duty.
HEAD: Molded nylon per MIL-M-20693A.

		Net per C 30.00	
No.	Color	No.	Color
33-264-BU	Red	33-266-BU	Blk

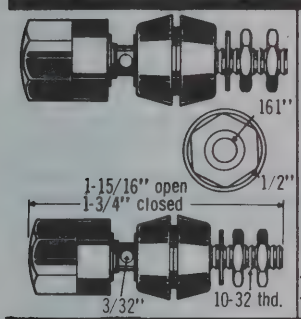
BINDING POST



DESC: Brass, nickel plated body with insulating washer and two hex nuts. 8-32 threaded stud. Accepts phone tip plug, spade lug, alligator clip, banana plug or stranded wire.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD AND WASHER: Molded nylon per MIL-M-20693A.

		Net per C 24.00	
No.	Color	No.	Color
33-265-BU	Red	33-267-BU	Blk

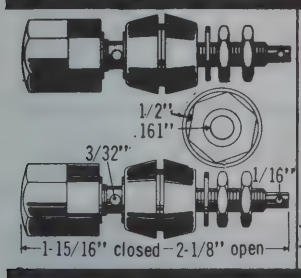
HEAVY DUTY BINDING POST*



DESC: Brass, nickel plated body; accepts standard banana or tip plug, spade lug alligator clip or bare wire; supplied with a thick molded insulating spacer; punched, keyed slot for mounting washers; spacer has "D" shaped shoulder; shoulder keys into chassis mounting hole and prevents post from turning; supplied with two hex nuts.
RATING: (Maximum) 30 amps...2000 RMS Volt.
HEAD AND WASHER: Molded nylon per MIL-M-20693A.

		Net per C 42.00	
No.	Color	No.	Color
33-268-BU	Red	33-270-BU	Blk

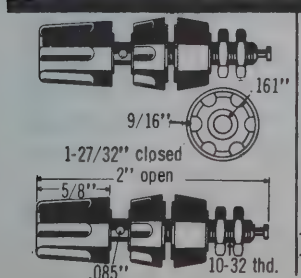
HEAVY DUTY BINDING POST*



DESC: Identical in design to binding post No. 33-268/270, except, that end of stud is milled flat and drilled for solder connection.
HEAD AND WASHER: Molded nylon per MIL-M-20693A.

		Net per C 42.00	
No.	Color	No.	Color
33-272-BU	Red	33-274-BU	Blk

BINDING POST

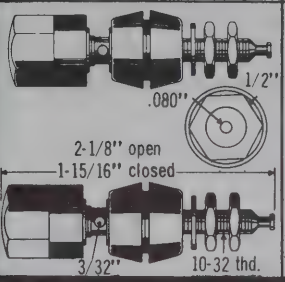


DESC: 5-way, nylon. Fluted style, insulated, Banana adapter type. Wrap around tips, brass nickel plated.
HEAD AND WASHER: Molded nylon per MIL-M-20693A.

		Net per C 42.00	
No.	Color	No.	Color
33-279-1BU	Red	33-279-2BU	Blk

ILLUSTRATIONS	DESCRIPTION

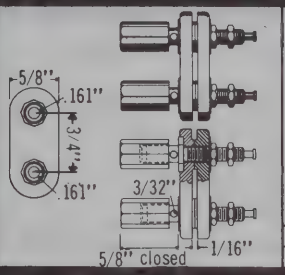
NYLON BINDING POST*



DESC: Tip plug receptacle .080" I.D. Wire hole at right angle to flat on insulated washers. Punched keyed slot for mounting washers. Mounts in 3/8" hole in panels up to 1/4" thick. Solder connection to stud. Body and inserts are brass, bright nickel plated.
HEAD AND WASHER: Molded nylon per MIL-M-20693A.

		Net per C 42.00	
No.	Color	No.	Color
33-275-1BU	Red	33-275-2BU	Blk

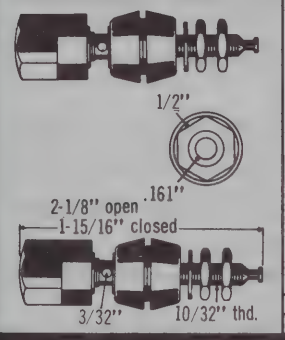
DUAL BINDING POST



DESC: Accepts standard dual banana plug and wire, etc. Mounts in two 3/8" holes on 3/4" centers in 1/16" to 1/4" panels. With wrap-around solder studs.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
BODY: Black plastic.

		Net per C 60.00	
No.			
33-276-BU			

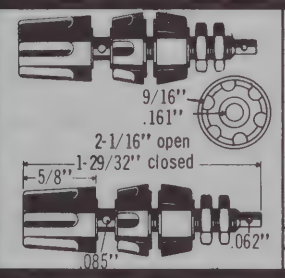
HEAVY DUTY BINDING POST*



DESC: Brass nickel plated body; accepts banana or tip plug, spade lug, alligator clip or bare wire; supplied with a thick molded insulating spacer with "D" shaped shoulder; shoulder keys into chassis mounting hole and prevents post from turning; maximum rating 30 amps...2000 RMS volts; with 2 hex nuts.
RATING: 30 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD AND WASHER: Molded nylon per MIL-M-20693A.

		Net per C 36.00	
No.	Color	No.	Color
33-278-BU	Red	33-280-BU	Blk

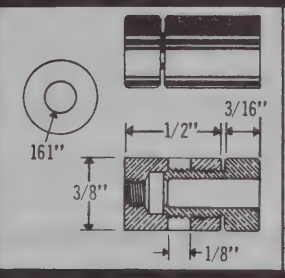
BINDING POST



DESC: 5-way, nylon. Fluted style, insulated, banana adapter type. Spade type tip...brass nickel plated.
HEAD AND WASHER: Molded nylon per MIL-M-20693A.

		Net per C 45.00	
No.	Color	No.	Color
33-281-1BU	Red	33-281-2BU	Blk

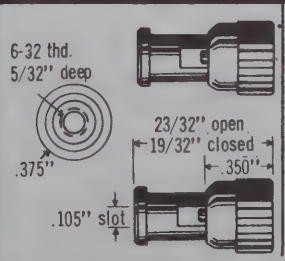
BINDING POST, ALL METAL



DESC: Knurled cap; accepts banana plug, phone tip or wire. Mounts to panel with No. 6-32 screw (not supplied).
BODY: Brass, nickel plated..

		Net per C 15.00	
No.			
33-282-BU			

BINDING POST



DESC: Compression type, captive brass, nickel plated knurled head. Screw head down to tighten wire between body and sliding contact. Threaded internally for No.6-32 mounting screw.
BODY: Brass, nickel plated.

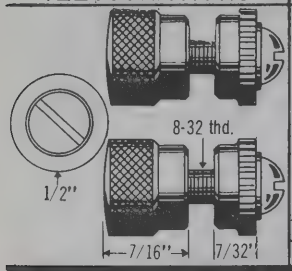
		Net per C 21.00	
No.			
33-283-BU			

Also available in Bulk quantities in yellow, green, or blue. To order: add to part number, "-3BU" for yellow, "-4BU" for green, "-5BU" for blue. Example: No. 33-000-3BU (for yellow).

ELECTROCRAFT ELECTRONIC COMPONENTS

BINDING POSTS

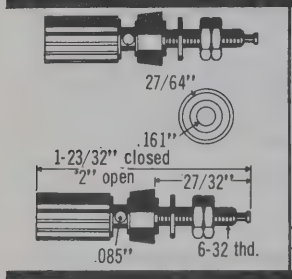
BINDING POST, ALL METAL



DESC: Knurled cap; designed for connection of bare wires or spade lugs; No. 8-32 x 1/2" mounting screw and lock washer supplied.
BODY: Heavy brass, nickel plated.

	Net per C 18.00
No.	
33-284-BU	

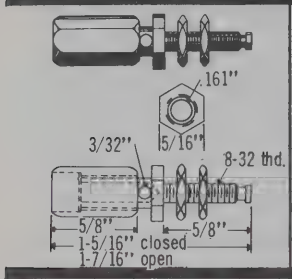
METAL BINDING POST



DESC: Gold plated, fluted brass, captive head. Molded black nylon washer with gold plated brass insert. Use where direct ground connection is made to panel or chassis. Complete with gold plated brass flat washer for grounding. Accepts phone tip plug, spade lug, banana plug, alligator clip or stranded wire.

	Net per C 33.00
No.	
33-285-BU	

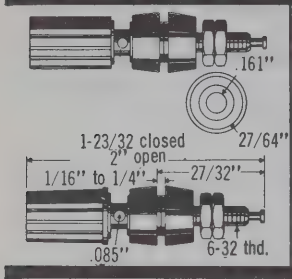
BINDING POST



DESC: 5-way metal binding post. Can accept banana plug. Mounts in .171" hole in 1/16" to 3/8" panels. Has wrap-around solder stud 8-32 thread.

	Net per C 21.60
No.	
33-286-BU	

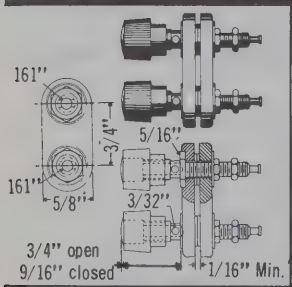
METAL BINDING POST



DESC: Gold plated, fluted brass, captive head, molded black nylon washer with gold plated brass insert. Use where internal ground circuit is isolated from chassis or panel. Accepts phone tip plug, spade lug, banana plug, alligator clip or wire strand.

	Net per C 33.00
No.	
33-287-BU	

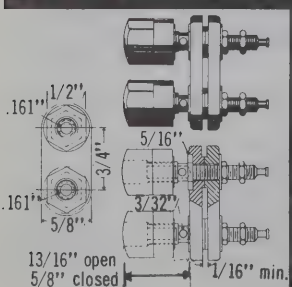
DUAL BINDING POST INSULATED



DESC: 5-way binding post with fluted heads. Accepts Dual Banana Plug. Mounts in two 3/8" holes, on 3/4" centers in panels from 1/16" to 1/4". Has soldered studs. With four hex nuts, black styrene washers.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Molded nylon per MIL-M-20693A.

	Net per C 54.00
No.	
33-288-BU	

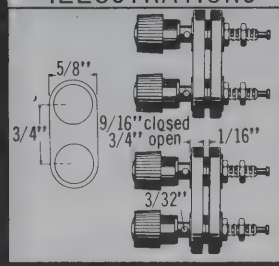
DUAL BINDING POST



DESC: Accepts standard phone tips, forward or sideways. Brass, nickel plated body. Mounts in two 3/8" holes on 3/4" centers in panels up to 1/4" thick. Accommodates single or dual banana plugs.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Molded nylon per MIL-M-20693A.

		Net per C 66.00	
No.	Color	No.	Color
33-290-BU	Blk	33-299-BU	Red

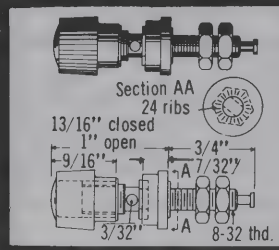
DUAL BINDING POST



DESC: Brass, nickel plated body. Molded styrene washer; cross slot accommodates phone tip forward, back or sideways. With hex nuts and washers. Mounts in two 3/8" holes on 3/4" centers on panels up to 1/4" thick.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Nylon heads per MIL-M-20693A.

		Net per C 50.00	
No.	Color	No.	Color
33-291-BU	Blk	33-293-BU	Red

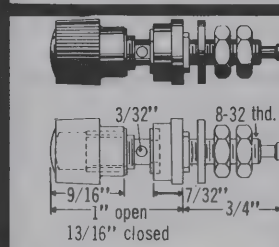
NYLON BINDING POST



DESC: Grounding type, with molded nylon, non-removable head takes direct dolder connection to stud.
RATING: 15 amps AC for 10 desgree C Temp. rise, continuous duty.
HEAD AND WASHER: Molded nylon per MIL-M-20693A.

		Net per C 30.00	
No.	Color	No.	Color
33-294-1BU	Red	33-294-2BU	Blk

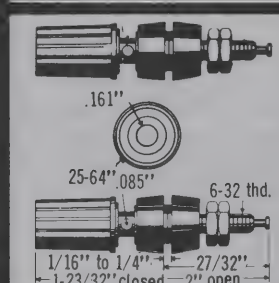
NYLON BINDING POST



DESC: Brass, nickel plated body. Takes direct solder connection to stud.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD AND WASHER: Molded nylon per MIL-M-20693A.

		Net per C 30.00	
No.	Color	No.	Color
33-296-1BU	Red	33-296-2BU	Blk

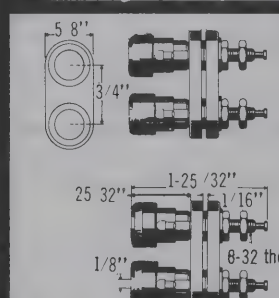
NYLON BINDING POST*



DESC: Gold plated body. Miniature washers and narrow head require minimum mounting space.. Requires 5/16" round or "D" hole in panel. Wrap around solder terminal. Accepts phone tip plug, banana plug, spade lug, alligator clip or stranded wire.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty.
HEAD: Molded nylon per MIL-M-20693A.

		Net per C 33.00	
No.	Color	No.	Color
33-297-1BU	Red	33-297-2BU	Blk

DUAL SPRING LOADED BINDING POST

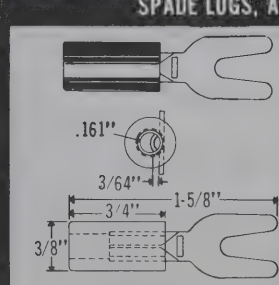


DESC: Cross-slotted to accept standard phone tips or wire either forward or sideways. Molded black styrene cap; nickel plated brass body. Requires 2-3/8" holes on 3/4" centers for mounting on panels up to 1/4" thick. Accommodates phone tips or wires in side holes and secures them when pressure on cap is released. With hex nuts and flat washers.
RATING: 15 amps AC for 10 degree C Temp. rise, continuous duty. 5 KV 60 cycle AC continuous working voltage.

	Net per C 75.00
No.	
33-298-BU	

SPADE LUGS, ALLIGATOR & BATTERY CLIPS

SPADE LUG, INSULATED



DESC: Tapered "fork" fits binding posts and terminal screws up to No. 10 size. Accepts soldered wire or banana plug.
RATING: 25 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.
LUG: Brass, nickel plated.

		Net per C 10.80	
No.	Color	No.	Color
33-300-BU	Red	33-302-BU	Blk

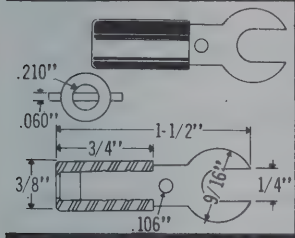
*Also available in Bulk quantities in yellow, green, or blue. To order: add to part number, "-3BU" for yellow, "-4BU" for green, "-5BU" for blue. Example: No. 33-000-3BU (for yellow).

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ELECTROCRAFT ELECTRONIC COMPONENTS

SPADE LUGS, ALLIGATOR & BATTERY CLIPS

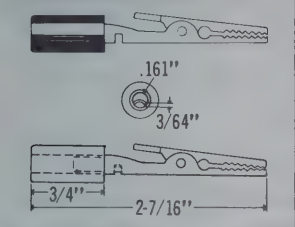
INSULATED SPADE LUG



DESC: Fits all standard multi-purpose binding posts. Wire up to No. 10 solders in front hole.
RATING: 30 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.
LUG: Brass, nickel plated.

Net per C 12.00

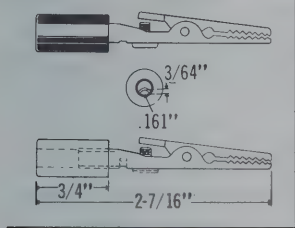
No.	Color	No.	Color
33-304-1BU	Red	33-304-2BU	Blk



DESC: 3/8" jaw opening; made of cadmium plated steel, accepts banana plug or wires. May be soldered to clip.
RATING: 5 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.

Net per C 8.50

No.	Color	No.	Color
33-310-BU	Red	33-312-BU	Blk

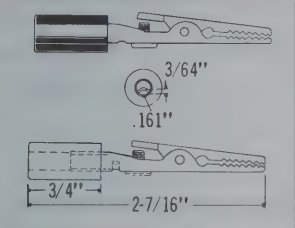


DESC: Molded plastic handle; cadmium plated steel jaws with 3/8" opening. Wire fastens with screw or soldered to clip.
RATING: 5 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.

Net per C 9.50

No.	Color	No.	Color
33-314-BU	Red	33-316-BU	Blk

ALLIGATOR CLIP SOLID COPPER

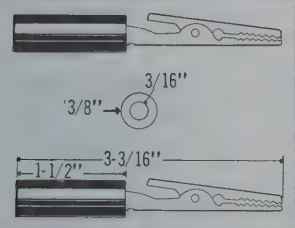


DESC: Identical to No. 33-314/16, except, made of solid copper for higher current carrying capacity.
RATING: 5 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.

Net per C 11.50

No.	Color	No.	Color
33-318-BU	Red	33-320-BU	Blk

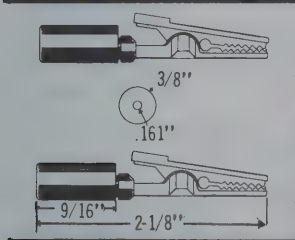
ALLIGATOR CLIP



DESC: With extra long insulated handle; cadmium plated steel jaws; 3/8" opening, wire solders to clip.
HANDLE: Molded Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.

Net per C 12.50

No.	Color	No.	Color
33-322-BU	Red	33-324-BU	Blk



DESC: Completely insulated with black molded plastic to insure against shock or grounding. Accepts banana plug in receptacle end.

Net per C 45.00

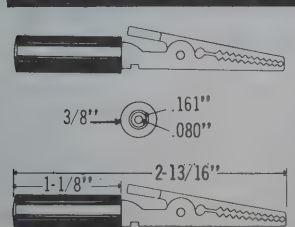
No.	Color	No.	Color
33-326-1BU	Red	33-326-BU	Blk

Accepts tip plug in receptacle end.

Net per C 54.00

No.	Color	No.	Color
33-328-1BU	Red	33-328-BU	Blk

ALLIGATOR CLIP ADAPTOR



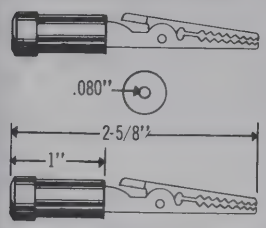
DESC: Accommodates standard tip plug, or banana plug; steel cadmium plated jaws.
RATING: 5 amps AC for 10 degree C Temp. rise, continuous duty..
HANDLE: Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.

Net per C 39.00

No.	Color	No.	Color
33-330-BU	Red	33-332-BU	Blk

ILLUSTRATIONS / DESCRIPTION

ALLIGATOR CLIP ADAPTOR

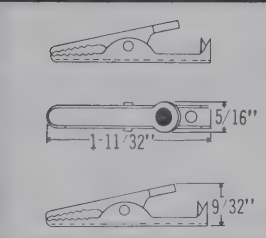


DESC: Adapts standard tip plug to alligator clips; steel cadmium plated jaws.
RATING: 5 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.

Net per C 33.00

No.	Color	No.	Color
33-334-BU	Red	33-336-BU	Blk

MINI-GATOR CLIP (MUELLER)



DESC: Miniature alligator clip. For use where space is a factor; wires solder to clip.

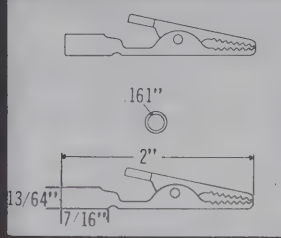
Net per C 7.20

No.	
33-342-BU	Steel

Net per C 8.00

No.	
33-344-BU	Copper

ALLIGATOR CLIP ALL METAL

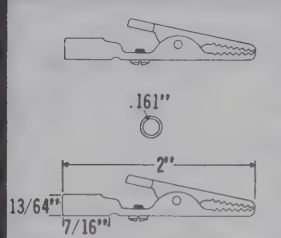


DESC: Cadmium plated jaws with 3/8" opening accepts standard banana plug or wires may be soldered directly onto clip.

Net per C 5.40

No.	
33-346-BU	

ALLIGATOR CLIP-ALL METAL



DESC: For solderless connection of wire by means of a No. 6-32 binding head screw; also accepts banana plug.

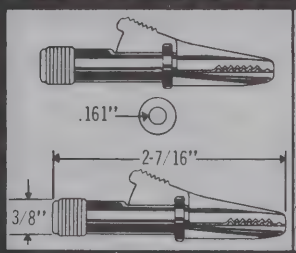
Net per C 6.00

No.	
33-348-BU	Steel

Net per C 9.00

No.	
33-350-BU	Copper

ALLIGATOR CLIP

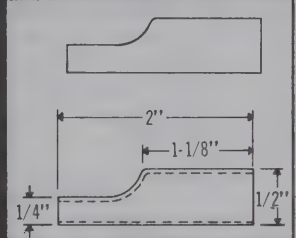


DESC: All insulated with standard Banana Plug adaptor. Molded plastic over steel jaws and clips.

Net per C 41.00

No.	Color	No.	Color
33-352-1BU	Red	33-352-2BU	Blk

ALLIGATOR CLIP INSULATOR

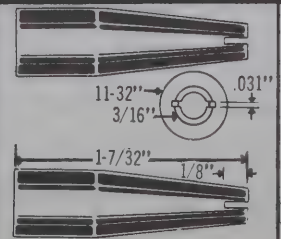


DESC: Flexible molded vinyl insulator which fits over most standard alligator clips. It completely insulates. Permits maximum jaw opening.

Net per C 4.80

No.	Color	No.	Color
33-360-BU	Red	33-362-BU	Blk

MINIATURE ALLIGATOR CLIP BOOTS



DESC: Molded vinyl plastic; allow maximum jaw opening of clip while still insulating clip. Miniature size.

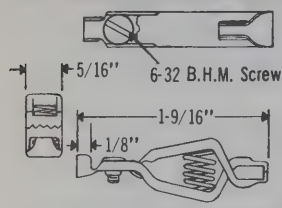
Net per C 4.00

No.	Color	No.	Color
33-363-1BU	Red	33-363-2BU	Blk.

GC ELECTRONICS ELECTROCRAFT ELECTRONIC COMPONENTS

SPADE LUGS, ALLIGATOR & BATTERY CLIPS

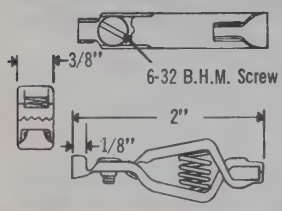
ILLUSTRATIONS | DESCRIPTION



BATTERY CONNECTING & TESTING CLIP

DESC: Steel cadmium plated jaws with 1/2" spread.
RATING: 5 amps

	Net per C 6.00
No.	
33-370-BU	

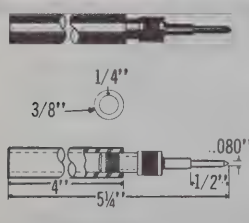


BATTERY CONNECTING & TESTING CLIP

DESC: Steel cadmium plated jaws with 9/16" spread.
RATING: 10 amps

	Net per C 8.00
No.	
33-372-BU	

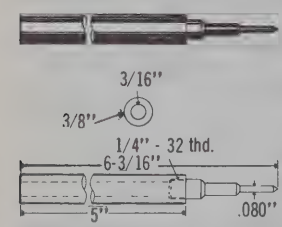
TEST PRODS, LEADS & ADAPTORS



SOLDERLESS FIBRE TEST PROD

DESC: Features 1/4" inside diameter for heavy duty wire. Overall length 5¼".
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Fibre, per MIL-F-1148-A type BH.
TIP: Brass, nickel plated.

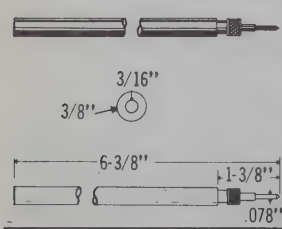
		Net per C 30.00	
No.	Color	No.	Color
33-376-1BU	Red	33-376-2BU	Blk



HEAVY DUTY TEST PROD

DESC: Brass, nickel plated. Overall length 6-3/16".
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Molded Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.
TIP: Extra heavy, brass, nickel plated.

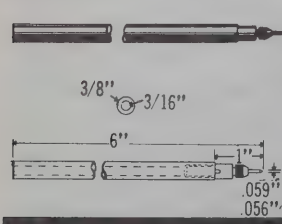
		Net per C 33.00	
No.	Color	No.	Color
33-378-1BU	Red	33-378-2BU	Blk



DELUXE TEST PROD

DESC: Solderless design; wire fits through handle and is fastened to tip with knurled collar. 6-3/8" long.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.
TIP: Brass, nickel plated.

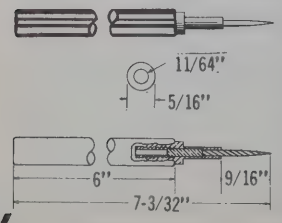
		Net per C 33.00	
No.	Color	No.	Color
33-380-BU	Red	33-382-BU	Blk



NEEDLE POINT TEST PROD

DESC: Extra safe, long handle; wire solders to nickel plated brass chuck.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 2.
TIP: Replaceable Phono Needle.

		Net per C 30.00	
No.	Color	No.	Color
33-384-BU	Red	33-386-BU	Blk

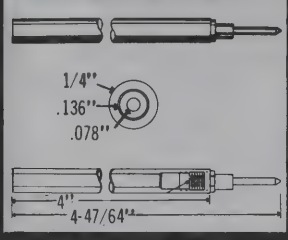


SOLDERLESS TEST PROD

DESC: Brass, nickel plated plug. Wire can be soldered to plug. Stud locks wire to pellet for solderless connections.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: XX-5 Spauldite - PB6-MIL-P-79.
TIP: Steel Phono Needle

		Net per C 75.00	
No.	Color	No.	Color
33-387-1BU	Red	33-387-2BU	Blk

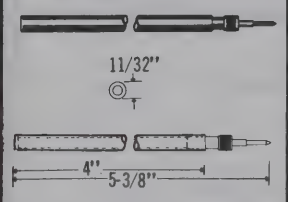
ILLUSTRATIONS | DESCRIPTION



SUBMINIATURE TEST PROD

DESC: Designed for checking all types of miniature products and equipment only. 4-2/3" long.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty..
HANDLE: Fibre, per MIL-F-1148-A type BH.
TIP: Brass, nickel plated.

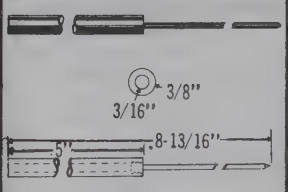
		Net per C 30.00	
No.	Color	No.	Color
33-388-1BU	Red	33-388-2BU	Blk



THIN HANDLE TEST PROD

DESC: Solderless wire connection; slim type for hard-to-reach places. Ideal for portable testers.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.
TIP: Brass, nickel plated.

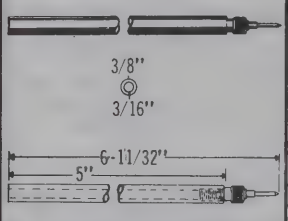
		Net per C 21.60	
No.	Color	No.	Color
33-392-BU	Red	33-394-BU	Blk



LONG REACH TEST PROD

DESC: Has a long thin insulated extension beyond handle, to reach hard-to-get places or for work in crowded quarters. Wire solders to prod.
HANDLE: Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.
TIP: Brass, nickel plated.

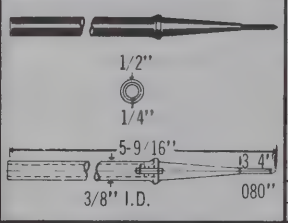
		Net per C 24.60	
No.	Color	No.	Color
33-396-BU	Red	33-398-BU	Blk



SOLDERLESS TEST PROD

DESC: 5" long handle, 3/8" diameter. Wire fits through handle, wraps around screw portion of body.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty.
HANDLE: Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3..
TIP: Nickel plated phone tip.

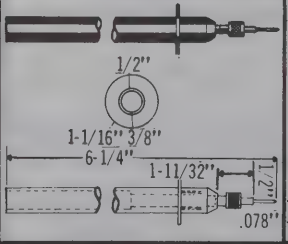
		Net per C 30.00	
No.	Color	No.	Color
33-404-1BU	Red	33-404-2BU	Blk



TEST PROD

DESC: Tapered slim-type. Fully insulated plastic-solder type. 5-9/16" overall length.
TIP: Nickel plated brass.

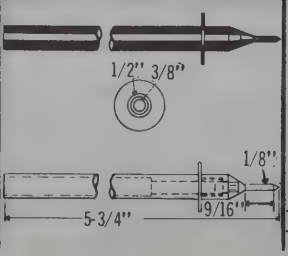
		Net per C 75.00	
No.	Color	No.	Color
33-406-1BU	Red	33-406-2BU	Blk



HIGH VOLTAGE TEST PROD

DESC: Heavy duty type; has guard ring to prevent accidental touching of tip; accepts wires up to 3/8" diameter. Solderless connection.
RATING: 12 amps AC for 10 degree C Temp. rise, continuous duty. 15 KV cycle AC continuous working voltage.
HANDLE: Fibre, per MIL-F-1148-A type BH.
TIP: Nickel plated brass.

		Net per C 72.00	
No..	Color	No.	Color
33-408-BU	Red	33-410-BU	Blk



R.F. TEST PROBE

DESC: Heavily insulated Coax cable or IN-34 crystal for R.F. Probes may be used because of larger inside diameter.
HANDLE: Fibre, per MIL-F-1148-A type BH.
TIP: Heavy duty; removable. Brass, nickel plated.

		Net per C 63.00	
No.	Color	No.	Color
33-411-1BU	Red	33-411-BU	Blk

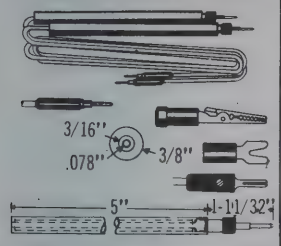
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GC ELECTRONICS

ELECTROCRAFT ELECTRONIC COMPONENTS

TEST PRODS, LEADS & ADAPTORS

ILLUSTRATIONS | DESCRIPTION

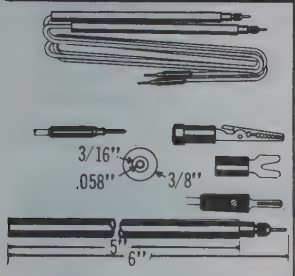


UNIVERSAL TEST LEADS

DESC: Interchangeable tips; one end solderless tip plug; other end banana plug; includes alligator clips, spade lugs and phono tip plugs, which fit on banana plug end.
HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
CABLE: 50" flexible

Net per pair 1.88

No.	
33-450-S	One pair, red and black

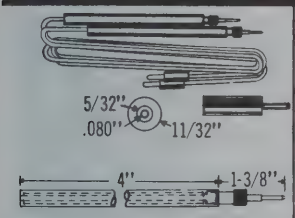


UNIVERSAL "NEEDLEPOINT" TEST LEADS

DESC: Interchangeable tips, one end interchangeable Phono needle type test prod,other end banana plug; includes spade lugs, alligator clips and phono tip plugs, which fit on banana plug end.
HANDLE: Butyrate, per MIL-LP-349A and ASESA letter QUD4-59-4820 type 3.
CABLE: 50" flexible

Net per pair 1.88

No.	
33-452-S	One pair, red and black

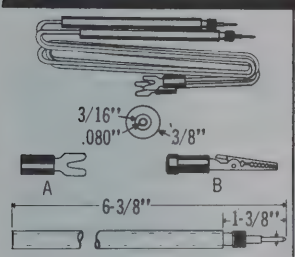


"THRIFTY" TEST LEADS

DESC: One end 4" test prods, other end terminated in standard phone tip.
HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
CABLE: 50" flexible

Net per pair .75

No.	
33-454-S	One pair, red and black



SOLDERLESS TIP TEST LEADS

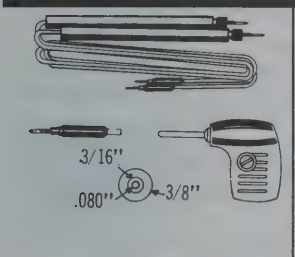
DESC: 5" x 3/8" diameter handle, available with either spade lugs or alligator clips.
HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
CABLE: 50" flexible

Net per pair .85

No.	
33-455-S	1 pair, red and black, W/spade lug A

Net per pair .91

No.	
33-457-S	1 pair, red and black, W/alligator clip B



HEAVY DUTY TEST LEADS

DESC: 6-11/32"long; solderless wire connections. Available in tip plug or right angle meter type.
HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
CABLE: 50" flexible

Net per pair 1.27

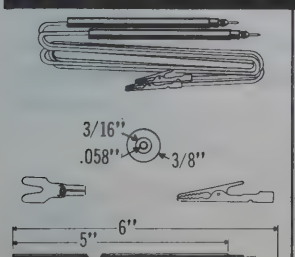
Pair of 1 red and 1 black with solderless straight tip plugs.

No.	
33-456-S	

Net per pair 1.38

Pair of 1 red and 1 black with right angle, meter-type, insulated tip plug.

No.	
33-458-S	



PHONO NEEDLE TEST LEADS

DESC: 5" x 3/8" diameter, tips are sharp phonograph needles. Available in spade lugs or alligator clips.
HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
CABLE: 50" flexible

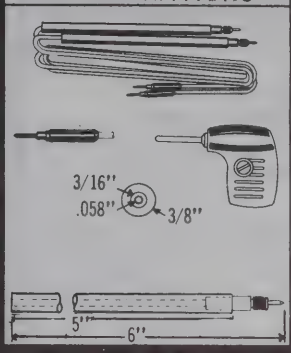
Net per pair .87

No.	
33-459-S	One pair, red and black With spade lug

Net per pair .93

No.	
33-461-S	One pair, red and black With alligator clip

ILLUSTRATIONS | DESCRIPTION



HEAVY DUTY "NEEDLEPOINT" TEST LEADS

DESC: 6" long, heavy duty needle point prods. Available in tip plugs or right angle meter plug.
HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
CABLE: 50" flexible

Net per pair 1.33

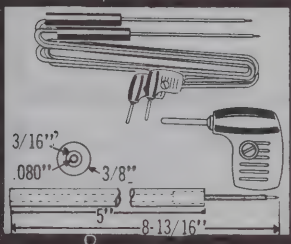
Pair of 1 red and 1 black with solderless straight tip plugs

No.	
33-460-S	

Net per pair 1.43

Pair of 1 red and 1 black with right angle, meter-type insulated tip plug.

No.	
33-462-S	

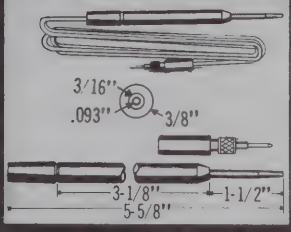


LONG REACH TEST LEADS

DESC: One end with 5" insulated test prod, very thin extension beyond handle to reach hard-to-get places; other end terminated in right angle, meter-type insulated tip plug.
HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
CABLE: 50" flexible

Net per pair 1.65

No.	
33-464-S	One pair, red and black

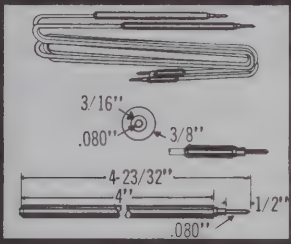


RETRACTABLE TEST PROD

DESC: Electrocraft's own printed circuit testprod with the exclusive retractable tip. This exclusive feature allows complete testing of printed circuitry without shorting or shock to the user.
HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
CABLE: 48" flexible

Net each 1.65

No.	Color	No.	Color
33-465-1-S	Red	33-465-2-S	Blk

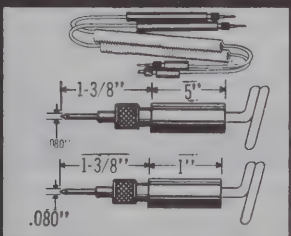


SUB-MINIATURE TEST LEADS

DESC: O.D. only 1/4"; insulated tips. Other end threaded phone tips.
HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
CABLE: 50" flexible

Net per pair 1.26

No.	
33-466-S	One pair, red and black

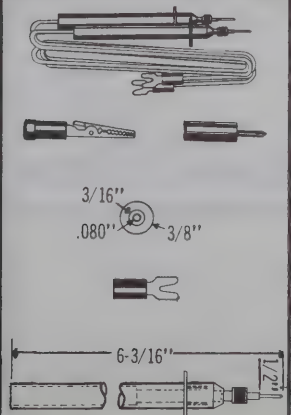


STRETCH TYPE TEST LEADS

DESC: One end 6-3/8" heavy duty test prods; other end insulated, solderless tip plug.
HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
CABLE: spiral type, 9"; 6" extended.

Net per pair 2.97

No.	
33-470-S	One pair, red and black



HIGH VOLTAGE TEST LEADS

DESC: Extra heavy-duty with finger guard type test prod handles. Available in tip plugs, spade lugs, or alligator clips.
HANDLE: Large-fibre, per MIL-F-1148-A type BH. Small Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
CABLE: 48" heavy insulated high tension wire (22,000 V)

Net per pair 2.57

Pair of 1 red, 1 black, terminated with tip plugs.

No.	
33-472-S	

Net per pair 2.40

Pair of 1 red, 1 black, terminated with insulated spade lugs.

No.	
33-474-S	

Net per pair 2.48

Pair of 1 red, 1 black, terminated with alligator clips.

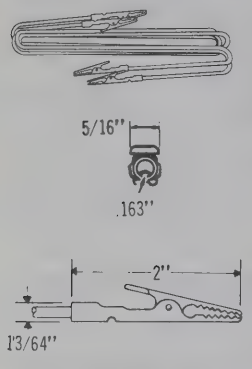
No.	
33-476-S	

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GC ELECTRONICS ELECTROCRAFT ELECTRONIC COMPONENTS

TEST PRODS, LEADS & ADAPTORS

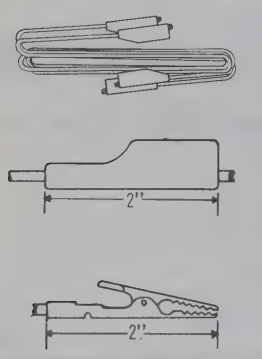
ILLUSTRATIONS | DESCRIPTION



ALLIGATOR CLIP TEST LEADS

DESC: Cadmium plated steel alligator clips on both ends of heavy duty test lead wire.
CABLE: Flexible, choice of lengths

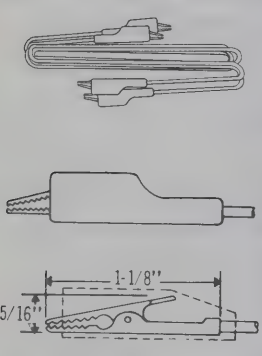
No.			Net per pair
33-496-S	12" length	One pair, red and black	.55
33-497-S	24" length	One pair, red and black	.61
33-498-S	36" length	One pair, red and black	.70
33-499-S	48" length	One pair, red and black	.79



ALLIGATOR CLIP JUMPER LEADS

DESC: Terminated at each end with fully insulated steel nickel plated alligator clips.
CABLE: Flexible, choice of lengths

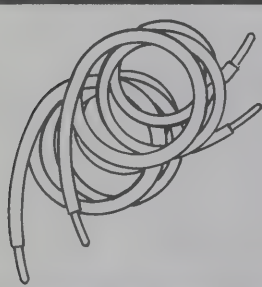
No.			Net per pair
33-500-S	12" length	One pair, red and black	.92
33-502-S	24" length	One pair, red and black	.95
33-504-S	36" length	One pair, red and black	1.05
33-506-S	48" length	One pair, red and black	1.10



MIDGET ALLIGATOR CLIP TEST LEADS

DESC: Cadmium plated steel alligator clips with red vinyl plastic boots.
CABLE: Flexible, choice of lengths

No.			Net per pair
33-501-S	12" length	One pair, red and black	.81
33-503-S	18" length	One pair, red and black	.84
33-505-S	24" length	One pair, red and black	.87
33-507-S	36" length	One pair, red and black	.96

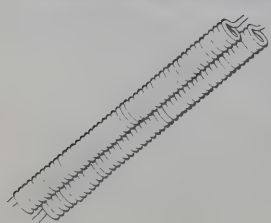


TEST LEAD WIRE

DESC: Flexible, rubber-coated and kink-resistant replacement wire for test leads.

	Net per pair
Package of two, 50" length, red and black, 6000/V insulation.	.60
Package of two, 48" length, red and black, heavy duty, 1/4" diameter, 22000/V test leads.	.87

No.	
33-518-S	
33-520-S	

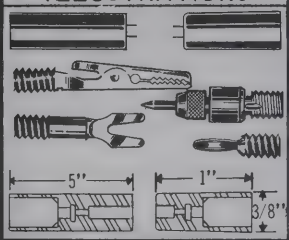


STRETCH LEAD WIRE

DESC: Coiled wire, for all applications where it is desirable to have leads retract. Package contains 1 red and 1 black lead..9" long - stretches to 6'.
Net per pair 1.95

No.	
33-522-S	

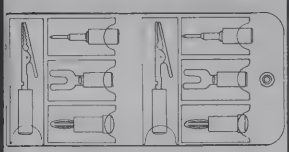
ILLUSTRATIONS | DESCRIPTION



UNIVERSAL TEST LEAD KIT

DESC: Two 55" leads and 12 interchangeable testing tips and connectors. Both ends convert to different types. Has four phone tips, two alligator clips, two needle tips, two banana plugs, two spade lugs. Plastic wallet-style kit.
HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
CABLE: 55" flexible
Net per pair 2.40

No.	
33-528	

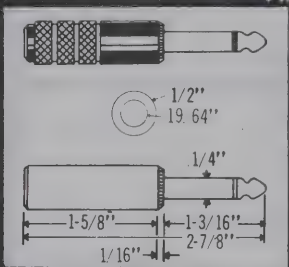


TEST LEAD PLUG INTERCHANGE KIT

DESC: Contains pairs of alligator clips, banana plugs, spade lugs and phone tips, (1 each in red and black) to adapt standard test leads to different types of terminations. Attractive plastic case.
HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
Net each 2.25

No.	
33-530	

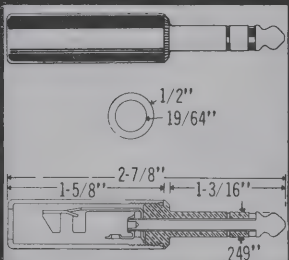
PHONE PLUGS



2-COND., SCREW TERMINALS

RATING: 5 amps AC for 10 degree C Temp. rise, continuous duty. 750 volts 60 cycle AC continuous working voltage.
HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
Net per C 44.83

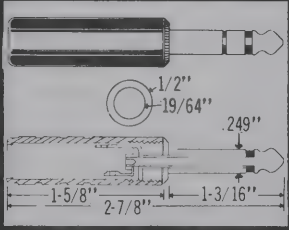
No.		Net per C
33-600-BU	with black plastic handle.	44.83
33-602-BU	with red plastic handle.	62.89
33-604-BU	with metal (shielded) handle.	



2-COND., CLAMP OR SOLDER

DESC: Standard size plug, with large "grounding" terminals which clamps around cable insulation or shield, and acts as strain relief.
HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
Net per C 39.90

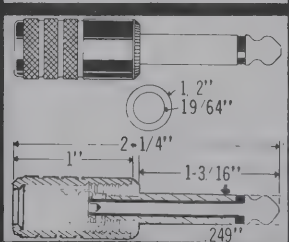
No.		Net per C
33-606-BU	With black plastic handle.	39.90
33-608-BU	with red plastic handle.	57.50
33-610-BU	with metal (shielded) handle.	



TWO-CONDUCTOR PHONE PLUG, PLAIN SOLDER LUGS

DESC: Standard size plug.
HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
Net per C 39.17

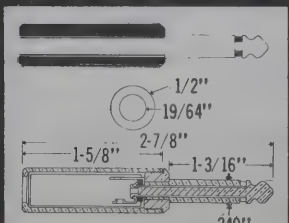
No.	Color	No.	Color
33-612-1BU	Red	33-612-2BU	Black



"STUBBY" SHIELDED TWO-CONDUCTOR PHONE PLUG

DESC: Standard phone plug with special, short metal handle; plain solder lugs.
Net per C 51.30

No.	
33-614-BU	



STANDARD SHIELD TWO-CONDUCTOR PHONE PLUG

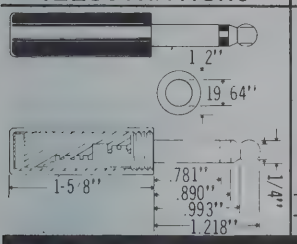
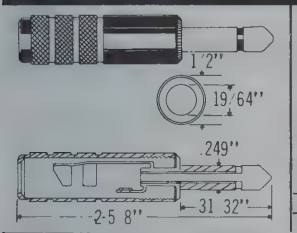
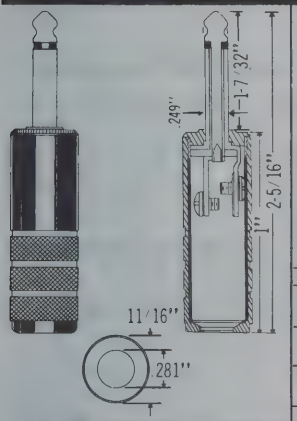
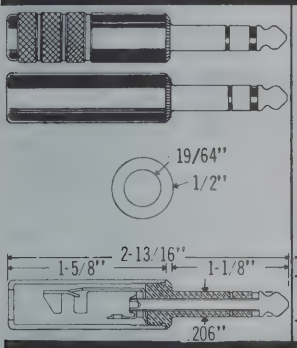
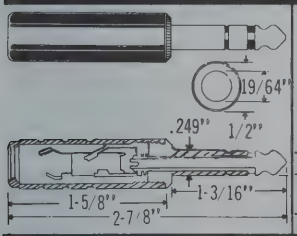
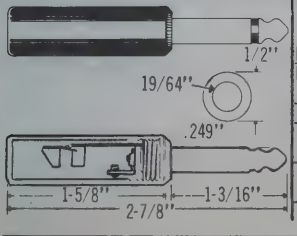
DESC: Regular plug with metal (shielded) handle, plain solder lugs.
Net per C 57.00

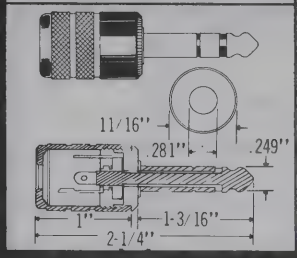
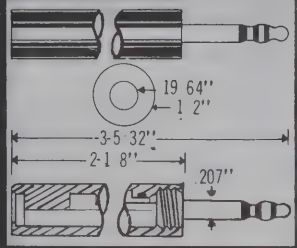
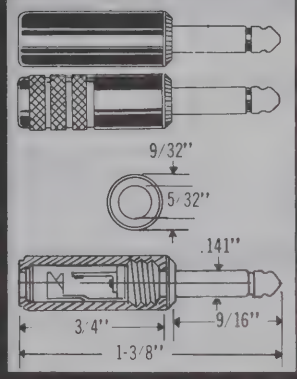
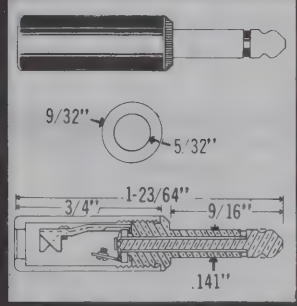
No.	
33-616-BU	

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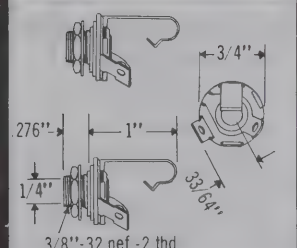
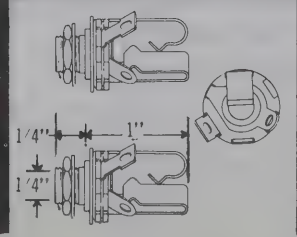
GC ELECTRONICS — ELECTROCRAFT ELECTRONIC COMPONENTS

PHONE PLUGS

ILLUSTRATIONS	DESCRIPTION
	**TWO-CONDUCTOR PHONE PLUG TYPE PJ-055B** DESC: Solder terminal and screw connection; supplied with black, break-resistant molded shell. Net per C 80.63 No. 33-618-BU
	**SHORT FINGER, 2-COND. PHONE PLUG** DESC: Special short finger (barrel) type plug to connect microphone or telephone pickup to Revere Wollensack tape recorders. Combination clamp and solder lug connection; metal shielded handle. Net per C 63.30 No. 33-620-BU
	**LARGE HANDLE 2-COND. PHONE PLUG** DESC: Standard size plugs with sturdy large handles where space is no factor; all supplied with screw type terminals. RATING: 5 amps AC for 10 degree C Temp. rise, continuous duty. 750 volts 60 cycles AC working voltage. HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. Net per C 42.30 No. 33-622-BU with black plastic handle, 1-1/2" long. Net per C 42.30 33-624-BU with red plastic handle, 1-1/2" long. Net per C 63.00 33-626-BU with metal (shielded) handle, 1" long. Net per C 69.00 33-628-BU with metal (shielded) handle, 2-1/16"
	**"THIN-FINGER" 2-COND. PHONE PLUGS** DESC: Special plugs, with undersize barrel diameter of .206", for applications where polarized input is desired to distinguish between different connections. Plugs have combination clamp and solder lug connection and mate with jacks No. 33-700/2. HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. Net per C 41.40 No. 33-630-1BU Color Red; No. 33-630-2BU Color Blk Net per C 51.00 33-632-BU with metal (shielded) handle.
	**3-CONDUCTOR PHONE PLUG: COMB. CLAMP AND SOLDER LUG TERMINALS** HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. Net per C 58.35 No. 33-640-1BU Color Red; No. 33-640-2BU Color Blk Net per C 73.35 33-642-BU Metal
	**SCREW TERMINALS 3-CONDUCTOR PHONE PLUG** HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. Net per C 70.83 No. 33-644-BU with black plastic handle. Net per C 70.83 33-646-BU with red plastic handle. Net per C 83.17 33-648-BU with metal (shielded) handle

ILLUSTRATIONS	DESCRIPTION
	**LARGE HANDLE 3-CONDUCTOR PHONE PLUG** DESC: For heavy duty applicator; can accommodate large diameter cables, with room in handle for wired-in resistors or capacitors; with 1" long metal (shielded) handle. Net per C 72.00 No. 33-650-BU
	**3-CONDUCTOR PHONE PLUG, TYPE PJ-068B** DESC: With solder terminal and screw connection; made in accordance with military specifications. Net per C 209.99 No. 33-654-BU
	**MIN. PHONE PLUGS COMB. CLAMP & SOLDER TER.** DESC: These small plugs are designed for use with hearing aids, pocket radios, portable recorders, etc. Two-conductor style; tested for 500 V breakdown. RATING: 5 amps AC for 10 degree C Temp. rise, continuous duty. HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. Net per C 51.66 No. 33-660-BU with metal (shielded) handle. Net per C 40.02 33-662-BU with black plastic handle. Net per C 40.02 33-664-BU with red plastic handle
	**MIN. PHONE PLUGS COMB. CLAMP & SOLDER TER.** DESC: Same plug as 33-660 except for different style terminals. HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. Net per C 59.85 No. 33-666-BU with metal (shielded) handle. Net per C 42.51 33-668-BU with black plastic handle. Net per C 42.51 33-670-BU with red plastic handle.

PHONE JACKS

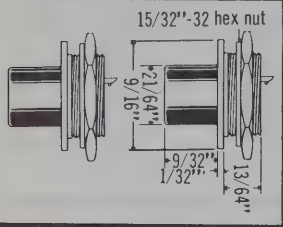
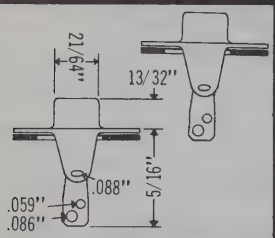
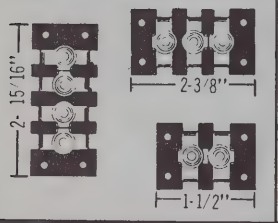
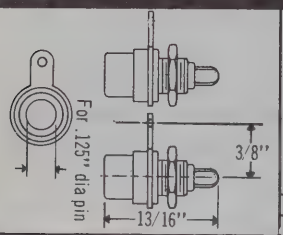
	**PANEL MOUNTING TWO-CONDUCTOR PHONE JACKS** DESC: Open circuit, 2-conductor. RATING: 10 amps AC for 10 degree C Temp. rise, continuous duty. 1.2 K Volts 60 cycle AC continuous working voltage. WASHER: Phenolic, per MIL-LL-31 and ASTMD-709 type 1. Net per C 27.00 No. 33-690-BU
	**PANEL MOUNTING TWO- CONDUCTOR PHONE JACKS** DESC: Panel mounting two conductor Phone Jack. Use with Revere/Wollensach type. Will accommodate 33-620 phone plug. Net per C 29.83 No. 33-691-BU

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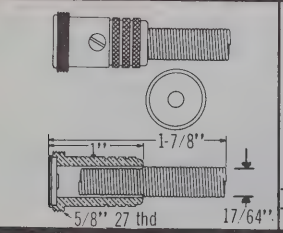
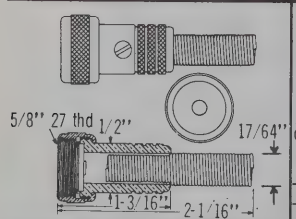
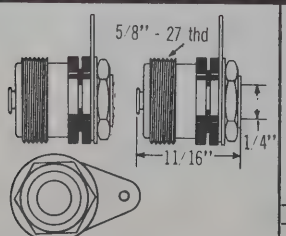
GC ELECTRONICS

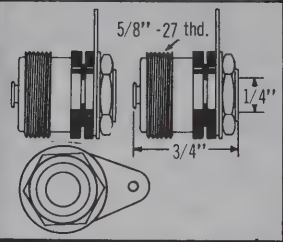
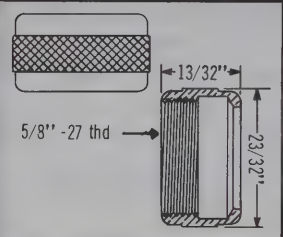
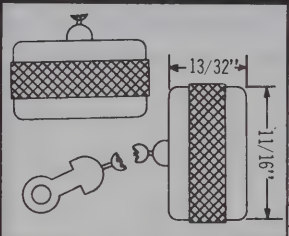
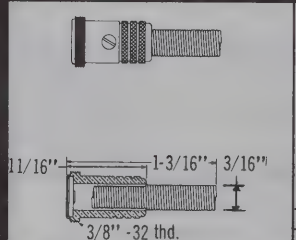
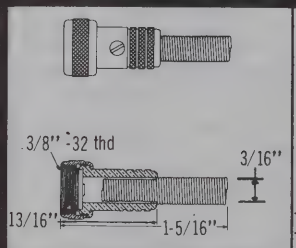
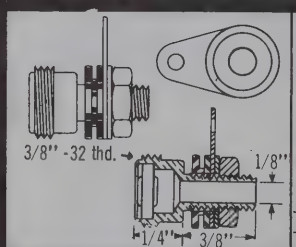
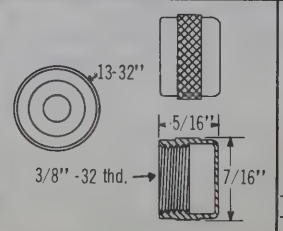
ELECTROCRAFT ELECTRONIC COMPONENTS

PHONO PIN PLUGS & JACKS

ILLUSTRATIONS	DESCRIPTION
	**PHONO JACK, SINGLE HOLE MOUNTING** DESC: Supplied with washer and mounting nut. Net per C 20.67 No. 33-790-BU
	**PHONO JACKS** DESC: Fastens to chassis with 2 rivets or 2 screws. Net per C 7.33 No. 33-792-BU W/oval, space saving metal mounting plate. Net per C 7.50 No. 33-796-BU W/regular, round mounting plate.
	**PHONO PIN JACKS** No. 33-798-BU single phono pin jack — Net per C 7.50 No. 33-800-BU double phono pin jack — 12.00 No. 33-802-BU triple phono pin jack — 15.00 No. 33-803-BU quadruple phono pin jack — 24.00
	**SINGLE HOLE PANEL PHONO JACK** DESC: Mounts in 9/32" hole, requires only one hole drilled. Comes equipped with nut, washer and solder lug for ground. Net per C 16.20 No. 33-804-BU

STANDARD MICROPHONE CONNECTORS

ILLUSTRATIONS	DESCRIPTION
	**CORD MOUNTED MALE MICROPHONE CONNECTOR** DESC: With flexible spring to protect cable; center conductor solders to contact; braid is clamped securely by set screw. Net per C 24.00 No. 33-810-BU
	**CORD MOUNTED FEMALE MICROPHONE CONNECTOR** DESC: With flexible spring to protect cable; center conductor solders to contact; braid is clamped securely by set screw. Net per C 31.50 No. 33-812-BU
	**PANEL MOUNTED MICROPHONE CONNECTOR** DESC: Requires 3/8" hole when grounded to chassis; or 7/16" hole if insulated with fibre washers; mates with No. 33-812 connector. Single contact connector. Net per C 19.38 No. 33-814-BU

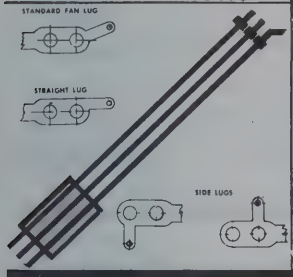
ILLUSTRATIONS	DESCRIPTION
	**MICROPHONE AND CHASSIS CONNECTOR** DESC: Closed circuit type which grounds center contact when cable connector removed, thus eliminating noise. Net per C 26.50 No. 33-816-BU
	**COUPLING NUT** DESC: Converts No. 33-810 male connector to No. 33-812 female type, and No. 33-872 adapter to female No. 33-874. Net per C 8.33 No. 33-818-BU
	**CAP FOR PANEL CONNECTORS** DESC: Protects unused connectors from mechanical damage and dust. Net per C 42.48 No. 33-820-BU
	**MINIATURE MALE MICROPHONE CONNECTOR** DESC: These connectors are only about one-half the size of the standard microphone connectors. Particularly useful for portable equipment, lapel microphone, musical instruments, recorders, etc. Made to the same specifications and of same materials as standard size connectors. Net per C 26.00 No. 33-826-BU
	**MINIATURE FEMALE MICROPHONE CONNECTOR** DESC: These connectors are only about one-half the size of the standard microphone connectors. Particularly useful for portable equipment, lapel microphone, musical instruments, recorders, etc. Made to the same specifications and of same materials as standard size connectors. Net per C 33.15 No. 33-828-BU
	**MINIATURE MIKE CONNECTOR** DESC: These connectors are only about one-half the size of the standard microphone connectors. Particularly useful for portable equipment, lapel microphones, musical instruments, recorders, etc. Made to the same specifications and of same materials as standard size connectors. Panel mounted connector. Net per C 20.33 No. 33-830-BU
	**MINIATURE COUPLING NUT** DESC: Converts male connector No. 33-826 to female connector No. 33-828. Net per C 5.48 No. 33-832-BU

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GC ELECTRONICS — ELECTROCRAFT ELECTRONIC COMPONENTS

STACK ASSEMBLIES

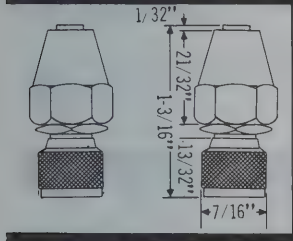
ILLUSTRATIONS | DESCRIPTION



STACK ASSEMBLIES

DESC: High grade stack assemblies can be supplied in a wide variety of circuit arrangements and contact ratings. Basic contacts can be placed at any one or more locations. Assemblies are tightly held together by press-fit insulator tubing. Length of blade is variable up to a maximum of 2-5/8". Available in lug design, as shown below. With a small tooling charge, blades are available in various forms to act as cam followers or other types of actuators.
We will be happy to consult with you on any special application where stack assemblies are used.

SPECIAL CONNECTORS & ADAPTORS

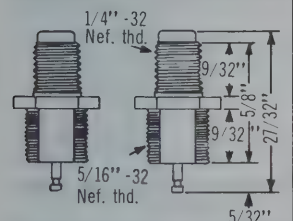


FEMALE COAXIAL CONNECTORS

DESC: Low-cost solderless coaxial cable connectors. For use with RG-8/U, RG-11/U and RG-59/U. Mates with No. 33-836 receptacle or No. 33-838 female coupler. Low-loss insulation.

Net per C 48.00

No. 33-834-BU

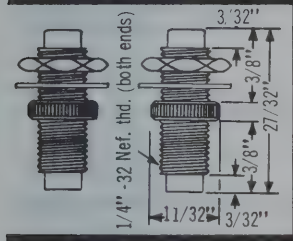


MALE CHASSIS FITTING

DESC: Silver-plated, low-loss insulated co-axial cable connector. Mates with No. 33-834. 5/8" threaded stem.

Net per C 48.00

No. 33-836-BU

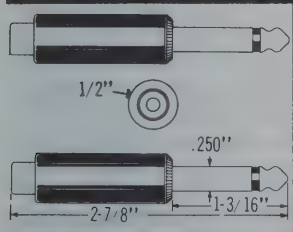


MALE COUPLER

DESC: Highly conductive, silver-plated cable connector. Mates at either end with No. 33-834 connector.

Net per C 60.00

No. 33-838-BU

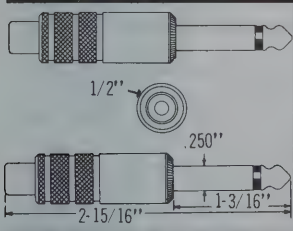


ADAPTOR

DESC: Phono jack input, standard phone plug output.
HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.

Net per C 67.50

No. 33-850-BU

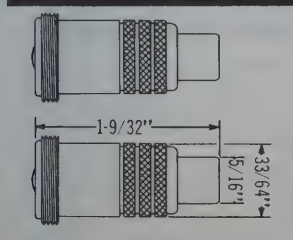


ADAPTOR

DESC: Phono jack input, standard phone plug output, heavy duty metal shielded type.

Net per C 78.30

No. 33-852-BU



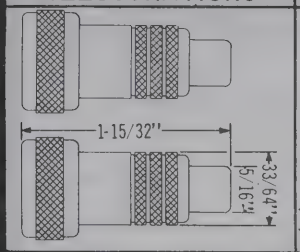
MALE ADAPTOR

DESC: Phone jack input, microphone connector output.

Net per C 59.40

No. 33-854-BU

ILLUSTRATIONS | DESCRIPTION

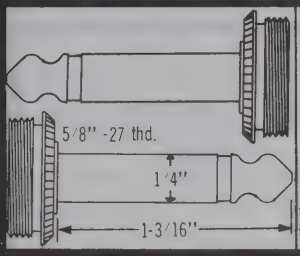


FEMALE ADAPTOR

DESC: Phono jack input, microphone connector output.

Net per C 67.50

No. 33-856-BU

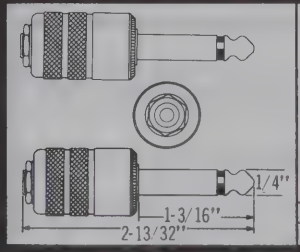


MALE ADAPTOR

DESC: Microphone connector input, standard phone plug output.

Net per C 30.00

No. 33-858-BU

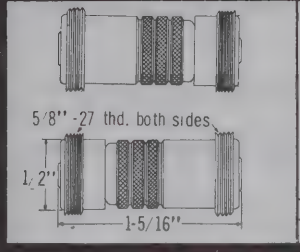


ADAPTOR

DESC: Miniature phone jack input, standard phone plug output.

Net per C 78.30

No. 33-860-BU

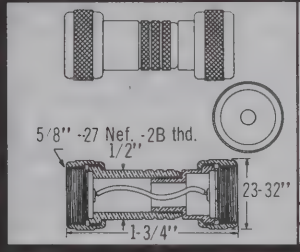


MALE CONNECTOR

DESC: Connects 2 female microphone connectors.

Net per C 40.00

No. 33-862-BU

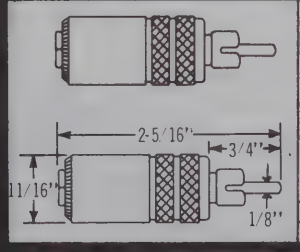


FEMALE CONNECTOR

DESC: Connects 2 male microphone connectors.

Net per C 44.17

No. 33-864-BU

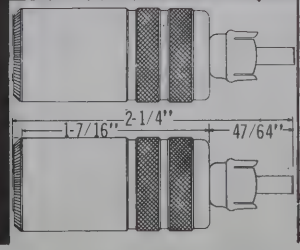


ADAPTOR

DESC: Miniature phone jack input, standard phono plug output.

Net per C 78.30

No. 33-865-BU



ADAPTOR

DESC: Standard phone jack input, phono plug output.

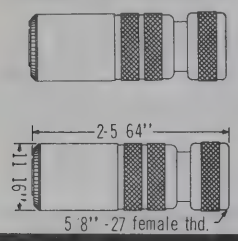
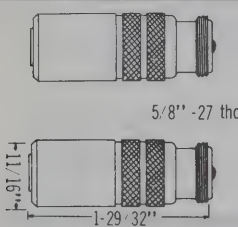
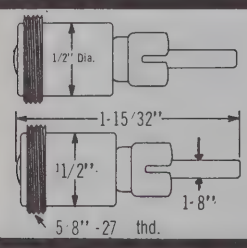
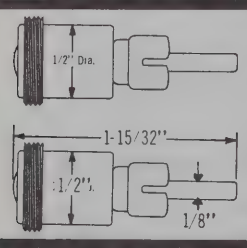
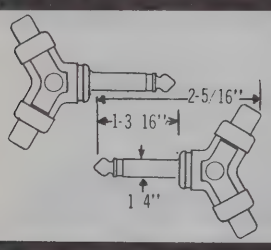
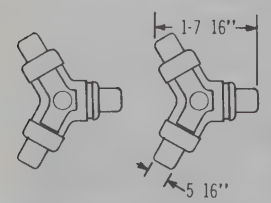
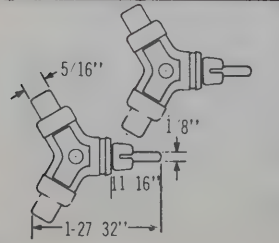
Net per C 105.84

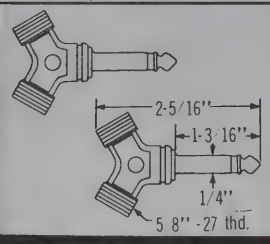
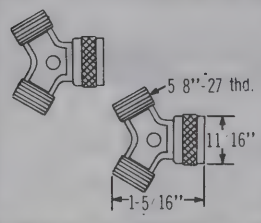
No. 33-866-BU

GC ELECTRONICS

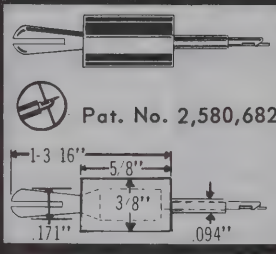
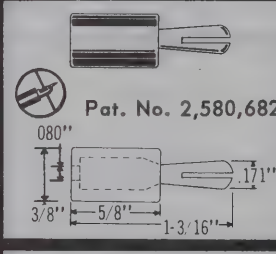
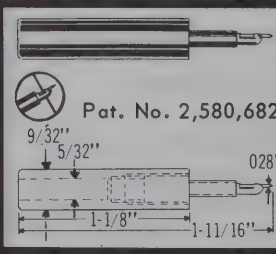
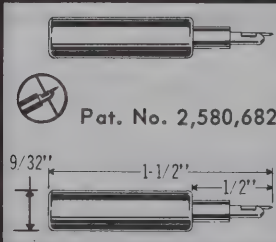
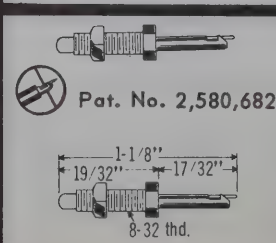
ELECTROCRAFT ELECTRONIC COMPONENTS

SPECIAL CONNECTORS & ADAPTORS

ILLUSTRATIONS	DESCRIPTION
	**FEMALE ADAPTOR** DESC: Standard phone jack input, microphone connector output. Net per C 99.17 No. 33-868-BU
	**MALE ADAPTOR** DESC: Standard phone jack input, microphone connector output. Net per C 89.10 No. 33-870-BU
	**MALE ADAPTOR** DESC: Microphone connector input, phone plug output. Net per C 67.50 No. 33-872-BU
	**FEMALE ADAPTOR** DESC: Microphone connector input, phone plug output. Net per C 99.17 No. 33-872-1BU
	**"Y" ADAPTOR** DESC: Input --2 phono jacks (in parallel); output phone plug. Net per C 98.50 No. 33-880-BU
	**"Y" ADAPTOR** DESC: Input - 2 phono jacks (in parallel); output - single phono jack. Net per C 94.50 No. 33-882-BU
	**"Y" ADAPTOR** DESC: Input - 2 phono jacks (in parallel); output - standard phono pin plug. Net per C 94.50 No. 33-884-BU

ILLUSTRATIONS	DESCRIPTION
	**"Y" ADAPTOR** DESC: Input - 2 male microphone connectors (in parallel); output standard phone plug. Net per C 102.60 No. 33-886-BU
	**"Y" ADAPTOR** DESC: Input - 2 male microphone connectors (in parallel); output - female microphone connector. Net per C 89.63 No. 33-888-BU

KLIPZON

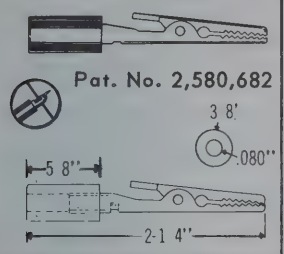
ILLUSTRATIONS	DESCRIPTION
	**BANANA PLUG-KLIPZON ADAPTOR** DESC: Designed to adapt unterminated wire ends to Banana Jack. HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. TIP: One end cross-slotted; brass, nickel plated banana plug; other end "Klipzon" self-holding wire piercing tip. Net per C 45.00 No. 33-076-BU Color Red — No. 33-078-BU Color Blk
	**ADAPTER, KLIPZON TIP TO BANANA PLUG** DESC: For connection of test leads terminated with Klipzon prods to equipment with banana jacks or standard tip plugs. HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. TIP: Adapts tip plugs to banana plugs. Net per C 36.00 No. 33-080-BU Color Red — No. 33-082-BU Color Blk
	**KLIPZON MINI-PROD** DESC: Ingeniously designed; insulated tip plug which can be snapped securely on wires; sharp point to pierce insulation; fits standard tip jacks; wire solders to body. HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. TIP: Wire piercing Klipzon Net per C 36.00 No. 33-138-BU Color Red — No. 33-140-BU Color Blk
	**KLIPZON MINI-PROD ADAPTOR** DESC: Converts standard Tip Plug and Test Prod to self-holding Klipzon wire piercing prod. HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3. TIP: Wire piercing Klipzon. Net per C 36.00 No. 33-160-BU Color Red — No. 33-162-BU Color Blk
	**KLIPZON PANEL MOUNTS** DESC: Wire holding patented Klipzon Test Prod with threaded shank (8-32 x 3/8") for panel mount. Designed for test setups. Quickly connects and disconnects Resistors, Capacitors, Diodes or Transistor leads. TIP: Wire piercing Klipzon. Net per C 45.00 No. 33-164-BU

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GC ELECTRONICS — ELECTROCRAFT ELECTRONIC COMPONENTS

KLIPZON

ALLIGATOR-KLIPZON PROD ADAPTOR

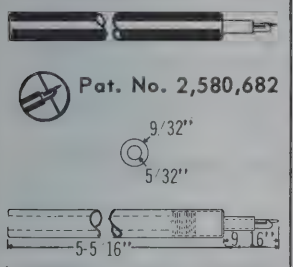


DESC: Adapts Klipzon Mini-Prod connectors and standard tip plugs to Alligator clip. has very short insulated handle and cadmium plated steel jaws.
HANDLE: Butyrate. per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.

Net per C 36.00

No.	Color	No.	Color
33-338-BU	Red	33-340-BU	Blk

KLIPZON TEST PROD

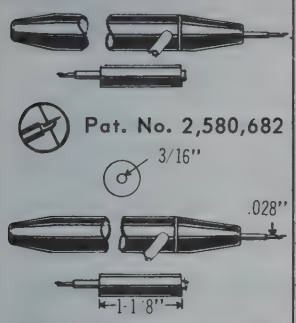


DESC: Ingenious Klipzon tip has self-holding point which clips on wire or chassis: sharp point, easily penetrates insulation; has convenient, thin handle: wire solders to tip.
HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Wire piercing Klipzon

Net per C 63.00

No.	Color	No.	Color
33-400-BU	Red	33-402-BU	Blk

KLIPZON CRYSTAL PROD KIT

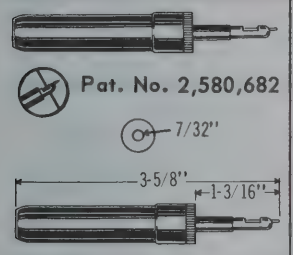


DESC: Self-holding prod in molded, streamlined handle with Germanium Diode and other parts to assemble a low capacity crystal probe.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Self-holding, Patented Klipzon tip. Aluminum body, spring wire tip.

Net each 1.83

No.
RF Probe for use with Vacuum Tube Volt Meter 33-412
RF Probe for use with Vacuum Ohm Milliameter 33-414

KLIPZON JUMBO PROD HANDLE

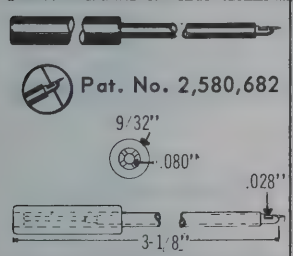


DESC: Solder type. Clips on wires up to .229" in diameter, chassis, screws, terminals, etc.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Self-holding, patented Klipzon tip. Aluminum body; spring wire tip.

Net per C 66.00

No.	Color	No.	Color
33-416-BU	Red	33-418-BU	Blk

KLIPZON LONGIE ADAPTOR

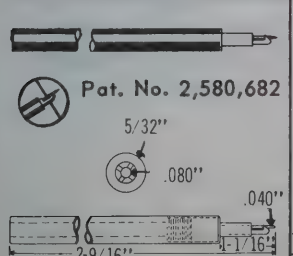


DESC: Long, slender, self-holding point. Fits standard tip plug and test prod.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Self-holding, patented Klipzon tip. Aluminum body; spring wire tip.

Net per C 45.00

No.	Color	No.	Color
33-420-BU	Red	33-422-BU	Blk

KLIPZON JUMBO ADAPTOR



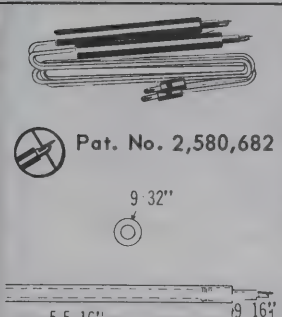
DESC: Adapts regular Tip Plug or Test Prod to Jumbo self-holding Klipzon type. Designed to clip on large wires, chassis, screws, lugs, etc.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Self-holding, patented "Jumbo" Klipzon tip. Aluminum body; spring wire tip.

Net per C 63.00

No.	Color	No.	Color
33-424-BU	Red	33-426-BU	Blk

KLIPZON

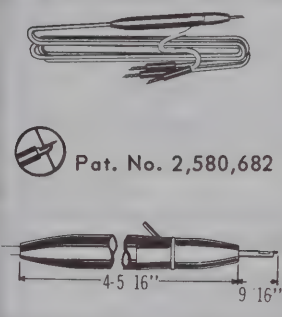
KLIPZON TEST LEADS



DESC: 48" flexible leads. One end on all leads is 4-3/4" long handle with Klipzon tip; other end is 1-1/8" handle with choice of Klipzon tip, standard Phone Tip, or Banana Plug.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
PROD TIP: Self-holding, patented Klipzon. Aluminum body, spring wire tip.

No.	Net each
With Klipzon on 1-1/8" handle 33-480-S	2.03
With Insulated Standard Phone Tip Plug 33-482-S	1.65
With Banana Plug 33-484-S	1.95

KLIPZON CRYSTAL PROBES

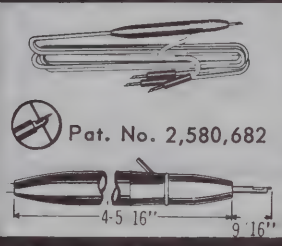


DESC: Germanium diode probe with Klipzon self-holding points. for measuring high frequency voltage with Vacuum Tube Volts Meter. flexible lead wires are terminated on meter end with Klipzon tip plug. Completely shielded model. with flexible coaxial cable and separate grounding terminals. on probe and cable end. for frequencies to 200 Mc.
HANDLE: Butyrate. per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.

Net each 4.35

No.
33-486-S

KLIPZON CRYSTAL PROBE

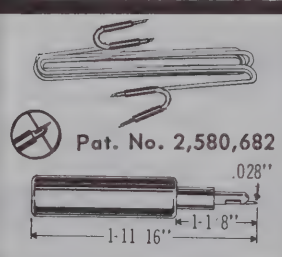


DESC: Standard type. consisting of lead. with Klipzon crystal probe on one end. plus ground lead terminated on each end with Klipzon tip plug; for use with regular v,lt meter. Frequency range to 200 Mc.
HANDLE: Butyrate. perMIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.

Net each 4.35

No.
33-488-S

SHIELDED LOW CAPACITY

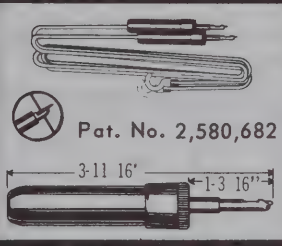


DESC: 36" low capacity, coazial type lead. terminated on each end with self-holding insulation piercing, Klipzon tip prods. Ground connection of each end with separate Klipzon plug tips.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Self-holding, patented Klipzon Tip. Aluminum body; spring wire tip.

Net each 2.97

No.
33-490-S

HEAVY DUTY KLIPZON LEADS

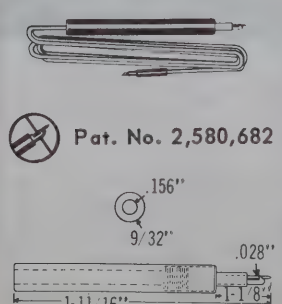


DESC: 48" leads with "Jumbo" Klipzon type terminals one end, hook type other end. One pair red and black.
HANDLE: Molded Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Self-holding, patented Klipzon Tip. Aluminum body, spring wire tip..

Net each pair 2.87

No.	
33-492-S	One pair, red and black

KLIPZON JUMPER LEADS

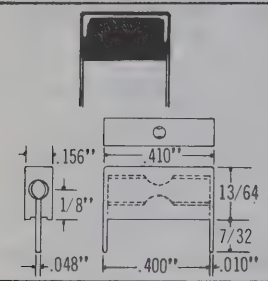


DESC: 48" leads, terminated on each end with patented Klipzon tips, which clip on wires and terminals, have sharp insulation and corrosion piercing points, and will also plug in any standard tip jack. Single jumper.
HANDLE: Butyrate, per MIL-LP-349-A and ASESA letter QUD4-59-4820 type 3.
TIP: Self-holding, patented Klipzon Tip. Aluminum body, spring wire tip.

No.	Length	Color	Net each
33-510-S	12"	Red	.77
33-512-S	12"	Black	.77
33-514-S	24"	Red	1.12
33-516-S	24"	Black	1.12

PRINTED CIRCUIT CONNECTORS

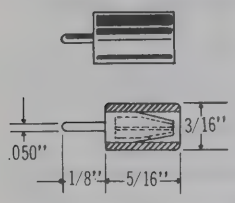
MINIATURE HORIZONTAL JACK*



DESC: unique design accepts .080" diameter tip plug in either end,or from top or bottom.Only .400" in width, .156" in depth.
BODY: Tough, low-loss plastic, per MIL-P-17091.
CONTACT: Silver-plated, berylium copper formed contact. 2 terminals.
RATING: 5 amperes maximum current capacity.
OPERATING VOLTAGE: 1500 volts RMS 50,000 feet.

		Net per C 9.90	
No.	Color	No.	Color
33-235-1BU	Red	33-235-2BU	Blk

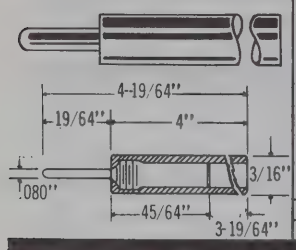
MINIATURE VERTICAL JACK*



DESC: Mounts through single .052" hole, requires minmum mounting area. Overall length is 7/16".
BODY: Tough, low-loss plastic, per MIL-P-17091.
CONTACT: Silver-plated, machined berylium-copper contact.
RATING: 5 amperes maximum current capacity.
OPERATING VOLTAGE: 1500 volts RMS at 50,000 feet.

		Net per C 13.60	
No.	Color	No.	Color
33-237-1BU	Red	33-237-2BU	Blk

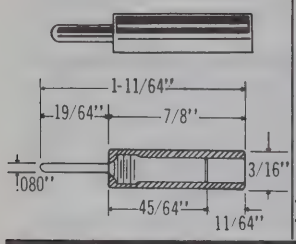
MINIATURE HANDLE TIP PLUG



DESC: For use with horizontal, vertical or standard .080" diameter tip jacks. 4" handle for ready access to "hard-to-reach" test points. Overall length is 4-19/64", 3/16" diameter.
BODY AND CONTACT: Nickel plated machined brass, solder-type lead connector.

		Net per C 28.90	
No.	Color	No.	Color
33-238-1BU	Red	33-238-2BU	Blk.

SUB MINIATURE TIP PLUG*

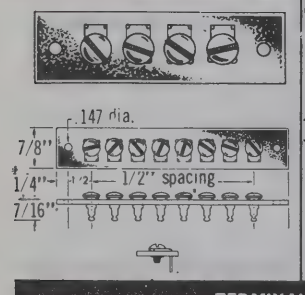


DESC: For use with horizontal, vertical or standard .080" diameter tip jacks. Overall length is 1-11/64", 3/16" diameter.
BODY AND CONTACT: Nickel plated machined brass, solder type lead connectors.

		Net per C 16.80	
No.	Color	No.	Color
33-239-1BU	Red	33-239-2BU	Blk

TERMINAL STRIPS

HEAVY DUTY TERMINAL BOARDS

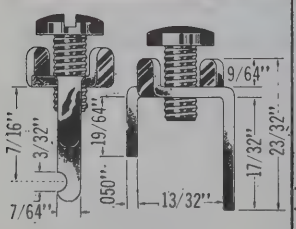


DESC: Brass and cadmium plated lug .042 thick with spaced 1/2" centers and numbered terminals. X.P. bakelite strip 7/8" wide x 3/32 thick and numbered. The brass screw is a nickel plated 8-32 x 5/16".

No.	Terminals	Mtg. Center	Net per C
33-930-BU	2	1½"	20.40
33-931-BU	3	2"	28.20
33-932-BU	4	2½"	34.20
33-934-BU	5	3"	40.20
33-935-BU	6	3½"	46.20
33-936-BU	7	4"	52.20
33-937-BU	8	4½"	58.80

TERMINAL LUGS & SCREWS

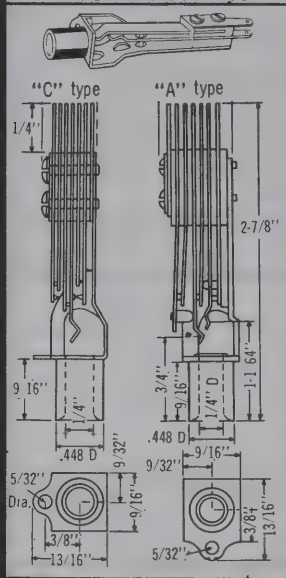
TERMINAL LUGS AND SCREWS



DESC: Designed for heavy duty terminal strips. Brass hot tinned lugs with screw inserted.

	Net per C 5.40
No.	
33-940-BU	

TELEPHONE SWITCHBOARD JACKS

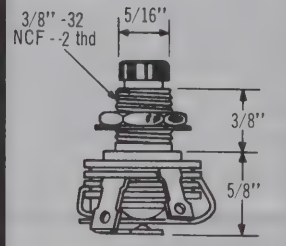


TELEPHONE SWITCHBOARD JACKS

DESC: Ruggedly built long frame telephone jacks, available in "A" and "C" frame designs as shown. Part numbers listed in our table are for the "A" type. "C" frames of the same circuit are available under special orders.
Steel frames are welded to give desired rigidity and stability. Nickel silver alloy springs assure maximum service life and resistance to corrosive action. On standard types the contacts are of fine silver; military types have palladium contacts and are made to MIL-J-641 specifications.
The accompanying table shows standard types... special contacts and unusual circuits are available on order.

No.	Net per C
2-cond. closed circuit w/insulated break	
33-957-BU	111.00
2-cond. double closed circuit w/insulated make before break	
33-960-BU	148.70
3-cond. 2 closed circuits, insulated break	
33-966-BU	148.70
3-cond. open circuit	
33-969-BU	105.40
Twin single conductor shorting	
33-971-BU	278.40

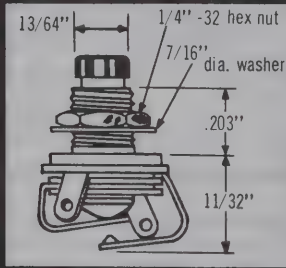
PUSH BUTTON SWITCHES



STANDARD SMALL PUSH BUTTON SWITCHES

DESC: Specially designed for test equipment, audio and inter-communication devices, electronic medical equipment, etc.. Standard design is with integral contacts for low level circuits, can also be supplied with silver contacts for 3 amps, 115/V. AC rating (on special orders in production quantities).
WASHERS: Phenolic, per MIL-LL-31 and ASTMD-709 type 1.

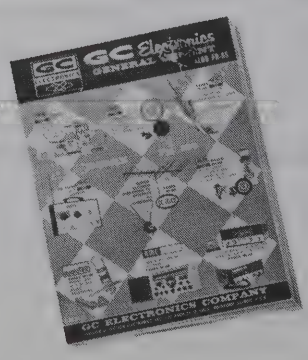
No.	Description	Net per C
34-000-BU	Single make - black button	51.66
34-002-BU	Single make - red button	51.66
34-004-BU	Single break - black button	51.66
34-006-BU	Single break - red button	51.66
34-008-BU	Single break-make-blk button	57.51
34-010-BU	Single break-make-red button	57.51



MINIATURE PUSH BUTTON SWITCHES

DESC: Designed for applications where space is extremely limited, such as aircraft, computers, portable test equipment, etc.. Made of the same specifications as standard small switches listed in this section.

No.	Description	Net per C
34-020-BU	Single make - black button	51.66
34-022-BU	Single make - red button	51.66
34-024-BU	Single break - black button	51.66
34-026-BU	Single break-make-blk button	57.51



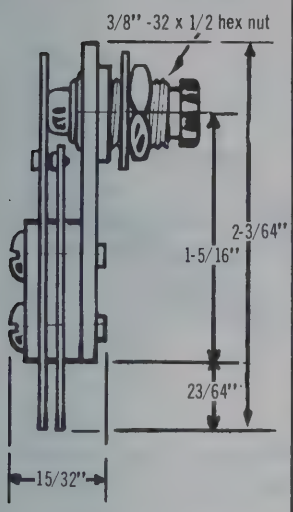
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**Also available in Bulk quantities in yellow, green, or blue. To order: add to part number, "-3BU" for yellow, "-4BU" for green, "-5BU" for blue. Example: No. 33-000-3BU (for yellow).*

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GC ELECTRONICS — ELECTROCRAFT ELECTRONIC COMPONENTS

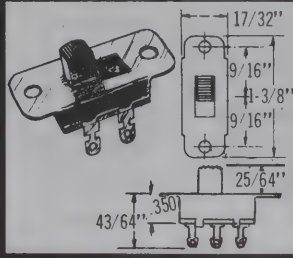
PUSH BUTTON SWITCHES

ILLUSTRATIONS	DESCRIPTION
	**STRAIGHT FRAME PUSH BUTTON SWITCHES** DESC: Designed for heavy duty application where utmost reliability is required; straight frame design provides perfect spring and contact; fine silver contacts with minmum resistance rated at 3 amp, 115/V, AC, non-inductive load. Standard push button is black, however, other colors and higher ratings as well as many additional contact arrangements can be supplied on order.

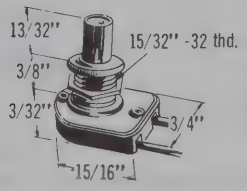
No.		Net per C
34-028-BU	Single make, black button SPST, normally open	58.35
34-028-1BU	Single make, red button SPST, normally open	58.35
34-030-BU	Single break, black button SPST, normally closed	58.35
34-030-1BU	Single break, red button SPST, normally closed	58.35
34-032-BU	Single break-make Black button SPDT, spring return	69.00
34-032-1BU	Single break-make Red button SPDT, spring return	69.00
34-034-BU	DPST, normally open Black button	75.90
34-034-1BU	DPST, normally open Red button	75.90
34-036-BU	DPST, normally closed Black button	75.90
34-036-1BU	DPST, normally closed Red button	75.90
34-038-BU	DPDT, spring return Black button	90.00
34-038-1BU	DPDT, spring return Red button	90.00
34-040-BU	3PDT, spring return Black button	115.00
34-040-1BU	3PDT, spring return Red button	115.00

PART NO	PUSH BUTTON	SCHEMATIC CIRCUIT
34-028 34-028-1	Black Red	
34-030 34-030-1	Black Red	
34-032 34-032-1	Black Red	
34-034 34-034-1	Black Red	
34-036 34-036-1	Black Red	
34-038 34-038-1	Black Red	
34-040 34-040-1	Black Red	

MISC. SMALL SWITCHES

ILLUSTRATIONS	DESCRIPTION
	**SLIDE SWITCHES** DESC: Small switches of sturdy design; UL approved for 1/2 amp, 125/V. Mount with 2 screws, No. 6 or rivets 1/8" with 1-1/8" spacing.

No.		Amps	Net each
34-160	SPDT	AC 4.0 DC 1.0	.18
34-162	DPDT	AC 3.0 DC 0.5	.22

ILLUSTRATIONS	DESCRIPTION
	**ROTARY CANOPY SWITCH** DESC: With wire leads and 13/32" shank length. Standard replacement switch for lighting fixtures, bench lamps, small electrical appliances, instruments, etc. Rating: 3 amps, 125/V, 1 amp, 250/V. Mounts in 3/8" hole.

No.	Net each .32
34-166	

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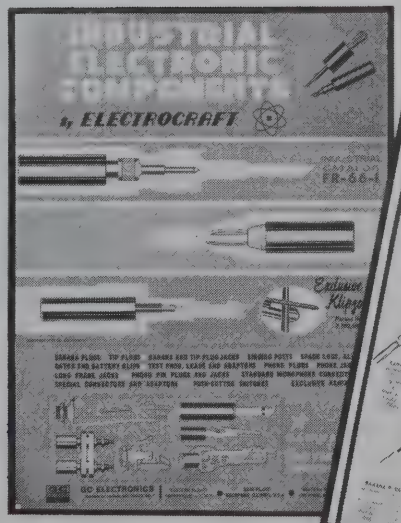
SEND FOR WALL CHART FR-029-E

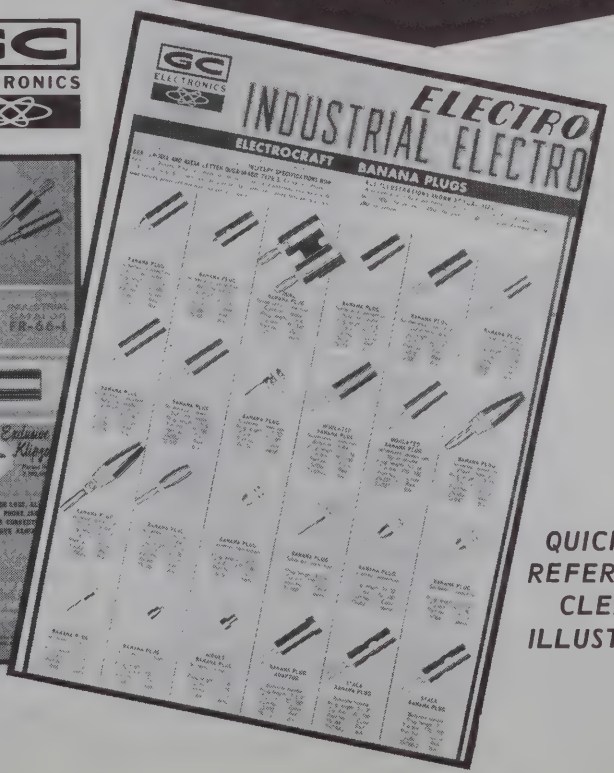
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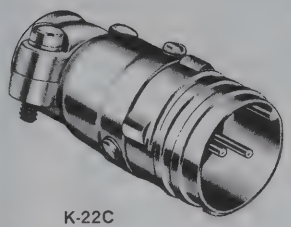
K SERIES

STANDARD CIRCULAR PLUGS
with Acme thread coupling

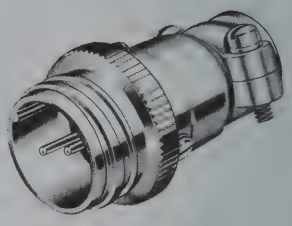
RUGGED CIRCULAR K PLUGS

K Series connectors are in industry-wide use for aircraft, communications and general purpose applications. They are lightweight, rugged and economical, featuring quick coupling Acme threads. RK types are K plugs with reverse coupling and will not mate with standard K's.

Connectors shown in this section are readily available from your ITT Cannon Authorized Distributor. For audio/video applications, see K type plugs (SK, LK and LKT) on page 29.



K-22C



RK-22C

STANDARD DATA

SHELLS
Material — Aluminum alloy
Finish — Cadmium plate
Size — 8 sizes offered to accommodate inserts sized from 5/8" to 2-1/4"

INSULATOR
Material — Molded melamine or fabricated phenolic are

CONTACTS
Material — Copper alloy
Finish — Silver plate
Terminals — Solder pot
Number — 2 to 82 contacts

COUPLING METHOD
K — Acme thread coupling nut
RK — Reverse coupling nut

NOTE: RK plugs or receptacles will **not** mate with K plugs or receptacles.

TEST DATA

There shall be no evidence of breakdown when the test voltages indicated below are applied, for a period of 1 minute, between the contacts and between the shell and the contacts with spacings as noted below:

Laboratory Conditions
Ambient Temperature.....23°C to 27°C
Relative Humidity.....69% to 73%
Barometric Pressure.....29.70" to 29.75"

Contact Spacing	Test Voltage 60 cps. (ac rms.)	Contact Spacing	Test Voltage 60 cps. (ac rms.)
1/64	540 Volts	3/16	3650 Volts
1/32	1000 Volts	13/64	3850 Volts
3/64	1300 Volts	7/32	4050 Volts
1/16	1700 Volts	15/64	4240 Volts
5/64	2050 Volts	1/4	4420 Volts
3/32	2350 Volts	19/64	4940 Volts
7/64	2600 Volts	5/16	5100 Volts
1/8	2900 Volts	3/8	5750 Volts
9/64	3050 Volts	25/64	5890 Volts
5/32	3250 Volts	13/32	6020 Volts
11/64	3450 Volts	7/16	6300 Volts
		1/2	6800 Volts

CONDUIT THREAD SIZES

Two types of entries are available on K and RK Connectors: conduit entries, (threaded) and cable clamps. The conduit entries are divided into three thread series: "B"-Navy, "AC"-Air Corps and "AN"-Army-Navy.

CONDUIT SIZE	B NAVY	AC AIR CORPS	AN ARMY-NAVY
1/8		5/16-32	
3/16	1/2 -28		1/2-28
1/4	11/16-24	5/8 -24	5/8-24
3/8	11/16-24	3/4 -20	3/4-20
1/2	15/16-18	7/8 -20	7/8-20
5/8	1-1/16-18	1-20	1-20
3/4	1-3/16-18	1-1/4-18	1-3/16-18
1	1-7/16-18	1-1/2-18	1-7/16-18
1-1/4	1-3/4 -18	1-3/4-16	1-3/4 -18
1-1/2	2-18	2-16	2-18
1-3/4			2-1/4-16*
2	2-1/2 -18		2-1/2-16*
2-1/2	3-18		3-16*

If tapered entries are required, identification is indicated by the addition of the letter "N" to the thread type.
For B and AC threads add N to denote tapered entry. Example: "BN" and "ACN."
*For AN threads that are asterisked only, add -1 to denote tapered entry. Example: "AN-1."

PART NUMBER EXPLANATION

WK - 6 - 22 - 3/8" AC & AN
R WK - 6 - 22C - 5/16"

- Conduit Coupling Type
- Clamp Capacity or Conduit Size
- Cable Clamp
- Shell Style
- Contact Arrangement
- Prefix
- Size
- Reverse Coupling

REVERSE COUPLING — RK is a reverse version of the K, with the pin insert typical in the plug and the socket insert typical in the receptacle. To prevent mismating, the coupling nut is also reversed so the RK will not mate with K plugs or receptacles.

SIZE — Diameter of coupling thread in inches, from the smallest to the largest:
W—7/8" G—1-3/16" S—1-5/16"
N—1-9/16" F—1-13/16" I—2-1/4"
L—2-1/2" A—2-13/16"

SERIES PREFIX — This series is designated "K."

CONTACT ARRANGEMENT — Layouts are numbered on the basis of number of contacts, varying from 2 to 82.

SHELL TYPE — Shell types include:
21 Straight plug with socket insert
22 Straight plug with pin insert
23 Angle 90° with socket insert
24 Angle 90° with pin insert
31S Small flange receptacle with socket insert
31SL Large flange receptacle with socket insert
32S Small flange receptacle with pin insert
32SL Large flange receptacle with pin insert

CABLE CLAMP — A "C" after the shell type number indicates endbells with cable clamp entries, while the absence of "C" indicates threaded conduit entries.

CONDUIT SIZE — Each shell size has several threaded conduit entry sizes available.

CONDUIT TYPE — On threaded conduit plugs, there is a choice of straight or tapered thread for B, AC or AN type conduit coupling.

STANDARD CIRCULAR PLUGS with Acme thread coupling — K SERIES

STRAIGHT PLUGS, SOCKET CONTACTS



K-21, SOCKET
Conduit Entry

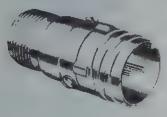
Size Shell	Conduit Size	Conduit Thread Type	Thread Size
WK	1/4"	AC & AN	5/8"-24



K-21C, SOCKET
Clamp Entry

Shell Size	Cable Size
WK	1/4", 5/16", 3/8", 1/2", 5/8"
GK	1/2", 5/8"
SK	1/2", 5/8", 3/4"
NK	1/2", 5/8", 3/4", 7/8"
FK	9/16", 5/8", 7/8", 1"
IK	7/8", 1", 1-1/8"
LK	1", 1-1/2"
AK	1-1/4"

STRAIGHT PLUGS, PIN CONTACTS



K-22, PIN
Conduit Entry

Size Shell	Conduit Size	Conduit Thread Type	Thread Size
WK	1/4"	AC & AN	5/8"-24



K-22C, PIN
Clamp Entry

Shell Size	Cable Size
WK	1/4", 5/16", 3/8", 1/2", 5/8"
GK	1/2", 5/8"
SK	1/2", 5/8", 3/4"
NK	1/2", 5/8", 3/4", 7/8"
FK	9/16", 5/8", 7/8", 1"
IK	7/8", 1", 1-1/8"
LK	1", 1-1/2"
AK	1-1/4"

90° ANGLE PLUGS, SOCKET CONTACTS



K-23, SOCKET

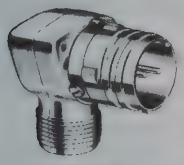
Thread Size	Conduit Size	Thread Size
LK	1-1/4"	B & AN



K-23C, SOCKET

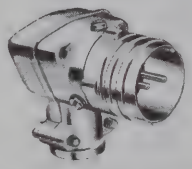
Shell Size	Cable Size
WK	3/8", 1/2"
GK	1/2", 5/8"
SK	1/2", 5/8", 3/4"
NK	9/16", 5/8", 11/16"
FK	9/16", 5/8", 7/8"
IK	1-1/8"

90° ANGLE PLUGS, PIN CONTACTS



K-24, PIN

Thread Size	Conduit Size	Thread Size
LK	1-1/4"	B & AN



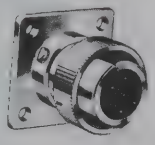
K-24C, PIN

Shell Size	Cable Size
WK	3/8", 1/2"
GK	1/2"
SK	5/8"
NK	5/8"
FK	9/16", 5/8", 7/8"

WALL MTG. RECEPT.



K-31S SOCKET



K-31SL SOCKET

Shell Size
WK, GK, SK, NK, FK, IK, LK, AK

WALL MTG. RECEPT.,



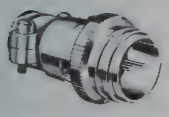
K-32S PIN



K-32SL PIN

Shell Size
WK, GK, SK, NK, FK, IK, LK

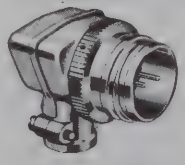
RK PLUGS (REVERSE COUPLING)



RK-22C, PIN

Shell Size	Cable Size
RWK	1/4", 5/16", 3/8", 1/2", 5/8"
RSK	1/2", 5/8", 3/4"
RNK	1/2", 5/8", 3/4", 7/8"
RFK	9/16", 5/8", 7/8", 1"
RGK	1/2", 5/8",

90° ANGLE PLUGS, (REVERSE COUPLING)



RK-24C, PIN

Shell Size	Cable Size
RWK	3/8", 1/2"
RGK	1/2", 5/8"
RSK	1/2", 5/8", 3/4"
RNK	9/16", 5/8", 11/16"
RFK	7/8", 1-1/8"

RK WALL MTG. RECEPT. (REVERSE COUPLING)



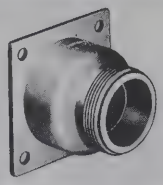
RK-31SL, SOCKET

Shell Size
RWK, RGK, RSK, RNK, RFK, RIK, RLK

K SERIES

STANDARD CIRCULAR PLUGS
with Acme thread coupling

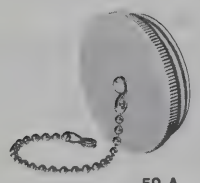
KCL JUNCTION SHELL



For K and RK Receptacles

Order No. By Shell Size	Thread Type	
WKCL	1/4" ACN	1/4" AC
WKCL	3/8" ACN	3/8" AC
WKCL	1/2" ACN	3/8" AC

DUST CAPS



59 A



60 A

K & RK 59A

For K-21 and K-23 plugs; K-31SL and RK-31SL receptacles.

Order No. By Shell Size	Length of Bead Chain
WK-59A-2	3-1/2"
SK-59A-2	4"
NK-59A-2	4"

K & RK 60A

For K-22, RK-22 and RK-24 plugs; K-32S and K-32SL receptacles.

Order No. By Shell Size	Length of Bead Chain
WK-60A-1	No chain
WK-60A-2	3"
GK-60A-2	3"
SK-60A-1	No chain
SK-60A-2	3-1/2"
NK-60A-2	3-1/2"
FK-60A-2	4-13/16"

For RK version, add the letter R. Example: RWK-59A-2.

CONTACT ARRANGEMENTS

Contact Arr. Number	No. Contacts	Wire Size	Contact Spacing	Amps.
SHELL SIZE WK				
WK-M2	2	#16	3/32	10
WK-3	3	#14	1/16	15
WK-C3	2	#10	3/64	30
	1	#16		10
WK-4	4	#16	3/64	10
WK-S4	2	#10		30
	2	#16		10
WK-5	5	#16	3/64	10
WK-S5	4	#16	3/64	10
	1	#10		30
WK-6	6	#16	3/64	10
SHELL SIZE GK				
GK-C3	2	# 6	3/64	60
	1	#14		15
GK-S3	3	#10	5/64	30
GK-4	4	#10	3/64	30
GK-M5	3	#16	5/64	10
	2	#10		30
GK-R7	2	#14	9/64	15
	5	#16	3/64	10
GK-8	8	#14	3/64	15
GK-C8	3	#10	3/64	30
	5	#16		10
GK-S8	4	#10	3/64	30
	4	#16		10
GK-9	9	#16	1/16	10
GK-12	12	#16	3/64	10
SHELL SIZE SK				
SK-S2	2	# 4	5/64	80
SK-L3	3	#10	3/64	30
SK-U4	3	#16	3/64	10
	1	#16 COAX.		10
SK-5	5	#10	5/64	30
SK-6	6	#10	1/16	30
SK-C7	3	#10	5/64	30
	4	#16		10
SK-M7	4	#10	5/64	30
	3	#16		10
SK-10	2	#10	3/64	30
	8	#16		10
SK-M10	2	#10	5/64	30
	8	#16		10
SK-C16	2	#10	3/64	30
	14	#16		10
SK-19	19	#16	3/64	10

Contact Arr. Number	No. Contacts	Wire Size	Contact Spacing	Amps.
SHELL SIZE NK				
NK-D8	8	#14	7/64	15
NK-12	12	#14	5/64	15
NK-L15	15	#14	1/16	15
NK-L21	4	#10	3/64	30
	17	#16		10
NK-C23	3	#10	3/64	30
	20	#16		10
NK-L23	2	#10	3/64	30
	2	#14		15
	19	#16		10
NK-27	27	#16	3/64	10
SHELL SIZE FK				
FK-L17	2	#10	3/8	30
	15	#14	3/64	15
FK-19	19	#14	5/64	15
FK-21	17	#16		10
	2	# 8		40
	2	# 4		80
FK-L20	7	#10	5/64	30
	13	#16		10
FK-24	23	#16	1/32	10
	1	#16 COAX.	5/64	10
FK-C32	32	#16	3/64	10
FK-L32	7	#10	3/64	30
	25	#16		10
FK-37	37	#16	3/64	10
SHELL SIZE IK				
IK-M7	7	# 6	9/64	60
IK-26	26	#14	5/64	15
IK-30	30	#16	3/32	10
SHELL SIZE LK				
LK-B30	1	# 2	5/64	115
	13	#10		30
	16	#16		10
SHELL SIZE AK				
AK-C9	9	"R" Coax., #16	8-5/64 1-5/32	10
AK-30	26	#16	15-1/32	10
	4	"R" Coax., #16	9-5/64 3-13/64 1-1/16 2-3/32	10
AK-37	34	#16	34-5/64	10
	3	"R" Coax., #16	3-3/32	10
AK-G52	2	# 8	42-3/64	40
	8	#10	10-5/64	30
	42	#16		10
AK-82	82	#16	3/64	10

STANDARD CIRCULAR PLUGS
(MIL-C-5015)

▲MS SERIES

MS PLUGS TO MIL-C-5015

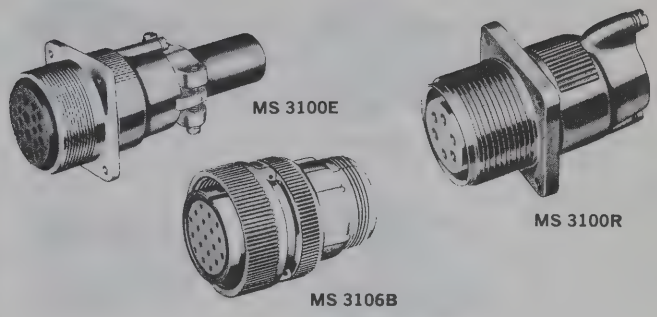
The MS line of CANNON Plugs is produced in accordance with MIL-C-5015. It is the line of connectors originally designated "AN" plugs, noted for low cost and uniformly high quality.

FOUR STANDARD MS LINES ARE OFFERED

MS-A — Solid shell. Plastic or resilient insulators.
MS-B — Split shell (for greater accessibility to solder connections). Plastic insulators.
MS-E — Environmental resisting. Resilient insulators.
MS-R — Lightweight environmental resisting. Resilient insulators.

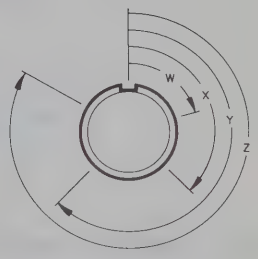
The MS-E and MS-R plugs are designed to operate under extreme environmental conditions such as moisture condensation, high altitude and vibration. The plug is sealed by a resilient grommet at the rear of the insulator which acts as an "O" ring about the wires. Insulators are made of resilient polychloroprene to prevent vibration damage, and provide a complete sealed plug when all cavities are filled. Grommet wire hole sealing plugs are provided in the ratio of one for every six contacts of sizes 16, 12 and 8.

MS-R connectors are identical to the MS-E series CT except for the addition of an "O" ring seal about the 3106 and 3108 plug barrels which supplements the interfacial seal between the plug and receptacle.



ALTERNATE INSERT POSITIONS

Alternate positions for class A & B plugs can be assembled by most ITT Cannon Authorized Distributors. Alternate positions for E & R class plugs can be assembled only by CAPS Distributors.



PIN FRONT AND SOCKET REAR VIEW
NOTE: Arrows indicate rotation of insulator within the shell.

STANDARD DATA

SHELLS

Material —	Selected aluminum alloy
Finish —	Olive drab chromate coating over cadmium plate
Size —	15 sizes from ½" to 3" (coupling thread diameters)

INSULATOR MATERIAL

MS-A, MS-B —	Hard melamine insulator
MS-A Resilient —	Resilient polychloroprene insulator
MS-E, MS-R —	Resilient polychloroprene insulator

CONTACTS

Material —	Brass or copper alloy
Finish —	Silver plate
Terminals —	Solder pots (tinned)
Number —	1 to 102 contacts

COUPLING METHOD — Threaded coupling nut

▲ MS does not apply only to MIL-C-5015 types. Individual connectors of other lines may be designated MS when they comply strictly with MIL specs.

WIRING

The wires soldered to each contact should be the same AWG size (or smaller) as the contact. For example: Size 12 AWG should be used when soldering to a size 12 contact. A size 6 AWG wire should be soldered to a size 4 contact since no size 6 contacts are provided and size 4 is the next larger contact for a #6 wire. For class E & R plugs, satisfactory performance will be obtained if AWG and MS wire sizes and insulation outside diameters are governed by this table.

Contact Size	Wire Size (MIL-W-5086)	Insulation OD Limit Inches
16	16 thru 22	.064 min. to .130 max.
12	12 thru 14	.114 min. to .170 max.
8	8 thru 10	.159 min. to .255 max.
4	4 thru 6	.280 min. to .370 max.
0	0 thru 2	.400 min. to .550 max.

ELECTRICAL SERVICE DATA

Maximum current ratings of contacts and maximum allowable voltage drop under test conditions when assembled as in service are shown below.

Contact Size	Max. Current Rating (amps)	Test Current (amps)	Potential Drop (Millivolts)
16	22	20	21
12	41	35	20
8	73	60	12
4	135	110	10
0	245	200	10

HIGH POTENTIAL TEST VOLTAGE

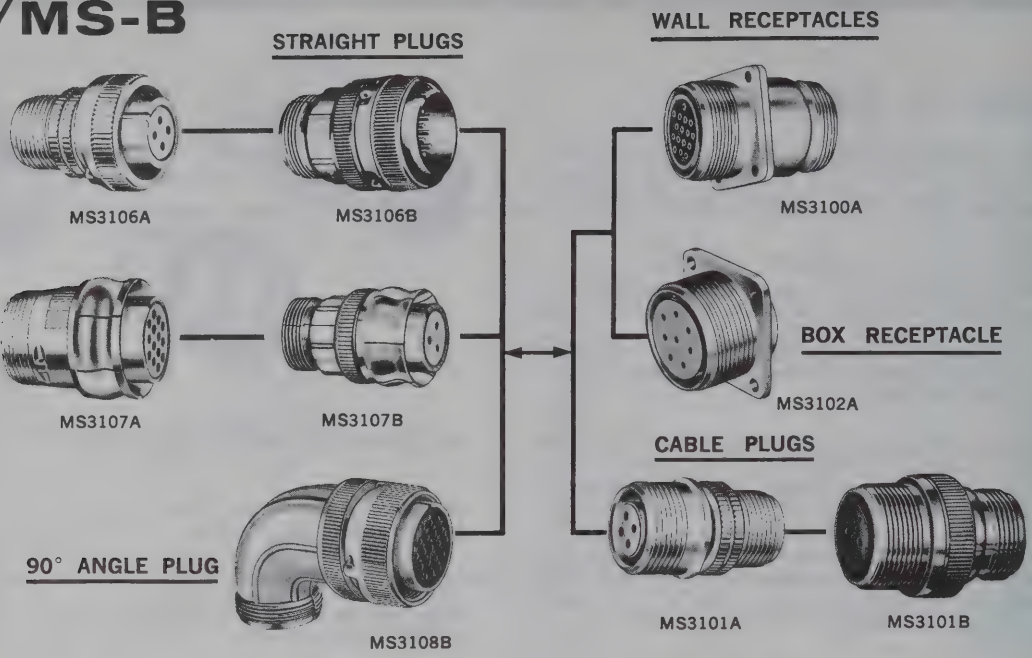
MS plugs will show no evidence of breakdown when the test voltage indicated is applied between the two closest contacts and between the shell and the contacts closest to the shell for a period of one minute.

MS Service Rating	Test Voltage (RMS) 60 cps.	Suggested Operating Voltages DC	Suggested Operating Voltages AC (RMS)	Air Spacing Nom. Inches	Creepage Distance Nom. Inches
Inst.	1000	250	200		1/16
A	2000	700	500	1/16	1/8
D	2800	1250	900	1/8	3/16
E	3500	1750	1250	3/16	1/4
B	4500	2450	1750	1/4	5/16
C	7000	4200	3000	5/16	1

MS SERIES

STANDARD CIRCULAR PLUGS
(MIL-C-5015)

MS-A/MS-B



MS-A/MS-B PART NUMBER EXPLANATION

MS 3102A 18-3 PY
CA 3106B 18-3 PY A105

- Modification Codes
- Polarization
- Contact Type
- Contact Arrangement
- Shell Size
- Class
- Shell Style
- Prefix

PREFIX
- MS Conforms to Military Specification MIL-C-5015.
- CA Cannon standard prefix indicating special application or variation of MS. See Modification Codes.

SHELL STYLE
- 3100 Wall mounting receptacle
- 3101 Cord connecting plug
- 3102 Box mounting receptacle
- 3106 Straight plug
- 3107 Straight plug for quick disconnect
- 3108 90° plug

CLASS
- A Solid or one piece shell
- B Split or two piece shell

SHELL SIZE
There are 19 shell sizes (15 insert diameters) ranging from 8S thru 48 in the MS series. Shell sizes are based on the diameter of the coupling threads in sixteenths of an inch. For example, the size 22 shell has a coupling thread diameter of 1⅜ inch, which equals 22/16, and yields the number 22.

CONTACT ARRANGEMENTS
See listing by shell size.

CONTACT TYPE
P for pin; S for socket.

POLARIZATION
Key and keyway provide positive polarization. Similar insert arrangements available in normal position (no letter) and four alternate positions (W, X, Y, Z) to prevent mismating. See Insert Arrangements.

CAN 5

MODIFICATION CODES
Modification code suffixes are to be used only when a modification of standard construction is required. Consult your ITT Cannon Authorized Distributor for availability, or write factory. Only the most commonly used modification codes are listed below.

FINISH
- A 29 Anodize, Natural
- A 30 Anodize, Black
- A 95 Gold over Silver Plate (applies to contacts only).
- A 101 Yellow chromate coating over cadmium, equivalent to type II plating, and class 3 thickness to QQ-P-416.
- A 105 Clear chromate coating over cadmium, equivalent to type II plating, and class 3 thickness to QQ-P-416.
- A 115 Heavy gold plate over silver plate (applies to contacts only).

INSERT MATERIALS
- C 22 Temperature resistant silicone based rubber. Burnt orange in color.
- C 32 Diallyl Phthalate, asbestos-filler, dark gray, Spec Mil-M-14.

ASSEMBLY AND MECHANICAL VARIATIONS
- F 1 Small flange with retaining ring type shell, sizes 8S thru 16S. For plastic insulators only.
- F 2 Small flange with spun-over skirt type shell, sizes 8S thru 16S.
- F 3 Intermediate flange with retaining ring-type shell, size 12S. For plastic insulator only.
- F 4 Intermediate flange with spun-over skirt type shell, size 12S. For plastic insulator only.
- F 7 Spun-over barrel or shell with standard flange. Molded in plastic pin inserts only. Size 10SL thru 16S.
- F 30 Short solder pot contacts, solder pot extension from rear insulator surface is ⅛". Sizes 8S thru 16S.
- F 32 Taper terminals, contacts to accommodate AMP tapered terminals.
- F 80 Crimp snap in contacts supplied with but not installed in resilient insulator connectors.
- F 110 Crimp snap in contacts supplied with but not installed in plastic insulator connectors. (Sizes 12 and 16 only.)

MS SERIES

STANDARD CIRCULAR PLUGS
(MIL-C-5015)

MS CONTACT ARRANGEMENTS

Contact Arrangement	No. of Contacts	Wire Size	Amps.	Service†
SHELL SIZE 8S				
8S-1 ●	1	#16	22	A
SHELL SIZE 10S/10SL				
10S-2 ●	1	#16	22	A
10SL-3 ● ✱	3	#16	22	A
10SL-4 ✱	2	#16	22	A
SHELL SIZE 12/12S				
12S-3 ● ✱	2	#16	22	A
12S-4 ●	1	#16	22	D
12-5 ●	1	#12	41	D
SHELL SIZE 14/14S				
14S-1	3	#16	22	A
14S-2 ● ✱	4	#16	22	Inst.
14-3 ●	1	# 8	73	A
14S-5 ● ✱	5	#16	22	Inst.
14S-6 ●	6	#16	22	Inst.
14S-7 ● ✱	3	#16	22	A
14S-9	2	#16	22	A
SHELL SIZE 16/16S				
16S-1 ● ✱	7	#16	22	A
16-2 ●	1	#12	41	E
16S-3 ●	1	#16	22	B
16S-4 ●	2	#16	22	D
16S-5	3	#16	22	A
16S-6	3	#16	22	A
16-7 ●	1 2	# 8 #16	73 22	A
16S-8 ●	5	#16	22	A
16-9 ●	2 2	#12 #16	41 22	A
16-10 ●	3	#12	41	A
16-11 ●	2	#12	41	A
16-12	1	# 4	135	A
16-13 ●	2 Thermocouple Contacts	#12	41	A
SHELL SIZE 18				
18-1 ●	10	#16	22	A(B,C, F,G)Inst. (all others
18-3	2	#12	41	D
18-4 ●	4	#16	22	D
18-5 ●	2 1	#12 #16	41 22	D
18-6 ●	1	# 4	135	D
18-7 ●	1	# 8	73	B
18-8 ●	1 7	#12 #16	41 22	A
18-9 ●	2 5	#12 #16	41 22	Inst.
18-10	4	#12	41	A
18-11 ●	5	#12	41	A
18-12	6	#16	22	A
18-13 ●	1 3	# 8 #12	73 41	A
18-14	1 1	# 4 #16	135	A
18-15 ●	4 Thermocouple Contacts	#12		A
18-16 ●	1	#12	41	C
18-19	10	#16	22	A
18-20	5	#16	22	A
18-21	3	#12	41	A
18-22	3	#16	22	D
SHELL SIZE 20				
20-2 ●	1	# 0	245	D
20-4 ●	4	#12	41	D
20-7 ●	8	#16	22	A(C,D, E,F)D (A,B,H,G)
20-8 ●	2 4	# 8 #16	73 22	Inst.
20-9 ●	1 7	#12 #16	41 22	A(A-G) D(H)
20-11	13	#16	22	Inst.
20-14 ●	2 3	# 8 #12	73 41	A
20-15 ●	7	#12	41	A
20-16 ●	2 7	#12 #16	41 22	A
20-17 ●	5 1	#12 #16	41 22	A
20-18 ●	3 6	#12 #16	41 22	A
20-19	3	# 8	73	A
20-21 ●	1 8	#12 #16	41 22	A
20-22 ●	3 3	# 8 #16	73 22	A
20-24 ●	2 2	# 8 #16	73 22	A
20-27 ● ✱	14	#16	22	A
20-29 ●	17	#16	22	A
20-33 ●	11	#16	22	A
SHELL SIZE 22				
22-2 ●	3	# 8	73	D
22-4	2 2	# 8 #12	73 41	A
22-5 ●	2 4	#12 #16	41 22	D
22-7 ●	1	# 0	245	E
22-9 ●	3	#12	41	E
22-10 ●	4	#16	22	E
22-11 ●	2	#16	22	B
22-12 ●	2 3	# 8 #16	73 22	D
22-14 ●	19	#16	22	A
22-15 ●	5 1	#12 #16	41 22	A(A,B,C, E,F) E (D)
22-17 ●	1 8	#12 #16	41 22	D(A) A (all others)
22-18 ●	8	#16	22	A(C,D,E)D (all others)
22-19 ●	14	#16	22	A
22-20	9	#16	22	A
22-21 ●	1 2	# 0 #16	245 22	A
22-22 ●	4	# 8	73	A
22-23 ●	8	#12	41	D(H)A (all others)
22-27 ●	1 8	# 8 #16	73 22	A(A-H) D (J)
22-36 ●	8	#12	41	A(A-G) D(H)
SHELL SIZE 24				
24-2 ●	7	#12	41	D
24-4 ●	1 3	# 0 #16	245 22	D
24-5	16	#16	22	A
24-6 ●	8	#12	41	D(A,G,H)A (all others)
24-7 ●	2 14	#12 #16	41 22	A
24-9	2	# 4	135	A
24-10 ●	7	# 8	73	A
24-11 ●	3 6	# 8 #12	73 41	A
24-12 ●	2 3	# 4 #12	135 41	A
24-14	2 1	#12 # 0	41 245	A
24-16 ●	1 3 3	# 8 #12 #16	73 41 22	A(C,D, E) D (A, B,F,G)
24-20	2 9	#12 #16	41 22	D
24-21 ●	1 9	# 8 #16	73 22	D
24-22 ●	4	# 8	73	D
24-27	7	#16	22	E
24-28 ●	24	#16	22	Inst.
SHELL SIZE 28				
28-1 ●	3 6	# 8 #12	73 41	D(A,J,E)A (all others)
28-2 ●	2 12	#12 #16	41 22	D
28-3 ●	3	# 8	73	E
28-4 ●	2 7	#12 #16	41 22	E(G,P,S)D (all others)
28-5 ●	2 1 2	# 4 #12 #16	135 41 22	D
28-8 ●	2 10	#12 #16	41 22	D(B)E (L,M)A (all others)
28-9 ●	6 6	#12 #16	41 22	D
28-10 ●	2 2 3	# 4 # 8 #12	135 73 41	D(G) A (all others)
28-11 ●	4 18	#12 #16	41 22	A
28-12 ●	26	#16	22	A
28-15 ●	35	#16	22	A
28-16	20	#16	22	A
28-17 ●	15	#16	22	A(A-L)D (M,N,P)B(R)
28-18 ●	12	#16	22	Inst. (C, D,E,F) D(G,H,J, K,L)C(M)
28-19 ●	4 6	#12 #16	41 22	A(C,E,G, J,K,L)D(A, B)B(H,M)A(A,B)
28-20 ●	10 4	#12 #16	41 22	A
28-21 ●	37	#16	22	A
28-22 ●	3 3	# 4 #16	135 22	D
SHELL SIZE 32				
32-1 ●	2 3	# 0 #12	245 41	E(A)D (all others)
32-2 ●	3 2	# 4 #16	135 22	E
32-3 ●	1 2 2 4	# 0 # 4 #12 #16	245 135 41 22	D
32-4	2 12	#12 #16	41 22	A(F,J, K,N)D (all others)
32-6 ●	2 3 2 16	# 4 # 8 #12 #16	135 73 41 22	A
32-7 ●	7 28	#12 #16	41 22	Inst. (A, B,h,j)A (all others)
32-8	6 24	#12 #16	41 22	A
32-9 ●	2 12	# 4 #16	135 22	D
32-13 ●	5 18	#12 #16	41 22	D
32-15 ●	2 6	# 0 #12	245 41	D
32-17 ●	4	# 4	135	D
SHELL SIZE 36				
36-3 ●	3 3	# 0 #12	245 41	D
36-5 ●	4	# 0	245	A
36-6 ●	2 4	# 0 # 4	245 135	A
36-7 ●	7 40	#12 #16	41 22	A
36-8 ●	1 46	#12 #16	41 22	A
36-9 ●	1 2 14 14	# 4 # 8 #12 #16	135 73 41 22	A
36-10	48	#16	22	A
36-15 ●	35	#16	22	D(m) A(all others)
36-2011-34	52	#16	22	A
SHELL SIZE 40				
40-5 ●	3 2 4 6	# 0 # 4 # 8 #12	245 135 73 41	A
SHELL SIZE 44				
44-2013-15	1 3 64	Coax. #12 #16	41 22	A
SHELL SIZE 48				
48-5	1 9 90	# 8 #12 #16	73 41 22	A

● MS-R authorized per MIL-C-5015C
✱ Hermetic version available

MS SERIES

STANDARD CIRCULAR PLUGS (MIL-C-5015)

MS "5015" TYPE HERMETIC

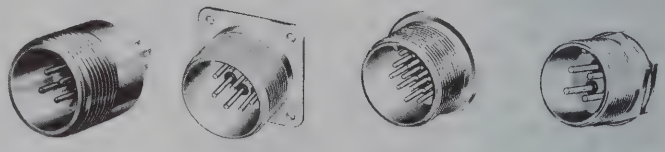
GS02 Series are circular hermetic receptacles which mate with standard MS plugs. The GS02 is available in steel finished in electro-deposited tin over cadmium. The insulator is lead-free compression glass; contacts are steel, finished in electro-deposited tin over cadmium. Consult factory for other materials and finishes and for increased service ratings.

PART NUMBER EXPLANATION

GS02 - 18 - 11 S W - 112

- Contact Terminal
- Flange Type
- Polarization
- Contact Type
- Contact Arrangement
- Size
- Shell Style
- Prefix

PREFIX	GS	Glass sealed
SHELL STYLE	02	Box mounting receptacle
SIZE		Coupling thread diameter figured in sixteenths of an inch
CONTACT ARRANGEMENTS		See Contact Arrangements, page 12.
CONTACT TYPE		Pin only
POLARIZATION		See introduction on page 7.
FLANGE TYPE	00	Without flange
	11	Square flange
	25	Circular flange
	30	Hex flange — with hex locknut and copper/asbestos gasket
CONTACT TERMINAL	1	Eyelet
	2	Solder pot



GS02 TYPE 00 | GS02 TYPE 11 | GS02 TYPE 25 | GS02 TYPE 30

MS ACCESSORIES

MS3057A CABLE CLAMP

Fits MS3100A, MS3102A receptacles; MS3101A & B plugs



MS Order Number	Fits Shell Size	MS Order Number	Fits Shell Size
MS3057-3A	8S & 10S	MS3057-12A	20, 22
MS3057-4A	10SL & 12	MS3057-16A	24, 28
MS3057-6A	14 & 14S	MS3057-20A	32
MS3057-8A	16 & 16S	MS3057-24A	36
MS3057-10A	18	MS3057-28A	40

For bushing, see MS3057

AN3057/CA2255 CABLE CLAMP

Fits MS3106, MS3108, MS3101 plugs; MS3100 receptacle



Order Number	Fits Shell Size	order Number	Fits Shell Size	Order Number	Fits Shell Size
AN3057-3	8S, 10S	CA2255-5	18	AN3057-16	24, 28
AN3057-4	10SL, 12S, 12	AN3057-10	18	AN3057-20	32
CA2255-28	14S, 14	AN3057-12	20, 22	AN3057-24	36
AN3057-6	14S, 14	CA2255-9	24, 28	AN3057-28	40
AN3057-8	16S, 16	CA2255-10	24, 28	AN3057-32	44

MS39056 BUSHING

Fits MS3057A cable clamp



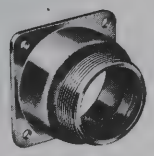
Order Number	For Clamp To Fit Shell Size	Order Number	For Clamp To Fit Shell Size
MS39056 — 1	8S, 10S	MS39056 — 7	24, 28, 32
MS39056 — 2	10SL, 12S, 12	MS39056 — 8	36, 40
MS39056 — 3	14S, 14	MS39056 — 9	36, 40, 44
MS39056 — 4	16S, 16	MS39056 — 10	40, 44, 48
MS39056 — 5	18	MS39056 — 11	44, 48
MS39056 — 6	20, 22, 24, 28	MS39056 — 12	48

CAN 7

STANDARD CIRCULAR PLUGS (MIL-C-5015) — MS SERIES

CA2120 JUNCTION SHELL

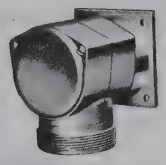
Protects and encloses the wires behind an MS3102 Box Mounting Receptacle and provides for conduit connection. Fits MS3106A & B or MS3108B plugs. Is used for "bonding" between plug endbell and wire shielding.



MS Order Number	Fits Shell Size	MS order Number	Fits Shell Size	MS Order Number	Fits Shell Size
CA2120-1	8S	CA2120-5	16S	CA2120-13	28
CA2120-2	10S	CA2120-9	18	CA2120-14	32
CA2120-21	10SL	CA2120-10	20	CA2120-15	36
CA2120-3	12S	CA2120-11	22	CA2120-16	40
CA2120-4	14S	CA2120-12	24	CA2120-17	44
				CA2120-18	48

CA2245 90° JUNCTION SHELL

For MS3102A Box Mounting Receptacle. Protects wires behind the receptacle and provides for conduit connection.



order Number	Fits Shell Size	Order Number	Fits Shell Size
CA2245-3	12 & 12S	CA2245-8	22
CA2245-5	16 & 16S	CA2245-9	24
CA2245-6	18	CA2245-10	28
CA2245-7	20	CA2245-11	32

CA2182 (MS3105) DUMMY RECEPTACLE

Holds MS3106A & B or MS3108B plugs when not in use.



MS order Number		Fits Shell Size	MS order Number		Fits Shell Size	MS Order Number		Fits Shell Size
CA2182-1	(MS3105-8S)	8S	CA2182-4	(MS3105-14)	14	CA2182-10	(MS3105-28)	28
CA2182-2	(MS3105-10S)	10S & 10SL	CA2182-5	(MS3105-16)	16	CA2182-11	(MS3105-32)	32
CA2181-16	(MS3105-12S)	12S	CA2182-6	(MS3105-18)	18	CA2182-12	(MS3105-36)	36
CA2182-17	(MS3105-14S)	14S	CA2182-7	(MS3105-20)	20	CA2182-13		40
CA2182-18	(MS3105-16S)	16S	CA2182-8	(MS3105-22)	22	CA2182-14		44
CA2182-3	(MS3105-12)	12	CA2182-9	(MS3105-24)	24	CA2182-15		48

MS25042C DUST CAP

Fits MS3106A & B or MS3108B plugs.



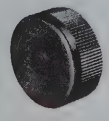
MS order Number	Cannon Order Number		Fits Shell Size
With chain*	With chain	Less chain	
MS25042-8C	CA17530-8	CA19741-8	8S
MS25042-10C	CA17530-10	CA19741-10	10S, 10SL
MS25042-12C	CA17530-12	CA19741-12	12S, 12
MS25042-14C	CA17530-14	CA19741-14	14S, 14
MS25042-16C	CA17530-16	CA19741-16	16S, 16
MS25042-18C	CA17530-18	CA19741-18	18

MS order Number	Cannon Order Number		Fits Shell Size
With chain*	With chain	Less chain	
MS25042-20C	CA17530-20	CA19741-20	20
MS25042-22C	CA17530-22	CA19741-22	22
MS25042-24C	CA17530-24	CA19741-24	24
MS25042-28C	CA17530-28	CA19741-28	28
MS25042-32C	CA17530-32	CA19741-32	32
MS25042-36C	CA17530-36	CA19741-36	36
MS25042-40C	CA17530-40	CA19741-40	40
MS25042-44C	CA17530-44	CA19741-44	44
MS25042-48C	CA17530-48	CA19741-48	48

*For "less chain" type, delete C. Example: MS25042-8.

MS25043 DUST CAP

Fits MS3100 and MS3102 receptacles and MS3101 plug.



MS order Number	Cannon Order Number		Fits Shell Size
With chain*	With chain	Less chain	
MS25043-8C	CA2209-1	CA2322-1	8S
MS25043-10C	CA2209-2	CA2322-2	10S, 10SL
MS25042-12C	CA2209-3	CA2322-3	12S, 12
MS25043-14C	CA2209-4	CA2322-4	14S, 14
MS25043-16C	CA2209-5	CA2322-5	16S, 16
MS25043-18C	CA2209-6	CA2322-6	18

MS order Number	Cannon Order Number		Fits Shell Size
With chain*	With chain	Less chain	
MS25043-20C	CA2209-7	CA2322-7	20
MS25043-22C	CA2209-8	CA2322-8	22
MS25043-24C	CA2209-9	CA2322-9	24
MS25043-28C	CA2209-10	CA2322-10	28
MS25043-32C	CA2209-11	CA2322-11	32
MS25043-36C	CA2209-12	CA2322-12	36
MS25043-40C	CA2209-13	CA2322-13	40
MS25043-44C	CA2209-14	CA2322-14	44
MS25043-48C	CA2209-15	CA2322-15	48

*For "less chain" type, delete C. Example: MS25043-8

AN3111 BONDING RING

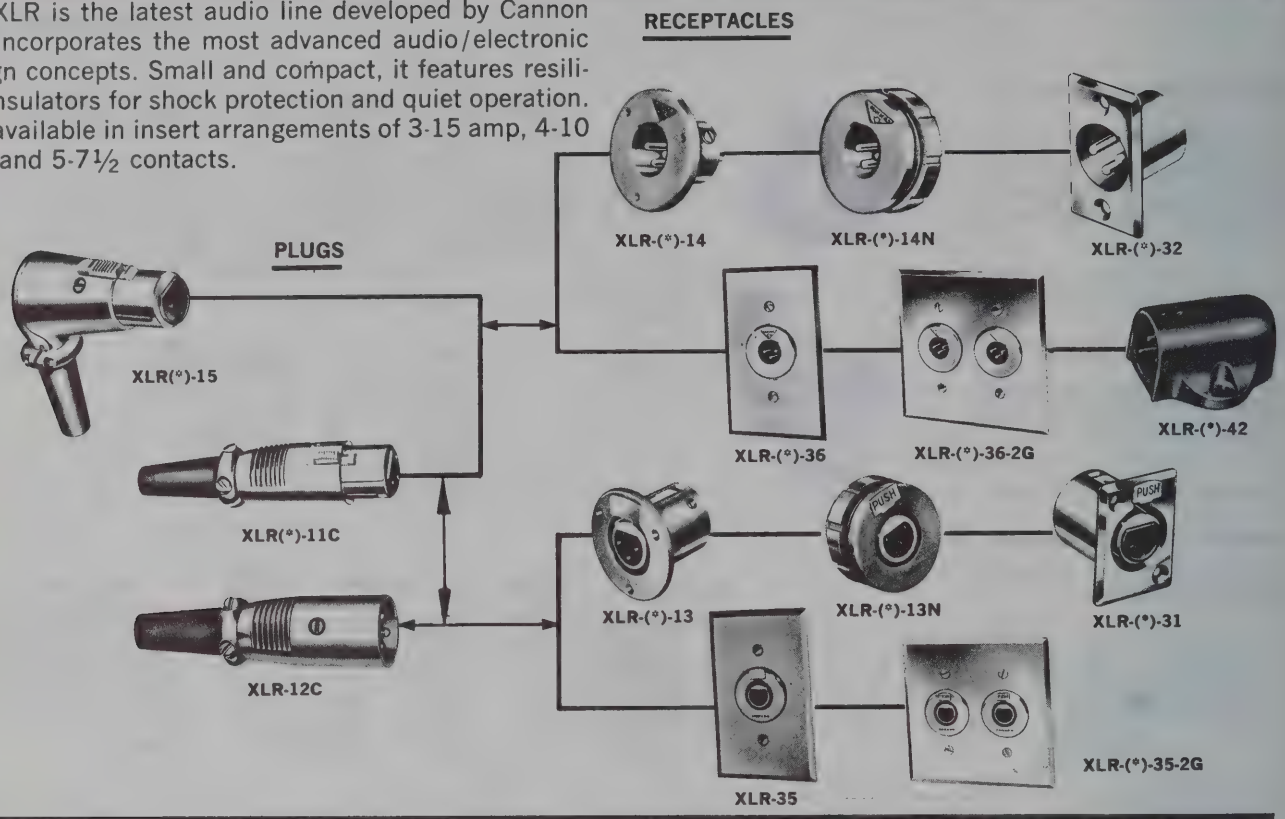
Is used for "bonding" between plug endbell and wire shielding.



CANNON Order Number	MS Order Number	Fits Shell Size	CANNON Order Number	MS Order Number	Fits Shell Size
CA2250-1	AN3111-1	8S, 10S	CA2250-7	AN3111-7	24, 28
CA2250-2	AN3111-2	10SL, 12, 12S	CA2250-8	AN3111-8	32
CA2250-3	AN3111-3	14, 14S	CA2250-9	AN3111-9	36
CA2250-4	AN3111-4	16, 16S	CA2250-10	AN3111-10	40
CA2250-5	AN3111-5	18	CA2250-11	AN3111-11	44
CA2250-6	AN3111-6	20, 22	CA2250-12	AN3111-12	48

DELUXE AUDIO/ELECTRONIC PLUG — XLR SERIES

The XLR is the latest audio line developed by Cannon and incorporates the most advanced audio/electronic design concepts. Small and compact, it features resilient insulators for shock protection and quiet operation. It is available in insert arrangements of 3-15 amp, 4-10 amp and 5-7½ contacts.



PART NUMBER EXPLANATION

XLR — 4 — 12C (A95)

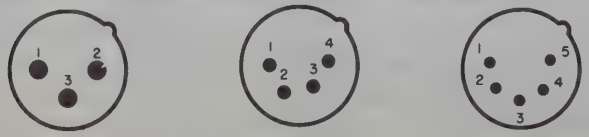
- XLR — Prefix
- 4 — Contact Arrangement
- 12C — Shell Style
- (A95) — Modification

PREFIX	XLR Series
CONTACT ARRANGEMENT	By number of contacts
SHELL STYLE	Even numbers indicate pin inserts. Odd numbers indicate socket inserts. For specific shell style number, refer to photo.
MODIFICATION	A95 Contacts finished in gold over silver plate.
Steel Shell:	XLR-(*)-11C and XLR-(*)-12C are available with steel shells. To order, add letter S as follows: XLR-(*)-11SC and XLR-(*)-12SC
Microphone Adapters:	XLR-(*)-50, XLR-(*)-50N and XLR-(*)-50T, are designed for mounting directly on microphones or other equipment. XLR-(*)-50N has coupling nut to mate with threaded portion of microphone unit, XLR-(*)-50T is threaded to mate directly with unit. Material is brass with satin nickel finish.

*Add number of contacts desired (3, 4 or 5) for complete nomenclature.

CONTACT ARRANGEMENTS

face view of pin inserts



3-15 amp contacts #14 B&S stranded wire

4-10 amp contacts #16 B&S stranded wire

5-7½ amp contacts #18 B&S stranded wire

STANDARD DATA

SHELLS

Material	Zinc
Finish	Satin nickel
Size	One size only

INSULATOR

Material	Pin insert: rigid molded plastic and synthetic rubber blend Socket insert: resilient polychloroprene

CONTACTS

Material	Brass
Finish	Silver plate
Number	3-15 amp, 4-10 amp, or 5-7½ amp contacts
Terminals	Solder pot

COUPLING METHOD — Latch lock

RECEPTACLE ADAPTERS



XLR-(*)-50N — XLR-(*)-50T — XLR-(*)-50

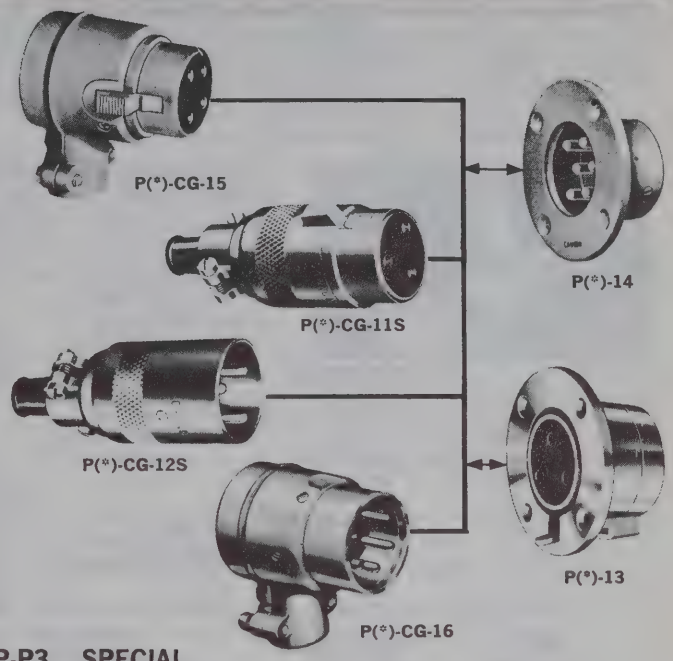
DUST CAPS

ORDER NUMBER	USED ON
XLR-13RC	XLR-13 XLR-31
XLR-14PC	XLR-14 XLR-32 XLR-42
XLR-11SRC	XLR-11C (11SC) XLR-13 XLR-15 XLR-31
XLR-12SPC	XLR-12C (12SC) XLR-14 XLR-32 XLR-42
XLR-13N-RC	XLR-13N XLR-35 XLR-35-2G
XLR-14N-PC	XLR-14N XLR-36 XLR-36-2G

P SERIES

AUDIO PLUG
from 2 to 8 contacts

CANNON Series P is designed for audio and other low level circuit applications. Type P plugs are available in six insert arrangements and offer the widest choice for satisfactory high voltage requirements.



STANDARD DATA

SHELLS
- Material
  - 11 & 12 styles — Steel
  - All others — Zinc
- Finish — Satin chrome

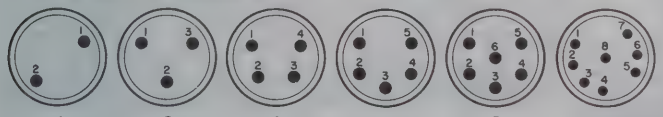
INSULATOR
- Material — Phenolic

CONTACTS
- Material — Brass
- Finish — Silver plate
- Number — 2, 3, 4, 5 or 6-30 amp or 8-15 amp
- Terminals — Solder pot

COUPLING METHOD — Latch lock

P CONTACT ARRANGEMENTS

FACE VIEW OF PIN INSERT



2 contacts 30 amp	3 contacts 30 amp	4 contacts 30 amp	5 contacts 30 amp	6 contacts 30 amp	8 contacts 15 amp

P-P3 SPECIAL

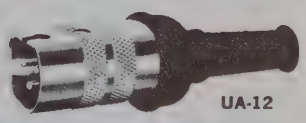
The P-P3 Special layout converts the standard P3-CG-15 90° angle socket plug and the P3-14 wall mounting pin receptacle to a design which provides an increased flashover of approximately 900 volts (total 2500 volts). This increased flashover is accomplished by an insert design which has thicker and stronger insulation, in addition to a special guide pin to provide positive polarization.

UA SERIES

AUDIO PLUG
designed to RETMA standards

UA Series plugs are standard audio plugs designed in cooperation with the RETMA Committee.





SHELL STYLE

UA-11	straight plug, socket
UA-12	straight plug, pin
UA-13	wall mounting receptacle, socket (round flange)
UA-31	wall mounting receptacle, socket (rectangular flange)
UA-14	wall mounting receptacle, pin (round flange)
UA-32	wall mounting receptacle, pin (rectangular flange)
UA-42	microphone or panel mtg. receptacle, pin

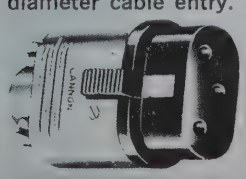
STANDARD DATA

Same as for the P Series, except that contact finish is gold plate. One contact arrangement is offered with 3-15 amp contacts.

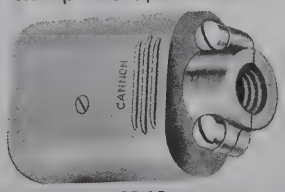
O SERIES

AUDIO PLUG
oval shell for microphone use

CANNON O Series plugs are designed for microphone use and feature a latchlock coupling means. Polarization is by contact arrangement. This contact arrangement accommodates three 30 amp. contacts. The clamp has 9/32" max. diameter cable entry.



03-11



03-12

SHELL	Material	Chrome
	Finish	Satin nickel
INSULATOR	Material	Phenolic
CONTACTS	Material	Brass
	Finish	Silver Plate

SHELL STYLES

03-11	straight plug, socket
03-12	straight plug, pin
03-13	wall mtg. receptacle, socket (round flange)
03-14	wall mtg. receptacle, pin (round flange)
03-41	90° or panel mtg. receptacle, socket
03-42	90°or panel mtg. receptacle, pin

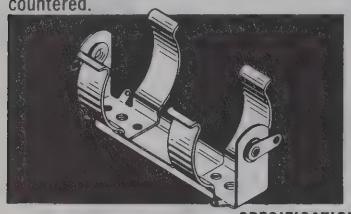
CAN 10

KEYSTONE ALL STEEL BATTERY HOLDERS

KEYSTONE ELECTRONICS CORP

STANDARDIZED ALL STEEL BATTERY HOLDERS

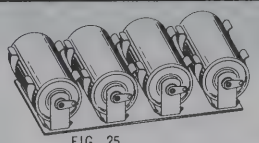
An important advance in design that has gained wide acceptance for military and commercial usage. Battery when installed is held under spring tension at a constant pressure assuring low resistance contact will hold up to 4 cells in series in sturdy insulating tube. Retainer clips available to lock battery securely. This prevents shifting or loosening of battery in holder. Recommended for use where shock or severe vibration is encountered.

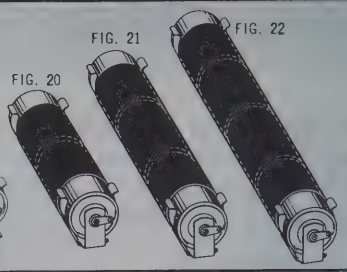


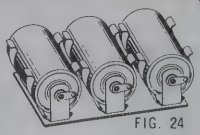
- CORROSION RESISTANT NICKEL PLATED
- STAINLESS STEEL CONTACTS
- MOISTURE PROOF INSULATING WASHERS
- IDEAL FOR NI-CAD AND ALKALINE CELLS

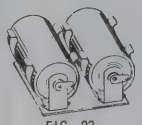
SPECIFICATIONS

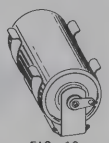
Made of SAE 1065 Carbon Steel to MIL Spec. 17919, heat treated to spring temper and nickel plated .0002 thick. Contact assembly consists of a stainless steel eyelet, moisture proof vulcoid washers and a coated copper solder lug. Ribbed carbon steel base for added support is nickel plated and has 2 mounting holes for ease in mounting.


FIG. 25


FIG. 20 FIG. 21 FIG. 22

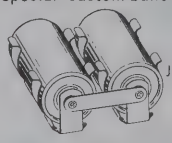

FIG. 24


FIG. 23


FIG. 19

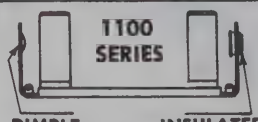
MODIFICATIONS AVAILABLE

Variety of stock parts permits fast delivery on special requirements. Use our engineering service for your special custom-built holders.


JUMPERS


SPECIAL LUGS


POLARIZED CONTACTS


1100 SERIES

DIMPLE CONTACT INSULATED CONTACT


2100 SERIES

INSULATED CONTACTS

One Insulated Contact	Net Each 5-19	Net Each 20-99	All Contacts Insulated	Net Each 5-19	Net Each 20-99	Fig. No.	Holds No. of Cells	All Batteries in the Group are of Similar Size and Fit Holders Listed: Burgess	Eveready	RCA
PENCELL HOLDERS										
Cat. No.			Cat. No.							
1139	.25	.23	2139	.30	.26	19	1	Z, HG9	E9, E12	VS034A
	—	—	2140*	.40	.38	23	2	CD6, 9R	E91, E133	VS144
	—	—	2171*	.65	.64	24	3	HG12R	E502, N46	VS149
	—	—	2182*	.75	.70	25	4	H133	515, 915	VS313A
1189	.40	.38	2189	.40	.38	20	2	HG502R	1015	VS334
1191	.45	.41	2191	.45	.40	21	3	920		
1194	.50	.48	2194	.55	.51	22	4	930		
"C" CELL HOLDERS										
1173	.35	.30	2173	.35	.33	19	1	1		VS035A
	—	—	2174*	.50	.49	23	2	P6	E233	VS300
	—	—	2187*	.75	.70	24	3	120	635	VS335
	—	—	2188*	.95	.85	25	4	130	935	VS400
1185	.50	.45	2185	.50	.49	20	2	H233		
1195	.50	.48	2195	.55	.51	21	3	302599		
1198	.55	.51	2198	.60	.57	22	4			
"D" CELL HOLDERS										
1175	.35	.30	2175	.35	.33	19	1	2	E42	VS036
	—	—	2176*	.50	.49	23	2	2R	N56	VS036A
	—	—	2190*	.75	.70	24	3	CD7	E95	VS336
	—	—	2192*	.95	.85	25	4	210	D99	
1186	.48	.44	2186	.50	.49	20	2	230	A100	
1199	.55	.51	2199	.55	.51	21	3		950	
1162	.60	.54	2162	.60	.57	22	4		1050	
1179	.35	.30	2179	.35	.34	19	1		E94	

*Clips mounted on phenolic 1/16" thick Mil Spec 3115B

SPACE SAVER BATTERY CLIPS



DIMPLE AND INSULATED CONTACTS

Std. Pkg. 10 Pieces

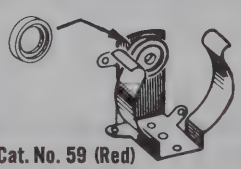


These holders are available insulated contact or with a dimple contact. Provides positive contact in either case. They are compact and economical. The "AA", "C", "D", Mercury and Ni-Cad batteries are accommodated. Made of SAE 1065 steel heat treated to spring temper and nickel plated. Insulated type has steel nickel plated eyelet and resin impregnated vulcanized fibre insulation. Snap-on washer for polarization will be supplied upon request.

Cat. No.	Battery Types	Min. to max. Diameter	Net Each 5-19	Net Each 20-99
92*	AA	.531- .660	.05	.04
99*	AA	.531- .660	.05	.04
100†	AA	.531- .660	.08	.07
86*	C	.875-1.125	.08	.08
87†	C	.875-1.125	.12	.11
88†	D	1.187-1.375	.13	.12
89*	D	1.187-1.375	.10	.09

*Non-Insulated †Insulated

INSULATED POLARIZING WASHERS

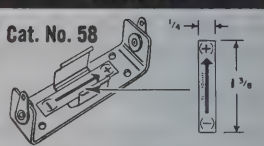


Cat. No. 59 (Red)
Cat. No. 60 (Black)

Molded Insulated Polarizing Washers. The washers hold securely when snapped over the eyelets used on our standardized battery holders.

POLARITY LABELS

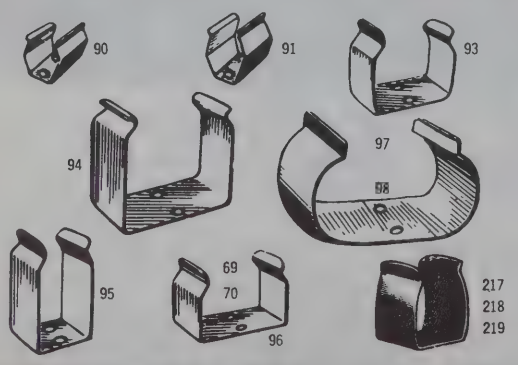
Cat. No. 58



- PRESSURE SENSITIVE
- WILL ADHERE TO ANY SURFACE
- NO GLUE OR DAMPING REQUIRED
- ECONOMICAL

Wherever circuit polarity is to to be shown labels colored Blue and Red.

BATTERY AND COMPONENT HOLDERS



Cat. No.	Battery Types	Min. to Max. Diameters	NET EACH 5-19	NET EACH 20-99	Cat. No.	Battery Types	Min. to Max. Diameters	NET EACH 5-19	NET EACH 20-99
69	2U6 or (2) AA	5/8 x 1 1/8	.07	.06	96	(1) K 20	5/8 x 1 13/64	.08	.07
70	(2) RM 12	5/8 x 1 5/16	.09	.08	97	(2) "C"	(2) 1 1/64 Dia.	.09	.08
90	#7	3/8 to 2 9/64	.06	.04	98	(2) D	(2) 1 21/64 Dia.	.11	.10
91	(1) AA	17/32 to 21/32	.07	.05	217	1 3/8 Dia.	1 3/8 Dia.	.18	.14
93	(1) C	7/8 to 1 1/8	.07	.06	218	1 1/2 Dia.	1 1/2 Dia.	.20	.15
94	(1) D	1 3/16 to 1 3/8	.08	.07	219	2" Dia.	2" Dia.	.22	.16
95	(1) U-15	5/8 x 1 1/32	.07	.06					

Clips are made of Aluminum except Nos. 69, 217, 218, 219 are made of Steel.

KEYSTONE ELECTRONICS CORP

© U.C.P., Inc.

KEYSTONE BATTERY HOLDERS

KEYSTONE ELECTRONICS CORP.

Cat. No.	NET EACH 5-19	NET EACH 20-99	Holds No. of Cells	Fig. No.	ALL BATTERIES LISTED WITHIN BOXES ARE IN THE SAME SIZE GROUP BATTERY CROSS REFERENCE Burgess	Eveready	RCA
MINIATURE CELL HOLDERS							
137	.23	.21	1	1	7	912	VS074
138	.38	.34	2	2			
169	.49	.44	3	3			
170	.64	.57	4	4			
PENCELL HOLDERS							
139	.23	.21	1	1	CD6	E9, E12	VS034A
140	.38	.34	2	2	9R, Z	E91	VS144
171	.49	.44	3	3	HG9	E133	VS149
182	.64	.57	4	4	HG12R	333	VS313A
189	.45	.36	2	5	H133	E502	VS334
191	.49	.44	3	6	HG502R	515	
192	.64	.54	4	7	920	915, 1015	
193	.93	.81	6	8	930	N46	
"C" CELL HOLDERS							
173	.30	.26	1	1	1	226	VS035A
174	.38	.34	2	2	P6	E233	VS300
187	.45	.36	3	3	120	635	VS335
185	.45	.36	2	5	130	935	VS400
195	.49	.44	3	6	H233		
196	.64	.54	4	7	302599		
197	.93	.81	6	8			
"D" CELL HOLDERS							
175	.30	.26	1	1	2	E42	VS036A
176	.38	.34	2	2	2R	N56	VS036
190	.49	.44	3	3	CD7	E95	VS336
186	.46	.37	2	5	210	D99	
199	.50	.45	3	6	230	A100	
200	.65	.55	4	7		950	
201	.95	.85	6	8		1050	
205	.95	.85	6	12			
1½ VOLT CELL HOLDERS							
154	.21	.20	1	1	N	E340	VS073
155	.35	.32	2	2		E400	
156	.49	.44	3	3		E401	
160	.49	.44	1	1	21R	964	VS236
179	.30	.26	1	1		E94	
4½ VOLT CELL HOLDERS							
139	.23	.21	1	1		333	VS1149
9 VOLT CELL HOLDERS							
139A	.26	.24	1	1		206	VS327
203P	.44	.30	1	14	2U6	216	VS323
173P	.30	.29	1	1	P6M	226	VS300A
15 VOLT CELL HOLDERS							
163	.30	.26	1	11	K10	417	
161	.30	.26	1	11	U10	411	VS083
166	.30	.26	1	9			
167	.38	.34	2	10			
225	.21	.20	1	1	Y10	504	
226	.35	.32	2	2			
22½ VOLT CELL HOLDERS							
164	.30	.26	1	11	K15		
168	.30	.26	1	11		420	
177	.30	.26	1	9	U15	412	VS084
178	.38	.34	2	10			
139A	.26	.24	1	1	Y15	505	
140A	.41	.37	2	2			
171A	.52	.47	3	3			
182A	.67	.60	4	4			
30 VOLT CELL HOLDERS							
157	.30	.26	1	14	Y20	506	
165	.30	.26	1	11	K20	430	
183	.30	.26	1	9	U20	413	VS085
184	.38	.34	2	10			
134	.38	.34	1	1	Y20S	507	

INSULATED POLARIZING WASHERS

Insulated Polarizing Washers eliminate the danger of damage and short circuit to expensive transistor equipment. The washers hold securely when snapped over the eyelets used on our standardized battery holders.

Material: Precision molded of plastic.



Cat. No.	NET COST EACH 5-19	20-99
59	.04	.03

A standard line of battery holders available for immediate shipment from stock. Low cost, lightweight and sturdily constructed of quality materials. Good electrical contact, low leakage current and snap-fit clips are the outstanding features.

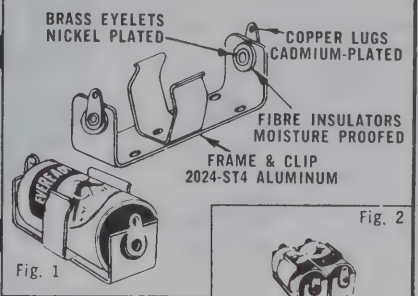
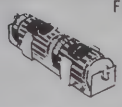


Fig. 1

Fig. 2


Fig. 3


Fig. 4


Fig. 5

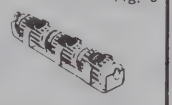

Fig. 6


Fig. 7


Fig. 8


Fig. 9


Fig. 10


Fig. 11

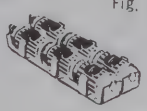

Fig. 12


Fig. 14

RETAINER CLIPS



These retainers prevent the battery from shifting or loosening in the holder. Made of high carbon steel, heat treated to spring temper and nickel plated.

Cat. No. 61—Retainer for "A" or Mercury cells with diameters of 1/32" to 5/16" when used with Keystone #91, 92, 99 or 100 clips also clip #95 for rectangular battery.

Cat. No. 62—Retainer for C cells or other batteries with maximum diameter of 1 1/32" when used with Keystone #93, 86 or 87 clips.

Cat. No. 63—Retainer for D cells or other batteries with maximum diameter of 1 11/32" when used with Keystone #94, 88 or 89 clips.

Cat. No. 66—Retainer for mercury cells with .650 dia. when used with our #91 clips.

Any above, Net Each (5-19) .05; (20-99) .04

MERCURY BATTERY HOLDERS


FIG. 13


FIG. 15


FIG. 16


FIG 17


FIG 18



FIG. 19

Mallory Mercury Battery Listing	Aluminum and Phenolic Base Holders Cat. No.	Fig. No.	All Steel Holders One Insulated Contact Cat. No.	Fig. No.	All Steel Holders All Contacts Insulated Cat. No.	Fig. No.
RM1R	101*	13	1101	15	2101	16
RM3R	103*	13	1103	15	2103	16
RM4R	104*	13	1104	15	2104	16
ZM9	139	1	1139	19	2139	19
RM12R	139	1	1139	19	2139	19
RM42	175	1	1175	19	2175	19
TR113			1113	15	2113	16
TR114			1114	15	2114	16
TR115	132	1	1132	15	2132	16
TR132	132	1	1132	15	2132	16
TR133	139	1	1139	19	2139	19
TR134	134	1	1134	19	2134	19
TR135	135	5	1135	19	2135	19
TR136	189	5	1189	19	2189	19
TR137			1125	19	2125	19
TR145			1145	15	2145	16
TR152	124**	1				
TR153	106**	1				
TR162			1113	15	2113	16
TR163	132	1	1132	15	2132	16
TR164	109	1	1109	19	2109	19
TR165	110	1	1110	19	2110	19
TR169	189	5	1189	19	2189	19
TR175	124**	1				
TR177			1142	19	2142	19
TR233	173	1	1173	19	2173	19
TR234			1144	19	2144	19
RM400	111*	18				
RM401	124**	1				
RM411	166**	9				
RM412	177**	9				
RM413	183**	9				
RM450	112*	17				
RM502	139	1	1139	19	2139	19
RM601			1116	15	2116	16
RM625	117*	17				
RM630	126*	18				
RM640	118*	13				
RM675	127*	18				
302351	119	1	1119	19	2119	19
302478	120	5	1120	19	2120	19
302642	121	1	1121	19	2121	19
302435	122**	1				
302437	139	1	1139	19	2139	19
302599	173	1	1173	19	2173	19

*Bakelite Base Holders
**Available Only in Aluminum

NET EACH PRICE LIST
MERCURY BATTERY HOLDERS

No.	5-19	20-99	No.	5-19	20-99	No.	5-19	20-99
101	.30	.26	175	.30	.26	1175	.35	.30
103	.30	.26	177	.30	.26	1189	.40	.38
104	.30	.26	183	.30	.26	2101	.35	.34
106	.30	.26	189	.45	.36	2103	.35	.34
109	.30	.26	1101	.35	.30	2104	.35	.34
110	.38	.34	1103	.35	.30	2109	.35	.34
111	.30	.26	1104	.35	.30	2110	.35	.34
112	.30	.26	1109	.35	.30	2113	.35	.34
117	.30	.26	1110	.35	.30	2114	.35	.34
118	.30	.26	1113	.35	.30	2116	.35	.34
119	.38	.34	1114	.35	.30	2119	.35	.34
120	.38	.34	1116	.35	.30	2120	.45	.41
121	.38	.34	1119	.35	.30	2121	.45	.41
122	.38	.34	1120	.40	.38	2125	.35	.34
124	.23	.21	1121	.40	.38	2132	.35	.34
126	.30	.26	1125	.35	.30	2134	.35	.34
127	.30	.26	1132	.35	.30	2135	.40	.37
132	.30	.26	1134	.35	.30	2139	.30	.26
134	.38	.34	1135	.35	.30	2142	.30	.26
135	.38	.34	1139	.25	.23	2144	.30	.26
139	.23	.21	1142	.25	.23	2145	.35	.34
166	.30	.26	1144	.25	.23	2173	.35	.33
173	.30	.26	1145	.35	.30	2175	.35	.33
			1173	.35	.30	2189	.40	.38

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STANDARDIZED PLUG-IN HOUSINGS

KEYSTONE ELECTRONICS CORP.

BANANA PLUG IN MODULES

3/4" Centers

- Suitable for test adaptors, modules, filters, etc.
- Low resistance Beryllium Copper spring plugs
- Shielded or molded hi-impact Butyrate cover
- Mates with all standard patch board plugs

MATERIAL SPECIFICATIONS—
(For All Items On This Page)

BANANA PLUG SPRINGS: One piece Beryllium Copper per QQ-C-533 and heat treated to 15N, 73-79.

PLUG BODY: Brass QQ-626 Comp. 22½ H; silver plated, MIL-P-14072 per QQ S-365.

BAKELITE: Black per MIL-P-3115C, TYPE PBE.

PLASTIC HOUSING: Molded of high impact clear Butyrate plastic will withstand temp. 210°F. Ample room for wiring or terminal board.

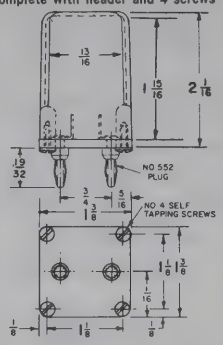
HEADER: Precision machined black bakelite which mounts flush to housing with self-tap screws. Solder lugs firmly staked to banana plugs.

ALUMINUM HOUSING: For circuits requiring shielding. Banana plugs attached to ¼" thick bakelite and staked to solder lugs. Hole for cable entry can be supplied at small additional charge.

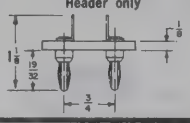
MODIFICATIONS: We welcome the opportunity to quote on variations of standard items.

PLASTIC HOUSING

Cat. No. 658
Complete with header and 4 screws

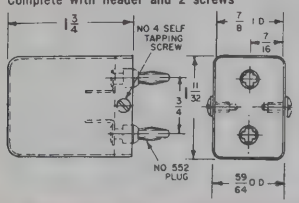


Cat. No. 656
Header only

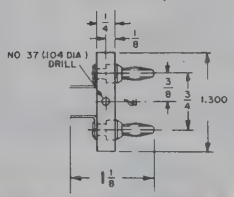


ALUMINUM SHELL

Cat. No. 659
Complete with header and 2 screws



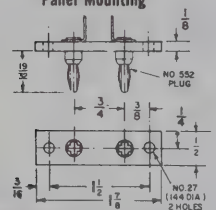
Cat. No. 657
Header only



BANANA PLUG AND JACK STRIP

3/4" Centers — Mate with all Stack-Up Plugs

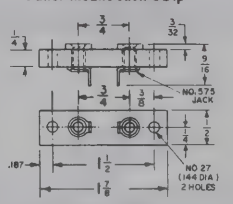
BANANA PLUG STRIP
Panel Mounting



Cat. No. 621

A much needed accessory for patch-cord boards and stack-up plugs. Low resistance banana plugs are spaced on ¾" centers, staked into ⅛" thick black bakelite and solder plugs.

JACK STRIP
Panel Mount Jack Strip



Cat. No. 653

These panel mounting strips mate with any ¾" spaced stack-up plug or individual patchcords. Silver plated jacks are staked into ¼" thick black bakelite with solder lugs. Multiples can be supplied in most instances without tooling or setup charges.

TERMINALS AND EYELETS

TERMINALS: Turret terminals can be staked into .062 dia holes.



Cat. No.	O.D.	Height Above The Board
1508-2	.093	3/32
1526-2	.095	5/32
1562-2	.125	5/32
1592-2	.125	5/32
1593-2	.093	5/32

EYELETS: High quality precision formed and hot dip solder finish for good solderability.



Specify Cat. No. 23
For .062 dia. hole
BOARD THICKNESS 1/16"

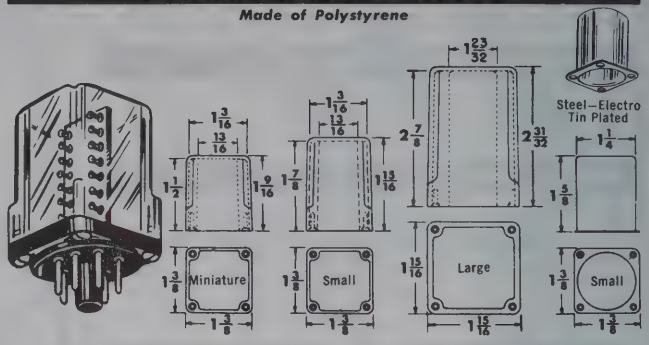
SELF-TAPPING SCREWS



CAT. NO. 688 — For miniature and small covers #4 x 5/16"
CAT. NO. 689 — For large covers #4 x 3/8"

PLASTIC MOLDED HOUSINGS

Made of Polystyrene



LOW COST DUST COVERS — AVAILABLE FROM STOCK

- Variety of molded materials
- Good chemical resistance
- A choice of 4 types
- Low water absorption
- Rigid construction

PLUG IN HOUSINGS

A wide range of colors is available in Polystyrene and Butyrate on special order

TERMINAL BOARDS NOT INCLUDED

Housing with Octal Header & 4 Screws Cat. No.	Housing only LESS Header & Screws Cat. No.	TYPE	MATERIAL	COLOR
662	672	Miniature	Polystyrene	Clear
663	673	Small	Butyrate	Clear
664	674	Small	Nylon	Natural (White)
665	676	Small	Polystyrene	Clear
668	679	Large	Polystyrene	Clear
669	680	Small	Steel—Electro Tin Plated	—

HEADERS

HEADERS: Headers are available in two sizes and a variety of pin configurations that fit standard sockets. Molded of general purpose phenolic with brass nickel plated pins sturdily staked. Guide hole tapped 8-32 for terminal board mounting stud.

Fig. 4

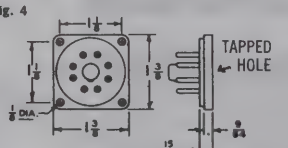
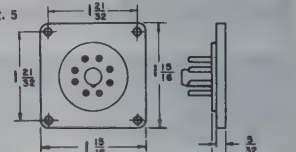


Fig. 5





1⅜" square for miniature and small covers—Fig. 4 Cat. No.	Pin Configuration	1 15/16" Square for large covers—Fig. 5 Cat. No.
681	Octal	685
682	Nine Pin	Not Avail.
683	Eleven Pin	686
684	Twenty Pin	687

Mica Filled Headers — Available on special order

TERMINAL BOARDS

(For Use with Above Housings)

These boards are stocked in XXXP paperbase and glass epoxy material. Spacing of holes is .100 and .200 alternates. An 8-32 threaded stud is firmly eyeletted to the board and is easily assembled into the tapped hole of the headers.



XXXP PBE MIL-P-31 13C Bakelite Cat. No.	Glass Epoxy G-10, GEE MIL-P-18177B Cat. No.	Size of Board with Stud	For Covers Listed Above
692	696	1 x 1 5/16	Miniature
693	697	1⅛ x 1¾	Small
694	698	1½ x 2¾	Large
695	699	1⅛ x 1 11/16	Metal Case

PUSH-IN TERMINALS

Recommended for use with above Terminal Boards

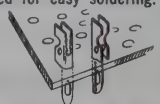


FLEA TERM. AND IMP TERM. designed for subminiature work. Fit holes .062 dia. perfectly. Made of Beryllium Copper and plated for easy soldering.



FLEA TERM.
Cat. No. 1500
(silver plate)





IMP TERM.
Cat. No. 1499-FT
(fused tin plate)
Cat. No. 1499-SP
(silver plate)

KEYSTONE ELECTRONICS CORP.

© U.C.P., Inc.

mueller clips

a complete line of

ALLIGATOR TEST & BATTERY CLIPS

Mueller Electric Co.

"60 SERIES" ALLIGATOR CLIPS

No. 60—CONVENTIONAL TYPE



New slim design with full-meshing teeth. Convenient, round thumb grip, barrel connection for banana plug. Equipped with small soldering lip. Strong spring with a hard bite. Cadmium plated. 2" long.

EACH NET.....$0.07 LOTS OF 10.....$0.046

No. 60-S—SCREW CONNECTION



Eliminates necessity for soldering. Otherwise same as No. 60.

EACH NET.....$0.08 LOTS OF 10....$0.052

No. 60-CS—COPPER ALLIGATOR CLIP

Solid copper version of No. 60-S. Screw connection. 2" long. 10 per box.

EACH NET.....$0.12 LOTS OF 10.....$0.08

No. 60PR-2—SPECIAL BARREL FOR TEST PROD OR PHONE TIP



Barrel crimped to provide friction fit on standard test prod or phone tip. Holds prod on test, frees hand for other work.

EACH NET.....$0.10 LOTS OF 10.....$0.072

No. 62 FLEXIBLE VINYL INSULATOR



Red and black insulators for Alligator Clips 60, 60-S, 60-CS, 60PR-2.

EACH NET.....$0.05 LOTS OF 10.....$0.035

No. 60-HS—STEEL ALLIGATOR CLIP WITH INSULATED HANDLE



Same as No. 60-S except equipped with red and black insulating sleeves on end. Very convenient for distinguishing leads. Has screw connection also. Cadmium plated. 2 1/32" long. Shipped half red, half black.

EACH NET.....$0.11 LOTS OF 10.....$0.075

No. 60-CHS—COPPER ALLIGATOR CLIP, INSULATED HANDLE

Solid copper version of No. 60-HS. Screw connection. Shipped with half red, half black insulating sleeves. 10 per box.

EACH NET.....$0.15 LOTS OF 10.....$0.10

"70 SERIES" ALLIGATOR CLIPS

U.S. Patent No. 2,762,028

A trim, modern Alligator Clip.
Features simplified design, fast connection of wire with cord strain relief ears, patented hinge construction and lower cost.
Mueller's traditionally snappy spring, full jaw spread, fine meshing teeth, round thumb grip and trim shape give most wanted features for test work in close quarters.

No. 70—FOR SOLDERED CONNECTION



Steel, cadmium plated. 1 1/8" long.

EACH NET.....$0.07 LOTS OF 10.....$0.042

No. 70-S—SCREW CONNECTION



Otherwise same as No. 70.

EACH NET.....$0.08 LOTS OF 10.....$0.048

No. 70-CS—COPPER SCREW CONNECTION

Solid copper version of No. 70-S.

EACH NET.....$0.11 LOTS OF 10.....$0.075

No. 72— SKIN-TIGHT INSULATOR FOR 70 SERIES ALLIGATOR CLIPS!



For the first time complete, skin-tight, one-piece insulation for a standard size Alligator Clip! Covers entire clip right down to nose. Special tip slot permits full jaw opening without exposing teeth.

EACH NET.....$0.05 LOTS OF 10.....$0.035



WEE-PEE-WEE No. 88

Entirely Non-ferrous.

An extremely small clip for fine testing in radio and electrical work. Light-Weight; thin-nosed; spring-temper phosphor bronze. Ideal for close-wound coils. 1 1/8" long; jaw spread 1/8". 10 per box.

EACH NET.....$0.23 LOTS OF 10.....$0.16

Use No. 93 Insulator.

NEW! MICRO-GATOR CLIP

(Smallest Insulated Clip Ever Made)

U.S. Patent No. 2,762,028 Trademark Reg.



Micro-Gator



Micro-Gator with Insulator

The alligator clip with the microscopic tip! This is the alligator clip you now can use where no other clip will do . . . on printed circuits, in tight spots and on tiny terminals too crowded for anything but its microscopic tip. It offers the speed, free-handed ease and convenience associated with other Mueller alligator clips. The Micro-gator is truly small (takes 30 to weigh an ounce!) Including separate skin-tight insulator the tip is no bigger than the head of a pin! Yet the Micro-gator has ample thumb grip, and plenty of bite to stand up straight on the smallest terminals. Ample 7/32" jaw spread. Solder connection. Skin-tight flexible vinyl insulator (sold separately) has "lip-action" tip slot so that jaws stay covered whether open or closed. 1 3/32" long.

No. 34 (Steel, cadmium plated)

EACH NET.....$0.06 LOTS OF 10.....$0.04

No. 34-C (Solid Copper)

EACH NET.....$0.07 LOTS OF 10.....$0.05

No. 36 (Insulator for Nos. 34 and 34-C)

EACH NET.....$0.05 LOTS OF 10.....$0.03

MINI-GATOR CLIP

U.S. Patent No. 2,762,028 Trademark Reg.



Mini-gator



Mini-gator with Insulator

Indispensable for testing or incorporation into miniaturized equipment. Skin-tight flexible Vinyl insulator (sold separately) covers completely—has slotted "lip action" tip. Clip weighs 1/20th oz., has tiny 11/64" O.D. nose, including insulator, but ample 3/16" jaw spread. Crimping ears. Solder connection. Surprisingly strong bite penetrates corrosion and coatings. 1 1/16" long.

No. 30 (Steel, cadmium plated)

EACH NET.....$0.06 LOTS OF 10.....$0.04

No. 30-C (Solid Copper)

EACH NET.....$0.07 LOTS OF 10.....$0.05

No. 32 (Insulator for Nos. 30 and 30-C)

EACH NET.....$0.05 LOTS OF 10.....$0.03

COMPLETELY INSULATED ALLIGATOR CLIPS

Patent Pending



No. 63 or 63-C Clip

Sold only as a unit, with factory-applied insulators.

A radically new development that doubles the usefulness of Alligator Clips! Completely insulated right down to the nose. Flexible 2-piece skin-type vinyl insulator of high dielectric strength, with "lip action" slotted nose that permits opening of clip without exposing metal. Insulator nose is only 13/64" O.D. The tight fitting sheath preserves all the slimness of the Alligator Clip, still giving complete protection against shorts in even the tightest spots. These clips could be bunched together—touching all around—without danger of shorting. Screw connection easily made by slipping insulator forward. Overall length 2 1/8".

No. 63—INSULATED ALLIGATOR CLIP (STEEL)

Composed of Mueller No. 60-S Alligator Clip steel, cadmium plated, screw connection, complete with 2-piece vinyl insulator. Shipped half with red insulators, half black. 10 per box.

EACH NET.....$0.19 LOTS OF 10.....$0.13

No. 63-C—INSULATED ALLIGATOR CLIP (COPPER)

Composed of Mueller No. 60-CS Alligator Clip, solid copper, screw connection. Shipped half with red insulators, half black. 10 per box.

EACH NET.....$0.22 LOTS OF 10.....$0.15

CROCODILE CLIPS



No. 85 or 85-C Clip with No. 87 Insulator



No. 85-T Clip

No. 85—A very small clip with slender, elongated jaws for getting into

EACH NET.....$0.09 LOTS OF 10.....$0.065

No. 85-C—Same as No. 85, except solid copper with phosphor bronze spring, brass screw. A radio frequency, entirely non-ferrous test clip. 10 per box.

EACH NET.....$0.18 LOTS OF 10.....$0.12

No. 85-T—Crocodile "Tip-Clip"—equipped with standard phone tip on one jaw, otherwise same as No. 85. Ideal for use as a prod, for ordinary clip connections and for connections to insulated binding posts having non-removable heads. 2 5/8" long. 10 per box.

EACH NET.....$0.23 LOTS OF 10.....$0.163

Use No. 87 Insulators for clips 85, 85-C and 85-T. Red and Black. Cover entire clip except nose. Protect against short and shock. Help to distinguish leads.

© U.C.P., Inc.

mueller clips

a complete line of

ALLIGATOR TEST & BATTERY CLIPS

Mueller Electric Co.

TEST CLIPS



No. 45 PEE WEE

A very small test clip for radio, ignition, meter and similar work. 1½" long. Jaw spread 5/16". Steel, cadmium plated.

EACH NET.....$0.08 LOTS OF 10.....$0.053



No. 45-C Clip
No. 47 Insulator

No. 45-C
Solid Copper R.F. Test Clip

Solid copper radio frequency test clip. Phosphor bronze spring, brass screw. Will not heat up in high frequency test work, entirely non-ferrous. 1½" long. 10 per box.

EACH NET.....$0.14 LOTS OF 10.....$0.095

Use No. 47 Insulator for clips 45 and 45-C.



No. 48-B

A small test and battery clip for radio use and general testing purposes. 2" long. Jaw spread ½". Steel, cadmium plated. 10 per box.

EACH NET.....$0.12 LOTS OF 10.....$0.086

No. 48C—Solid Copper. Same size as 48-B.

EACH NET.....$0.17 LOTS OF 10.....$0.12



No. 50-C Needle Clip

Solid bronze. Needle pierces insulation of wire for quick test contact. 2¼" long. 10 per box.

EACH NET....$0.28 LOTS OF 10....$0.20

No. 51-C—Large crocodile clip. Same as 50-C but without needle. 10 per box.

EACH NET....$0.19 LOTS OF 10..$0.133

Use No. 49 insulator for Clips 48-B, 48-C, 50-C and 51-C.



No. 27

A high grade test clip with meshing teeth on three sides of jaws. For laboratory and shop test work 2 7/16" long. Jaw spread ⅝". Steel, cadmium plated. 10 per box.

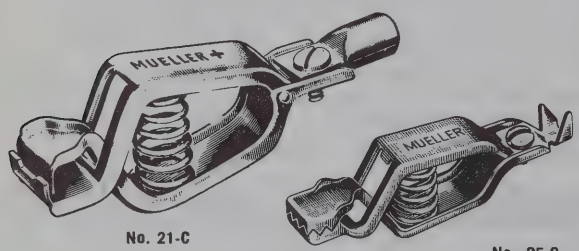
EACH NET.....$0.14 LOTS OF 10.....$0.098

No. 27-C—Solid copper. Same size as No. 27. 10 per box.

EACH NET.....$0.23 LOTS OF 10.....$0.16

Use No. 29 Insulator for clips 27 and 27-C.

LARGER SIZES OF CLIPS



No. 21-C

No. 25-C

All packed 10 per box.

		Each Net	Lots of 10
No. 24-A	— 25 Amp. Steel, lead plated, 2⅞" long	$0.24	$0.163
No. 25	— 40 Amp. Steel, cadmium plated, 3" long	.21	.15
No. 25C	— 75 Amp. Solid Copper, 3" long	.43	.30
No. 21-A	— 50 Amp. Steel, lead plated, 4" long	.42	.29
No. 21-C*	— 100 Amp. Solid Copper, 4½" long	.97	.68
No. 11-A*	— 100 Amp. Steel, lead plated, 6" long	1.06	.75
No. 11C*	— 200 Amp. Solid Copper, 6" long	1.81	1.27
No. 33-C*	— 300 Amp. Solid Copper, 7¾" long	3.45	2.41

(*Furnished with detachable lug connection for easy securing to large cables.)

GROUND CLAMP

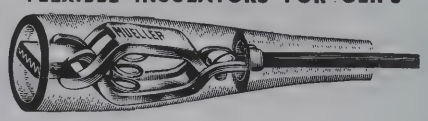


CLAMPIPE
No. 58

The ClamPipe will not spread, bend or lop over when applied. Point of large screw bites through corrosion into clean metal to insure good contact. Applicable to pipe ⅜" to 1⅜" O.D. The best ground clamp on the market!

EACH NET....$0.20 LOTS OF 10....$0.14

FLEXIBLE INSULATORS FOR CLIPS



A convenient protection against short circuit and electric shock. Colors help to distinguish leads. Packed half red and half black to indicate polarity. Long tail prevents breakage of wire. Constructed so that clip is held in firmly. NOW AVAILABLE also in blue, white, yellow and green at 10% above regular price are insulators marked * below.

Insulator No.	For Use with Clip No.	Each Net	Lots of 10
13*	11-A, 11-C	$0.80	$0.56
23*	21-A, 21-C	.40	.28
26*	24-A, 25, 25-C	.21	.15
29*	27, 27-C	.13	.09
32*	30, 30-C	.05	.03
35	33-C	2.93	2.05
36*	34, 34-C	.05	.03
47*	45, 45-C	.06	.04
49*	48-B, 48-C, 50-C, 51-C	.09	.065
62*	60, 60-S, 60-CS, 60PR-2 (also 70 Series)	.05	.035
72*	70, 70-S, 70-CS	.05	.035
87*	85, 85-C, 85-T	.06	.04
93	88	.12	.08

*Also available in blue, white, yellow and green.

MUELLER *QUALITY* BATTERY BOOSTER CABLES

Highest quality cables, equipped with famous Hippo-Clips, for boosting "dead" 6 or 12-volt vehicle batteries with an external battery. Cables are pure copper, finely stranded for high flexibility and covered with rubber insulation which stays flexible in the coldest weather and resists oil, grease and acid. 413 strands of No. 30 wire in the 4-gauge cable and 259 strands of No. 30 wire in the 6-gauge cable. The many fine features of the Hippo-Clips alone are listed elsewhere on this page. The clips are both soldered to the cable and clinched around the cable insulation by means of clinching ears.

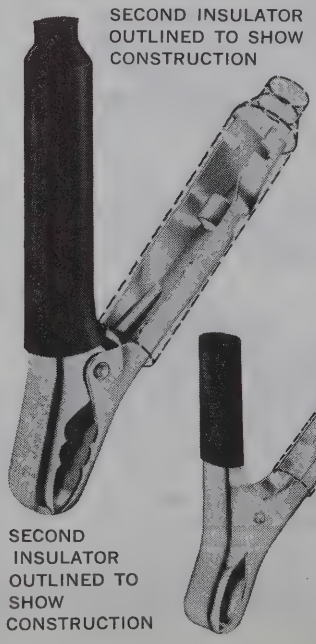
Packaged: pair of cables with clips in a bright, attractive display carton. Standard shipping container 10 cartons.

No. 8A6—8 ft., 6-gauge, with No. 41A Hippo-Clips (Steel, bright copper plated)
NET PRICE PER PAIR $4.50

No. 12A6—12 ft., 6-gauge, with No. 41A Hippo-Clips (Steel, bright copper plated)
NET PRICE PER PAIR.....$6.00



No. 12C4—12 ft., 4-gauge, with No. 41C Hippo-Clips (Solid Copper)
NET PRICE PER PAIR.....$11.40



HIPPO-CLIP

HIPPO-CLIP—For battery booster cables and fast chargers. Proved higher quality and superior design. Built-in solder strap and clinching ears for fast, sure cable connection. Supplied with vinyl handle insulators in red or black. Full 1-9/16" jaw spread. 6" long.

	Net price ea.
No. 41-A Steel, bright copper plated, 100 amp.	$ .45
No. 41-C Solid Copper, 200 amp.	.90

NEW!

PIGMY HIPPO-CLIP

PIGMY HIPPO-CLIP—A new small plier clip for battery operated equipment and automotive test. Flat, wide handle allows positive grip. Won't "squirt away". Built-in solder strap and wire clinching ears. Supplied with vinyl handle insulators in red or black. Ample 1⅛" jaw spread. 3" long.

	Net price ea.
No. 46-A Steel, bright copper plated, 50 amp.	$ .15
No. 46-C Solid Copper, 75 amp.	.24

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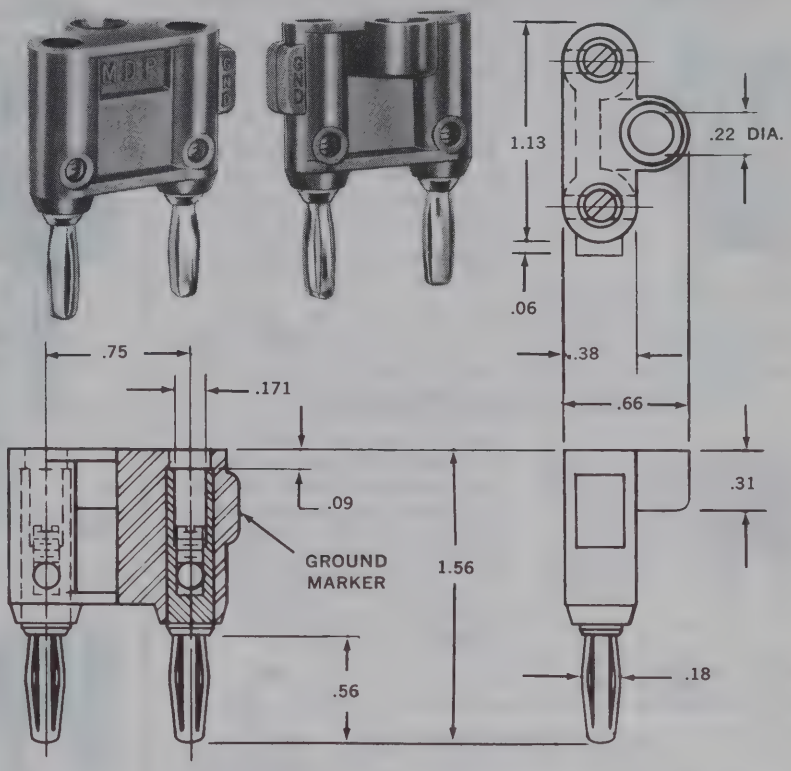
POMONA Electronics

¾" SPACED MOLDED DOUBLE BANANA PLUGS

Pomona Banana Plug and stack-up accessories are of the highest quality—tough thermoplastic—molded directly on to the metal body of plugs and connectors for maximum strength, moisture resistance and insulative properties:

General Specifications listed below apply to items using banana plugs in this catalog.

ACTUAL SIZE



FEATURES . . .

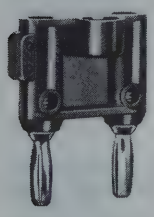
- One piece beryllium copper heat treated spring for maximum long life.
- Rounded spring design results in maximum contact area.
- STACK-UP feature allows an unlimited number of connections at the same electrical point.

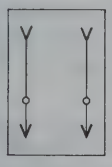
SPECIFICATIONS . . .

- Fits standard 0.166 dia. banana jacks.
- Spring, beryllium copper alloy 25 per QQ-C-533.
- Plug body, Brass per QQ-B-626 Comp. 22.
- Nickel plated per QQ-N-290, Class 2.
- Contact resistance less than 0.001 ohms per banana plug

RATINGS		Models: MDP; MDP-ST; 1330; 1330-ST
Capacity	:	0.8 pf to 10 MC
Current	:	15 Amps. Cont., 30 Amps. Int.
Voltage	:	5000 W.V. D.C.
Temperature	:	−25°C to +85°C, operating temp.

DOUBLE BANANA PLUG



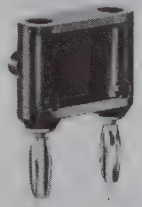


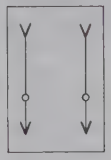
Double banana plug on ¾" centers; set screws secure leads; simplifies cable construction or component mounting; banana jacks permit top Stack-Up for multiple connections.

COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.

MODEL MDP (Specify Color) **NET .75**

COMPONENT MOUNTING DOUBLE BANANA PLUG



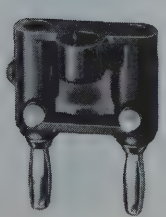


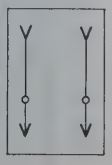
Double banana plug on ¾" centers; set screws secure leads; features recess for mounting small components; banana jacks permit top Stack-Up for multiple connections.

COLORS: Black, Red

MODEL 1330 (Specify Color) **NET .75**

DOUBLE BANANA PLUG WITH SOLDER TURRET TERMINALS



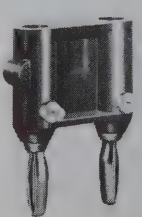


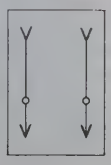
Similar to Model MDP, except has solder turret terminals for permanent noise-free connections of cables and components. Double banana plug on ¾" centers; banana jacks permit top Stack-Up for multiple connections.

COLOR: Black

MODEL MDP-ST **NET .85**

COMPONENT PLUG WITH SOLDER TURRET TERMINALS





Similar to Model 1330, except has solder turret terminals for permanent noise-free connections of components, etc. Double banana plug on ¾" centers: Banana jacks permit top Stack-Up for multiple connections.

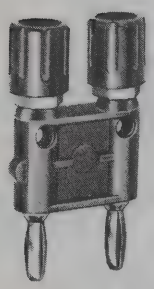
COLORS: Black, Red.

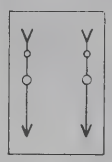
MODEL 1330-ST (Specify Color) **NET .85**

 © U.C.P., Inc.

POMONA Electronics — ¾" SPACED BANANA PLUG TEST ACCESSORIES

BINDING POSTS TO DOUBLE BANANA PLUG





Features insulated binding posts on ¾" centers for rapid mounting and interchangeability of components. Binding posts allow top Stack-Up for multiple connections. Side Stack-Up provided by thru-holes in plug body.

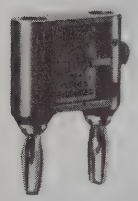
UPPER: Insulated double binding posts, on ¾" centers. Cross holes (.166 dia.) in body provide side Stack-Up connections.

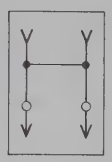
LOWER: Double banana plug, on ¾" centers.

COLORS: Body, Black. Binding Posts, Black/Red.

MODEL 1286 — **NET 2.50**

INSULATED SHORTING BAR





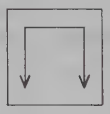
Ideal as a connecting link for use with ¾" spaced banana jacks. Banana plugs internally solder-bonded with #14 AWG wire. Banana jacks provide top Stack-Up. Cross holes (.166 dia.) in body provide side Stack-Up connections. Resistance less than 1.5 milliohms installed. Current rating 15 Amps. Cont., 30 Amps. Int. "Shorting Bar" marked on top of plug.

COLORS: Natural, Black, Red.

MODEL MDP-S (Specify Color) — **NET .95**

METAL SHORTING BAR

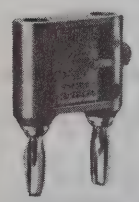


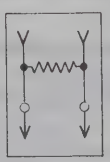


Low profile, nickel plated brass shorting bar. Double banana plugs on ¾" centers swaged to 3/32" thick brass bar. Resistance, less than 1.5 milliohms installed. Current rating: 15 Amps. Cont., 30 Amps. Int.

MODEL 1855 — **NET .75**

MOLDED PRECISION RESISTOR



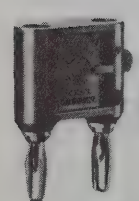


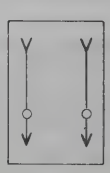
Ideal where rapid interchange of resistance values is required. Used in breadboarding, R & D labs., Standards, Terminations, etc. Deposited carbon 1% resistor, ½ watt, molded internally. Resistor soldered to double banana plug, on ¾" centers. Top Stack-Up provided for multiple connections. Cross holes (.166 dia.) in body provide side Stack-Up connections. Resistance value stamped on top of plug.

(OHMS)					
	50	200	1K	100K	1 Meg.
	75	250	5K	200K	2 Meg.
	120	500	10K	250K	5 Meg.
	130	600	20K	500K	10 Meg.
	150	900	50K		

MODEL MDP-R (Specify Value) — **NET 2.75**

ADAPTER — .080 TIP JACKS TO DOUBLE BANANA PLUG





Permits .080 Tip plugs to be used with equipment having banana jacks.

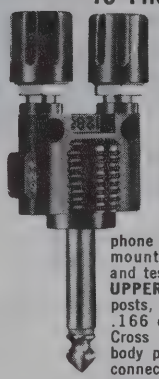
UPPER: Tip jacks, beryllium copper, gold flashed; spaced on ¾" centers to accept .080 dia. pin tip plugs.

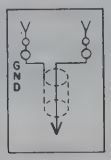
LOWER: Double banana plug, on ¾" centers, nickel plated. Cross holes (.166 dia.) in body provide side Stack-Up connections.

COLOR: Black.

MODEL 1845 — **NET .85**

ADAPTER — BINDING POSTS TO PHONE PLUG





Permits single or double banana plug to be used with equipment having phone jacks. Ideal for rapid mounting of components and test leads.

UPPER: Insulated binding posts, on ¾" centers with .166 dia. banana jacks. Cross holes (.166 dia.) in body provide side Stack-Up connections.

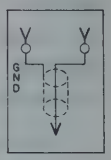
LOWER: ¼" dia. phone plug, 1-3/16" long.

COLOR: Body, Black. Binding Posts: Black/Red.

MODEL 1285 NET 4.85

ADAPTER — BANANA JACKS TO PHONE PLUG





Permits single or double banana plugs to be used with equipment having phone jacks.

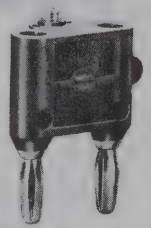
UPPER: Double banana jack, on ¾" centers. Cross holes (.166 dia.) in body provide side Stack-Up connections.

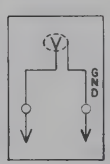
LOWER: Standard ¼" dia. phone plug, 1-3/16" long.

COLOR: Black.

MODEL 1980 NET 2.85

ADAPTER — MICRODOT RECEPTACLE TO DOUBLE BANANA PLUG





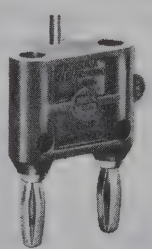
Permits Microdot miniature coaxial plug to be used with equipment having banana jacks. Cross holes in body provide side Stack-Up connections.

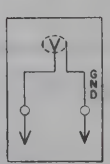
UPPER: Microdot receptacle, Screw-On Type.

LOWER: Double banana plug, on ¾" centers. Cross holes (.166 dia.) in body provide side Stack-Up connections.

MODEL	Type (Ohms)	Body Color	Receptacle Thread	NET
1275	50	Green	10-32	6.85
1277	70	Violet	12-32	6.85
1279	93	White	¼-32	6.85

ADAPTER — MICRODOT RECEPTACLE TO DOUBLE BANANA PLUG





Permits Microdot miniature coaxial plug to be used with equipment having banana jacks. Cross holes in body provide side Stack-Up connections.

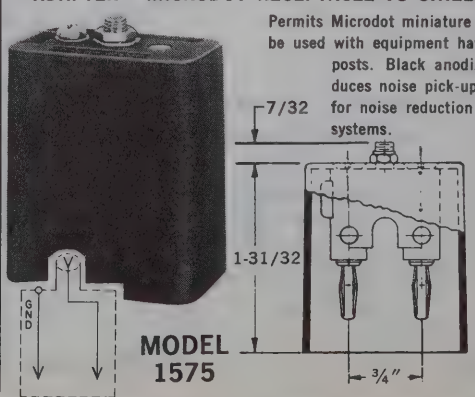
UPPER: Microdot Receptacle, Slide-On Type. Universally adapts to 50, 70 or 93 ohm type plug.

LOWER: Double banana plug, on ¾" centers. Cross holes (.166 dia.) in body provide side Stack-Up connections.

COLOR: Black.

MODEL 1276 — **NET 7.85**

ADAPTER — MICRODOT RECEPTACLE TO SHIELDED BANANA PLUGS



Permits Microdot miniature coaxial plug, 50 ohm, to be used with equipment having banana jack binding posts. Black anodized aluminum shield reduces noise pick-up more than 70 DB. Ideal for noise reduction in low level acceleration systems.

UPPER: Microdot Receptacle, Screw-On Type, Receptacle Thread 10-32.

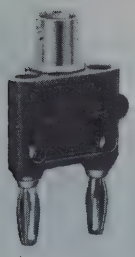
LOWER: Shielded Double banana plug, on ¾" centers.

COLOR: Black.

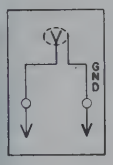
MODEL 1575 — **NET 6.85**

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POMONA Electronics BNC ADAPTERS



ADAPTER — BNC RECEPTACLE TO DOUBLE BANANA PLUG

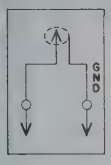


Permits BNC plug to be used with equipment having banana jacks. Excellent for adapting laboratory VTVM, oscilloscopes and signal generator inputs to readily available coaxial cables.
UPPER: BNC receptacle.
LOWER: Double banana plug, on ¾" centers. Cross holes (.166 dia.) in body provide side Stack-Up connections.
COLOR: Black.

MODEL 1269 **NET 2.85**



ADAPTER — BNC PLUG TO DOUBLE BANANA PLUG

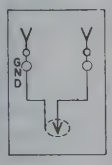


Permits BNC receptacle to be used with equipment having banana jacks. Minimizes number of coaxial connections for maximum efficiency.
UPPER: BNC plug.
LOWER: Double banana plug, on ¾" centers. Cross holes (.166 dia.) in body provide side Stack-Up connections.
COLOR: Black.

MODEL 1270 **NET 3.85**

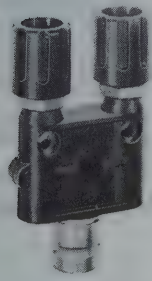


ADAPTER — BINDING POSTS TO BNC PLUG

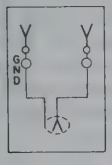


Permits single or double banana plugs to be used with equipment having BNC receptacle. Excellent for use with laboratory oscilloscopes.
UPPER: Insulated binding posts, on ¾" centers with .166 dia. banana jacks. Cross holes (.166 dia.) in body provide side Stack-Up connections.
LOWER: BNC plug.
COLOR: Body, Black. Binding Posts: Black/Red.

MODEL 1296 **NET 4.85**



ADAPTER — BINDING POSTS TO BNC RECEPTACLE



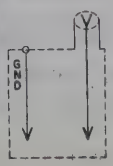
Permits single or double banana plugs to be used with equipment having BNC plug.
UPPER: Insulated binding posts, on ¾" centers with .166 dia. banana jacks. Cross holes (.166 dia.) in body provide side Stack-Up connections.
LOWER: BNC receptacle.
COLOR: Body, Black. Binding Posts: Black/Red.

MODEL 1452 **NET 4.85**



ADAPTER — BNC RECEPTACLE TO SHIELDED BANANA PLUGS

Permits BNC plug to be used with equipment having banana jack binding posts. Black anodized aluminum shield reduces noise Pick-up more than 70 DB. Ideal for low level inputs to oscilloscopes, wave analyzers, etc.



UPPER: BNC receptacle.
LOWER: Shielded double banana plug, on ¾" centers.

MODEL 1645 **NET 3.45**

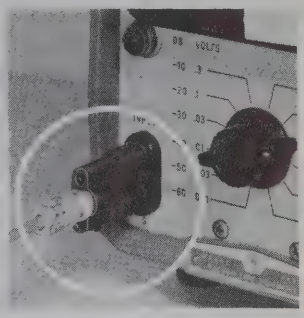
Now! Increase the flexibility of your laboratory with the use of POMONA molded test accessories.

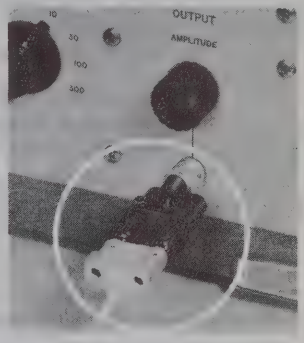
Minimize the necessity of stocking a large quantity and variety of coaxial cables by using POMONA molded adapters.

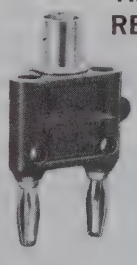
Tough thermo-plastic material molded to plug body or connectors insures maximum strength, moisture resistance and excellent insulative properties.

POMONA ELECTRONICS adapters are designed and engineered with you in mind, from the selection of the best in materials, incorporated with a quality control program that enables us to offer to you, products that are unequalled in reliability and quality.

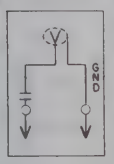
Complete engineering facilities are offered to our customers for special adapter problems that may arise.





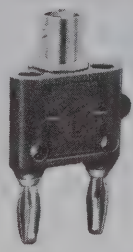


ADAPTER — SIGNAL ISOLATOR — BNC RECEPTACLE TO DOUBLE BANANA PLUG

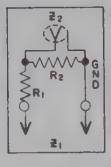


Permits BNC male connector to be used with equipment having banana jacks. General purpose ceramic capacitor molded internally. Rated @ .01 mfd ±20%, 200 WVDC. Insulation resistance 10,000 megohms min. Ideal for isolating DC signals from VTVM inputs and signal generator outputs.
UPPER: BNC receptacle.
LOWER: Double banana plug, on ¾" centers. Cross holes (.166 dia.) in body provide side Stack-Up connections.
COLOR: Blue.

MODEL 1868 **NET 7.85**



ADAPTER — BNC MATCHING PAD



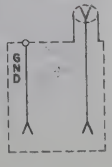
Adapts 600 OHM sources to 50, 75 or 93 OHM cables. Excellent for matching signal generators and VTVM's to standard coaxial cables. Ideal for receiver alignment. Molded in deposited carbon resistors 1%, ¼W.
UPPER: BNC receptacle.
LOWER: Double banana plug, on ¾" centers. Cross holes (.166 dia.) in body provide side Stack-Up connections.

MODEL	COLOR	RANGE — OHMS	NET
1656-1	Yellow	600 to 50	10.85
1656-2	Red	600 to 75	10.85
1656-3	White	600 to 93	10.85



ADAPTER — BNC RECEPTACLE TO SHIELDED BANANA JACKS

Permits BNC plug to be used with equipment having banana plugs. Black anodized aluminum shield reduces noise pick-up more than 70 DB. Ideal for low level inputs to oscilloscopes, wave analyzers, etc.



UPPER: BNC receptacle.
LOWER: Shielded double banana jacks, on ¾" centers.
COLOR: Black.

MODEL 1681 **NET 3.45**

688 1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625 © U.C.P., Inc.

POMONA Electronics — ISOLATION PLUGS— COMPONENT MOUNTINGS

CREATE passive and active networks, voltage dividers, isolation networks or attenuators with the Split-Terminal isolation plugs described below.

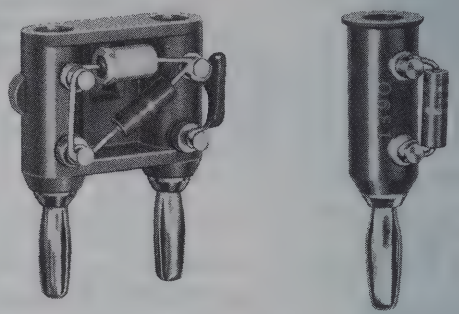
Gold flashed solder turret terminals provide permanent, reliable noise-free connections for component mounting.

Tough thermo-plastic material molded to plug body and connectors insures maximum strength, moisture resistance and excellent insulative properties.

Specifications for MDP-X, 1390, 1837, 1468:

- Fits standard 0.166 dia. banana jack.
- Spring, heat treated beryllium copper alloy 25 per QQ-C-533.
- Plug body, Brass per QQ-B-626 Comp. 22.
- Nickel plated per QQ-N-290, Class 2.
- Contact resistance less than 0.001 ohms per banana plug.

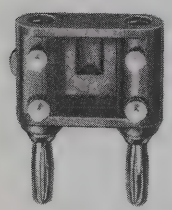
TYPICAL APPLICATION

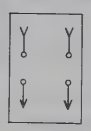


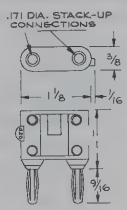
ACTUAL SIZE

MODEL MDP-X **MODEL 1390**

DOUBLE BANANA PLUG, FOUR TERMINAL ISOLATION







Provides four terminal isolation. Top Stack-Up receptacles isolated from lower plugs. Ideal for insertion of matching networks in laboratory VTVM's, signal generators, etc. Gold flashed solder turret terminals for permanent noise-free connections.

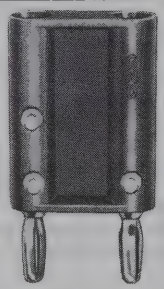
UPPER: Double banana jacks, .166 dia., on ¾" centers.

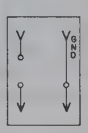
LOWER: Double banana plug on ¾" centers.

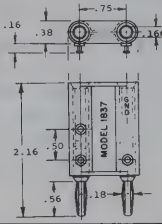
COLOR: Red.

MODEL MDP-X **NET 3.25**

DOUBLE BANANA PLUG, THREE TERMINAL ISOLATION







Provides three terminal isolation. Excellent for "L" and "Pi" networks. Plug and receptacle nickel plated. Gold flashed solder turret terminals for permanent noise-free connections. "Ground" is straight feed-thru. Hot side isolated.

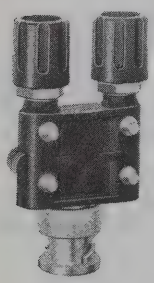
UPPER: Banana jacks, .166 dia. on ¾" centers.

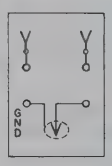
LOWER: Double banana plug on ¾" centers.

COLOR: Blue.

MODEL 1837 **NET 2.50**

ADAPTER — BINDING POSTS TO BNC PLUG, ISOLATION





Permits single or double banana plugs to be used with equipment having BNC receptacle. Provides isolation for a four terminal network. Binding posts facilitate connections of test leads or additional components. Gold flashed solder turret terminals provide permanent noise-free connections.

UPPER: Insulated binding posts, on ¾" centers with .166 dia. jacks.

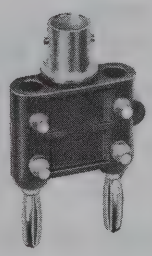
LOWER: BNC plug.

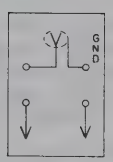
COLOR: Body, Black.

Binding Posts: Black/Red.

MODEL 1469 **NET 10.85**

ADAPTER — BNC RECEPTACLE TO DOUBLE BANANA PLUG, ISOLATION





Permits BNC plug to be used with equipment having banana jacks. Provides isolation for a four terminal network. Excellent for matching pad networks. Gold flashed solder turret terminals for permanent noise-free connnections.

UPPER: BNC receptacle.

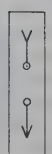
LOWER: Double banana plug, on ¾" centers.

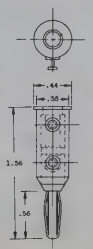
COLOR: Black.

MODEL 1468 **NET 9.85**

PLUG — SINGLE BANANA, ISOLATION







Provides two terminal isolation. Top Stack-Up receptacle is isolated from lower plug to permit addition of series resistors, diodes, etc. Ideal for computers, lab. circuit design and testing. Gold flashed solder turret terminals for permanent noise-free connections.

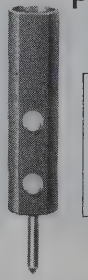
UPPER: Banana jack, .166 dia.

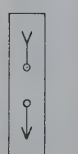
LOWER: Banana plug.

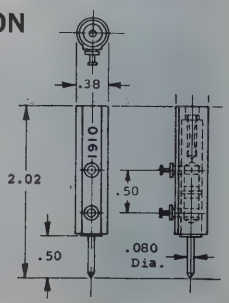
COLORS: Black, Red.

MODEL 1390 (Specify color) **NET .95**

PLUG — PIN TIP, ISOLATION







Pin tip jack is isolated from .080 pin tip plug. Provides for addition of series components. Ideal for use with computer boards, lab circuit designs, etc. Gold flashed solder turret terminals for permanent noise-free connections.

UPPER: Tip jack, beryllium copper, gold flashed; accepts .080 dia. pin.

LOWER: Pin tip, .080 dia. Brass, nickel plated.

COLORS: Black Red.

MODEL 1910 (Specify color) **NET .95**

© U.C.P., Inc.

POMONA Electronics "BLACK BOXES"

Boxes of unlimited uses for packaging of components and circuitry. Also ideal for potting and encapsulating. Available in three sizes as shown below. Housing molded of thermosetting electrical grade phenolic. Cover, punched XXP laminated paper base phenolic. Color, Housing and cover, Black. Cover plate and self tapping screws included.

Operating Temperature: —25°C to +125°C.

CREATE passive and active networks, voltage dividers, isolation networks or attenuators with these units. Solder turret terminals for permanent noise-free connection of components, etc. Entire unit may be potted or encapsulated.

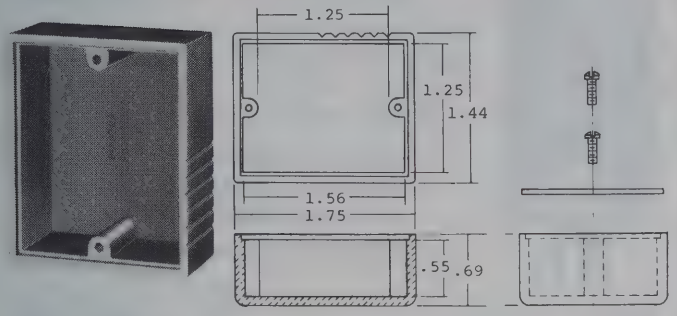
Housing molded of thermosetting electrical grade phenolic. Cover, punched XXP laminated paper base phenolic. Color, housing and cover, BLACK. Cover plate and self tapping screws included.

APPLICABLE SPECIFICATIONS:

Operating Temp: —25°C to +125°C.
Working Voltage: 5000 VDC.
Current: 15 Amps Cont., 30 Amps Int.

NEW

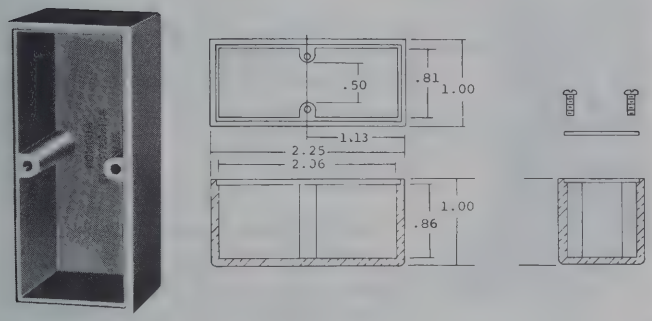
BLACK BOX—JUNIOR SIZE



MODEL 2105 **NET .75**

NEW

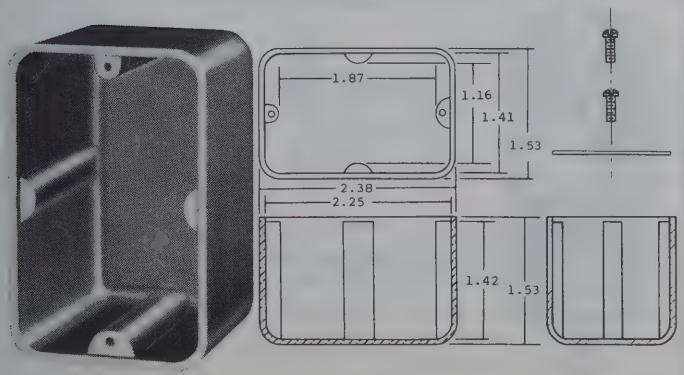
BLACK BOX—QUEEN SIZE



MODEL 2103 **NET .75**

NEW

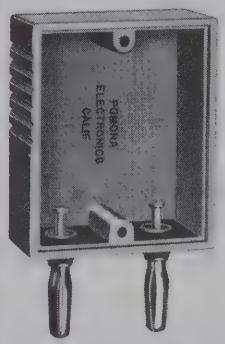
BLACK BOX—KING SIZE

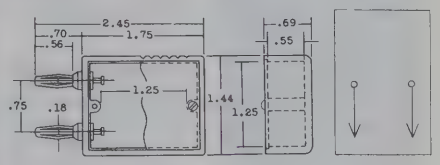


MODEL 2104 **NET .75**

NEW

COMPONENT MOUNTING—ACROSS BANANA PLUGS





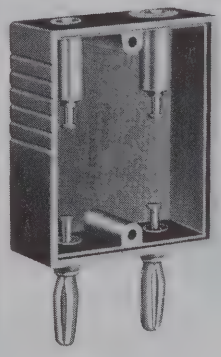
UPPER: No Connection.

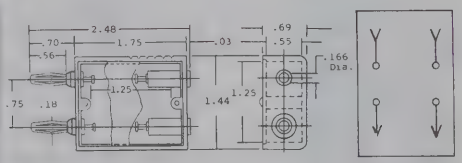
LOWER: Banana plugs on ¾" centers. One piece beryllium copper spring, heat treated, nickel plated. Plug body and solder turret terminals, brass, nickel plated. For use with standard .166" dia. banana jacks.

MODEL 2096 **NET 1.95**

NEW

COMPONENT MOUNTING—BANANA JACKS TO DOUBLE BANANA PLUG—JUNIOR SIZE





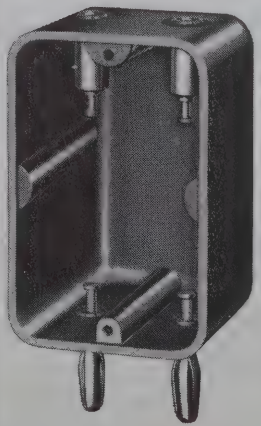
UPPER: Banana jacks, .166" dia. and solder turret terminals on ¾" centers. Brass, nickel plated. Polarity indicator on top, color, RED.

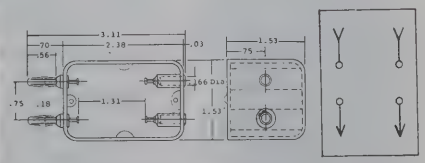
LOWER: Banana plugs on ¾" centers. One piece beryllium copper spring, heat treated, nickel plated. Plug body and solder turret terminals, brass, nickel plated. For use with standard .166" dia. banana jacks.

MODEL 2098 **NET 2.85**

NEW

COMPONENT MOUNTING—BANANA JACKS TO DOUBLE BANANA PLUG— KING SIZE





UPPER: Banana jacks, .166" dia. and solder turret terminals on ¾" centers. Brass, nickel plated. Polarity indicator on top, color, RED.

LOWER: Banana plugs on ¾" centers. One piece beryllium copper spring, heat treated, nickel plated. Plug body and solder turret terminals, brass, nickel plated. For use with standard .166" dia. banana jacks.

MODEL 2224 **NET 2.95**

 © U.C.P., Inc.

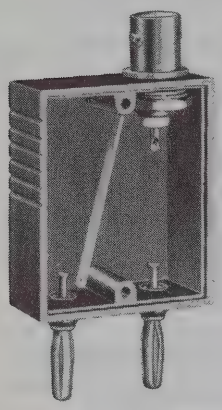
POMONA Electronics "BLACK BOXES"

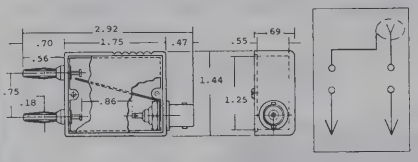
CREATE passive and active networks, voltage dividers, isolation networks or attenuators with these units. Solder turret terminals for permanent noise-free connection of components, etc. Entire unit may be potted or encapsulated.

Housing molded of thermosetting electrical grade phenolic. Cover, punched XXP laminated paper base phenolic. Color, housing and cover, BLACK. Cover plate and self tapping screws included.

NEW

COMPONENT MOUNTING—BNC RECEPTACLE TO DOUBLE BANANA PLUG





UPPER: BNC Receptacle UG1094/U

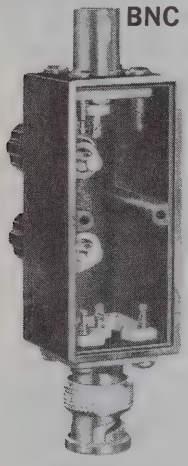
LOWER: Banana plugs on ¾" centers. One piece beryllium copper spring, heat treated, nickel plated. Plug body and solder turret terminals, brass, nickel plated. For use with standard .166" dia. banana jacks.

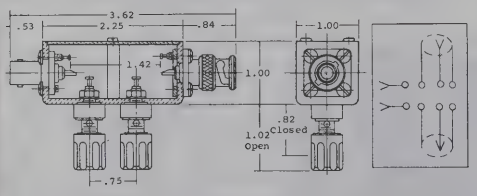
APPLICABLE SPECIFICATIONS:
Operating Temp: —25°C to +125°C.
Working Voltage: 500 V Peak.

MODEL 2097 **NET 3.85**

NEW

COMPONENT MOUNTING—BNC RECEPTACLE TO BNC PLUG WITH BINDING POSTS





UPPER: BNC Receptacle UG290A/U

CENTER: Banana jack binding posts with solder turret terminals. Red and Black.

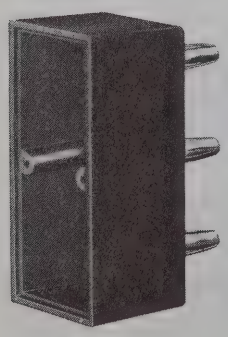
LOWER: BNC Plug. UG1104A/U.

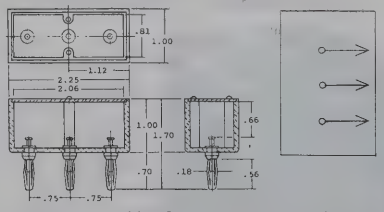
APPLICABLE SPECIFICATIONS:
Operating Temp: —25°C to +125°C.
Working Voltage: 500 V Peak.

MODEL 2100 **NET 8.95**

NEW

COMPONENT MOUNTING—(3) ¾" SPACED BANANA PLUGS





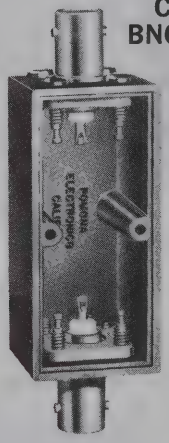
Three-in-line ¾" Spaced Banana Plugs.
One piece beryllium copper spring, heat treated, nickel plated. Plug body and solder turret terminals, brass, nickel plated. For use with standard .166" dia. banana jacks.

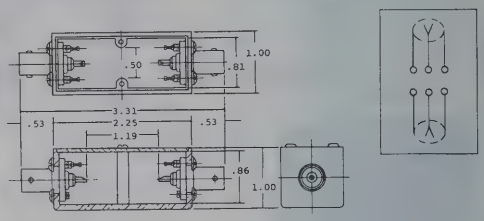
APPLICABLE SPECIFICATIONS:
Operating Temp: —25°C to +125°C.
Working Voltage: 5000 VDC.
Current: 15 Amps Cont., 30 Amps Int.

MODEL 2095 **NET 2.75**

NEW

COMPONENT MOUNTING—BNC RECEPTACLE BOTH ENDS





UPPER: BNC Receptacle UG290A/U

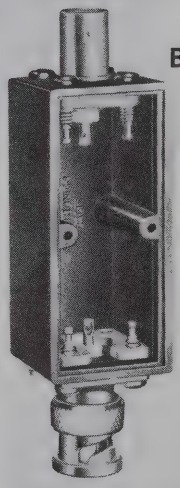
LOWER: BNC Receptacle UG290A/U

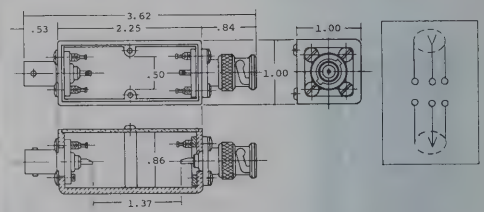
APPLICABLE SPECIFICATIONS:
Operating Temp: —25°C to +125°C.
Working Voltage: 500 V Peak.

MODEL 2101 **NET 4.85**

NEW

COMPONENT MOUNTING—BNC RECEPTACLE TO BNC PLUG





UPPER: BNC Receptacle UG290A/U

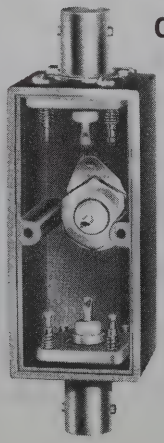
LOWER: BNC Plug UG1104A/U

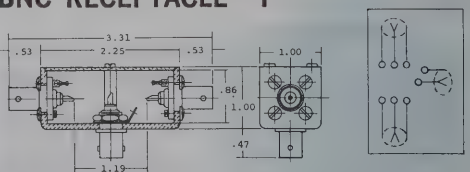
APPLICABLE SPECIFICATIONS:
Operating Temp: —25°C to +125°C.
Working Voltage: 500 V Peak.

MODEL 2099 **NET 6.85**

NEW

COMPONENT MOUNTING—BNC RECEPTACLE "T"





UPPER: BNC Receptacle UG290A/U

CENTER: BNC Receptacle UG1094/U

LOWER: BNC Receptacle UG290A/U

APPLICABLE SPECIFICATIONS:
Operating Temp: —25°C to +125°C.
Working Voltage: 500 V Peak.

MODEL 2102 **NET 7.85**

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POMONA Electronics — PATCH CORDS BANANA PLUG

POMONA BANANA PLUG PATCH CORDS

Tough thermoplastic insulation molds the plug and leads into a strong moisture resistant integral unit. Excellent for computer board and test equipment applications. Used by leading industries in applications where extreme reliability is of prime importance.



FEATURES

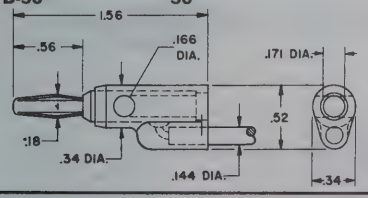
- One piece beryllium copper heat treated spring for maximum long life.
- Rounded spring design results in maximum contact area.
- Extra flexible polyvinyl insulation used on all leads.

SPECIFICATIONS

- Fits standard 0.166 dia. banana jacks.
- Spring, beryllium copper alloy 25 per QQ-C-533.
- Plug body, brass per QQ-B-626, Comp. 22.
- Nickel plated per QQ-N-290, Class 2.
- Contact resistance less than 0.001 ohms per banana plug.
- Operating Temp.: −0°C to +105°C.
- Wire, 18 AWG, stranding 65 x 36 T.C.
- Insulation, polyvinyl .144″ O.D.
- Ratings: 15 A. Cont., 30 A. Int. 10,000 W.V.D.C.

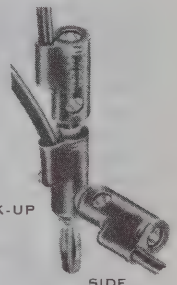
STACK-UP BANANA PLUG PATCH CORD

MODEL	LENGTH
B-4	4″
B-8	8″
B-12	12″
B-18	18″
B-24	24″
B-36	36″





Multiple stacking feature accommodates the most complex stacking; keeps circuitry neater. Greatly simplifies circuit connections and changes. Reliable solder-bonded connections withstand pull test in excess of 50 lbs. Banana plugs both ends.
COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.



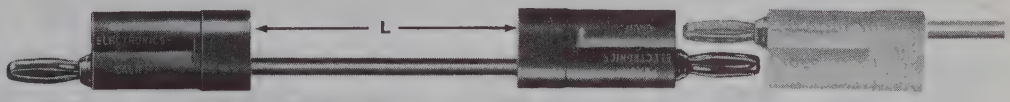
MODEL B (Specify Color) — **NET 1.50**

EXTENSION STACKING BANANA PLUG PATCH CORD

MODEL	LENGTH
HB-4	4″
HB-8	8″
HB-12	12″
HB-18	18″
HB-24	24″
HB-36	36″

(Specify Color)





Dual purpose. Insulates all hot leads when used as an extension cord. Endless extension couplings possible with any banana plug patch cord. Provides vertical stacking from any jack. Reliable solder-bonded connections withstand pull test in excess of 50 lbs. Banana plugs both ends.
COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.

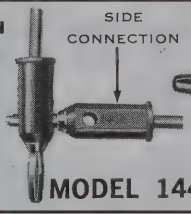


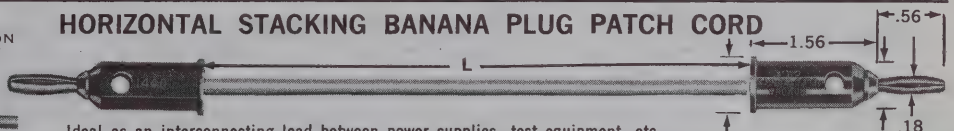
MODEL HB — **NET 1.75**

HORIZONTAL STACKING BANANA PLUG PATCH CORD

MODEL	LENGTH
1440-4	4″
1440-8	8″
1440-12	12″
1440-18	18″
1440-24	24″
1440-36	36″

(Specify Color)





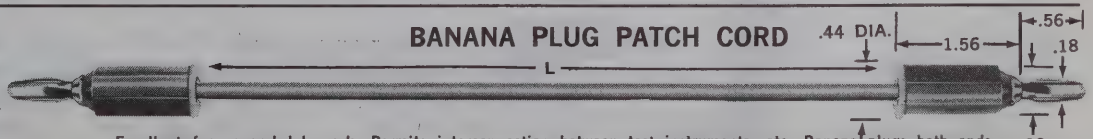
Ideal as an interconnecting lead between power supplies, test equipment, etc. Horizontal stacking feature. Banana plugs on both ends.
COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.

MODEL 1440 — **NET 1.00**

BANANA PLUG PATCH CORD

MODEL	LENGTH
1985-4	4″
1985-8	8″
1985-12	12″
1985-18	18″
1985-24	24″
1985-36	36″

(Specify Color)



Excellent for general lab work. Permits interconnection between test instruments, etc. Banana plugs both ends.
COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.

MODEL 1985 — **NET .85**

OTHER LENGTHS AVAILABLE TO ORDER

698 1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625 © U.C.P., Inc.

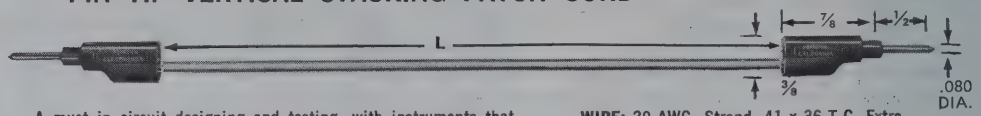
POMONA Electronics — PATCH CORDS .080 TIP

PIN TIP VERTICAL STACKING PATCH CORD

MODEL	LENGTH
P-4	4″
P-8	8″
P-12	12″
P-18	18″
P-24	24″
P-36	36″

MODEL P
(Specify Color)
NET 1.75


STACK-UP



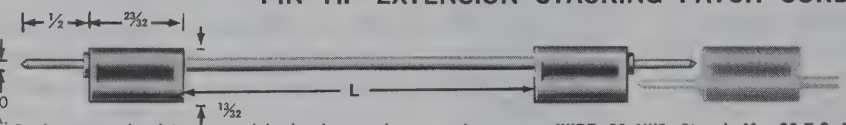
A must in circuit designing and testing, with instruments that utilize tip jacks.
PIN TIP: .080 dia., ½″ long, brass, gold flashed.
TIP JACK, STACK-UP: Beryllium copper, gold flashed. Accepts .080 dia. pin.

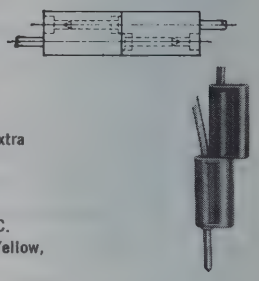
WIRE: 20 AWG, Strand. 41 x 36 T.C. Extra flexible polyvinyl insulation .087″ O.D.
RATED: 5 A. Cont., 10 A. Int. 5,000 W.V.D.C.
OPERATING TEMP.: —0°C to +105°C.
COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.

PIN TIP EXTENSION STACKING PATCH CORD

MODEL	LENGTH
1727-4	4″
1727-8	8″
1727-12	12″
1727-18	18″
1727-24	24″
1727-36	36″

MODEL 1727
(Specify Color)
NET 1.85





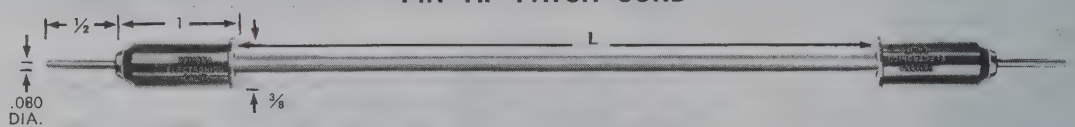
Dual purpose, insulates exposed leads when used as an extension cord. Endless extension coupling possible. Also provides stacking from .080 jack.
PIN TIP: .080 dia., ½″ long, brass, gold flashed.
TIP JACK: Beryllium copper, gold flashed. Accepts .080 dia. pin.

WIRE: 20 AWG, Strand. 41 x 36 T.C. Extra flexible polyvinyl insulation .087″ O.D.
RATED: 5 A. Cont., 10 A. Int. 5,000 W.V.D.C.
OPERATING TEMP.: —0°C to +105°C.
COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.

PIN TIP PATCH CORD

MODEL	LENGTH
1990-4	4″
1990-8	8″
1990-12	12″
1990-18	18″
1990-24	24″
1990-36	36″

MODEL 1990
(Specify Color)
NET .75



Heavy Duty patch cord. Excellent for general lab work. Permits interconnection between test instruments that utilize tip jacks.
PIN TIP: .080 dia., ½″ long, brass, nickel plated.
WIRE: 18 AWG, Strand. 65 x 36 T.C. Extra flexible polyvinyl insulation .144″ O.D.

RATED: 5 A. Cont., 10 A. Int. 10,000 W.V.D.C.
OPERATING TEMP.: —0°C to +105°C.
COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.

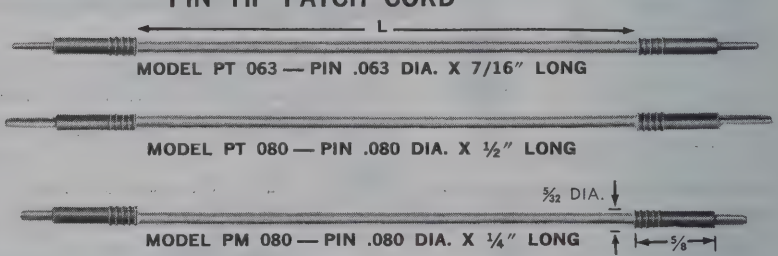
PIN TIP PATCH CORD

MODEL			LENGTH
PT063-4	PT080-4	PM080-4	4″
PT063-8	PT080-8	PM080-8	8″
PT063-12	PT080-12	PM080-12	12″
PT063-18	P8080-18	PM080-18	18″
PT063-24	PT080-24	PM080-24	24″
PT063-36	PT080-36	PM080-36	36″

MODEL PT & PM
(Specify Color) **NET .85**

Small body style permits usage in equipment having receptacles spaced closely together. Three models shown.

PIN TIP: Brass, gold flashed.
WIRE: 22 AWG, Strand. 19 x 34 T.C. Insulation, polyvinyl .064″ O.D.
RATED: 3 A. Cont., 7.5 A. Int. 1,000 W.V.D.C.
OPERATING TEMP.: —0°C to +105°C.
COLORS: Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White.



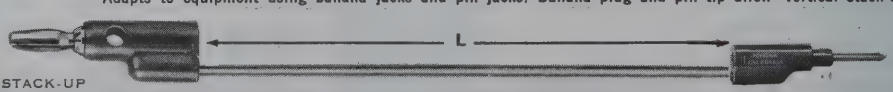
BANANA PLUG TO PIN TIP STACK-UP PATCH CORD

Adapts to equipment using banana jacks and pin jacks. Banana plug and pin tip allow vertical stack-up.

MODEL	LENGTH
1126-4	4″
1126-8	8″
1126-12	12″
1126-18	18″
1126-24	24″
1126-36	36″

MODEL 1126
(Specify Color)
NET 1.75


SIDE CONNECTION





BANANA PLUG: Spring, one piece beryllium copper, heat treated, nickel plated.
PIN TIP: .080 dia. ½″ long, brass, gold flashed.

TIP JACK, STACK-UP: Beryllium copper, gold flashed. Accepts .080 Dia. pin.
WIRE: 20 AWG, Strand. 41 x 36 T.C. Extra flexible polyvinyl insulation .087″ O.D.
RATED: 5 A. Cont., 10 A. Int. 5,000 W.V.D.C.
OPERATING TEMP.: —0°C to +105 C.
COLORS: Black, Red.

OTHER LENGTHS AVAILABLE TO ORDER

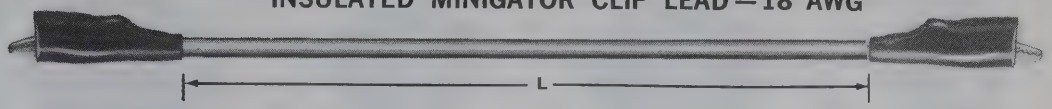
© U.C.P., Inc.

POMONA Electronics — JUMPERS—CLIP LEADS

INSULATED MINIGATOR CLIP LEAD—18 AWG

MODEL	LENGTH
MG-B-4	4″
MG-B-8	8″
MG-B-12	12″
MG-B-24	24″
MG-B-36	36″

MODEL MG-B
(Specify Color)



CLIP: Minigator, steel, cad plated.
WIRE: 18 AWG, Strand. 65 x 36 T.C. Extra flexible polyvinyl insulation .144″ O.D.

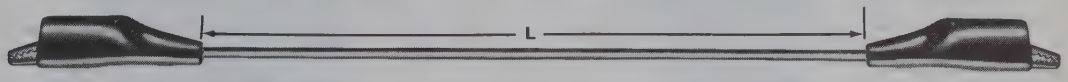
INSULATOR: Red vinyl with red wire. Black on all other colors.
OPERATING TEMP.: —25°C to +105°C.
COLORS: Black, Red.

NET .95

NEW — INSULATED MINIGATOR CLIP LEAD—20 AWG

MODEL	LENGTH
1236-4	4″
1236-8	8″
1236-12	12″
1236-24	24″
1236-36	36″

Model 1236
(Specify Color)



CLIP: Minigator, steel, cad. plated.
WIRE: 20 AWG, Strand. 41 x 36 T.C. Extra flexible polyvinyl insulation, .087″ O.D.

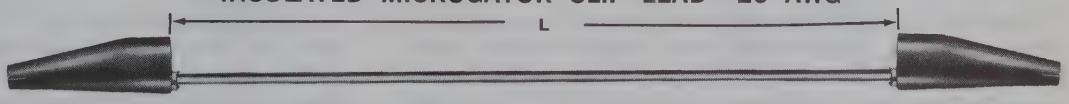
INSULATOR: Red Vinyl with Red Wire. Black on all other colors.
OPERATING TEMP.: —25°C to +105°C.
COLORS: Black, Red.

NET .95

NEW — INSULATED MICROGATOR CLIP LEAD—20 AWG

MODEL	LENGTH
1613-4	4″
1613-8	8″
1613-12	12″
1613-24	24″
1613-36	36″

Model 1613
(Specify Color)



CLIP: Microgator, solid copper.
WIRE: 20 AWG, Strand. 41 x 36 T.C. Extra flexible polyvinyl insulation, .087″ O.D.

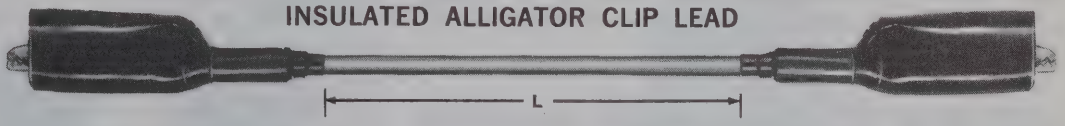
INSULATOR: Red Vinyl with Red Wire. Black on all other colors.
OPERATING TEMP.: —25°C to +105°C.
COLORS: Black, Red.

NET .95

INSULATED ALLIGATOR CLIP LEAD

MODEL	LENGTH
AL-B-4	4″
AL-B-8	8″
AL-B-12	12″
AL-B-24	24″
AL-B-36	36″

MODEL AL-B
(Specify Color)



CLIP: Alligator, steel, cad plated.
WIRE: 18 AWG, Strand. 65 x 36 T.C. Extra flexible polyvinyl insulation .144″ O.D.

INSULATOR: Red vinyl with red wire. Black on all other colors.
OPERATING TEMP.: —25°C to +105°C.
COLORS: Black, Red.

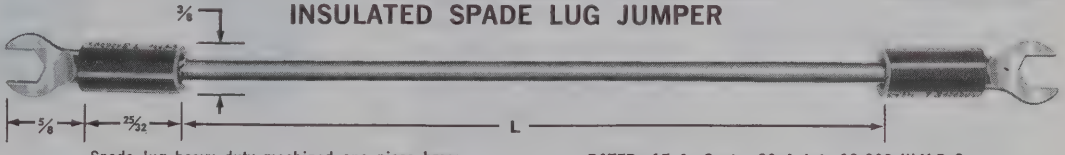
NET .95

INSULATED SPADE LUG JUMPER

MODEL	LENGTH	NET
1743-12	12″	.95
1743-24	24″	.95
1743-36	36″	.95
1743-48	48″	1.00
1743-60	60″	1.05

(Typical Dimensions spade lug)

MODEL 1743
(Specify Color)



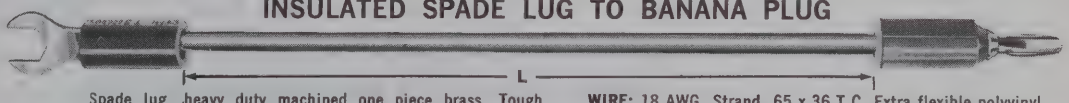
Spade lug heavy duty machined one piece brass. Tough thermo-plastic molded to spade lug body.
SPADE LUGS: Brass 1/16″ thick, nickel plated.
WIRE: 18 AWG, Strand. 65 x 36 T.C. Extra flexible polyvinyl insulation .144″ O.D.

RATED: 15 A. Cont., 30 A Int. 10,000 W.V.D.C.
OPERATING TEMP.: —25°C to +105°C.
COLORS: Black, Red, Green, White.

INSULATED SPADE LUG TO BANANA PLUG

MODEL	LENGTH	NET
1987-12	12″	.95
1987-24	24″	.95
1987-36	36″	.95
1987-48	48″	1.00
1987-60	60″	1.05

MODEL 1987
(Specify Color)



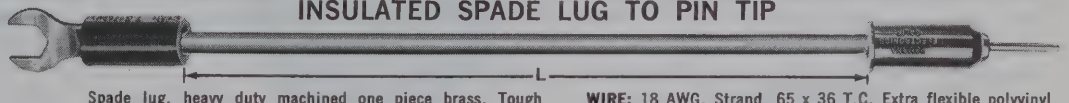
Spade lug, heavy duty machined one piece brass. Tough thermo-plastic molded to spade lug and banana plug body.
SPADE LUG: Brass 1/16″ thick, nickel plated.
BANANA PLUG: Spring one piece beryllium copper heat treated, nickel plated.

WIRE: 18 AWG, Strand. 65 x 36 T.C. Extra flexible polyvinyl insulation .144″ O.D.
RATED: 15 A. Cont., 30 A. Int. 10,000 W.V.D.C.
OPERATING TEMP.: —25°C to +105°C.
COLORS: Black, Red, Green, White.

INSULATED SPADE LUG TO PIN TIP

MODEL	LENGTH	NET
1989-12	12″	.95
1989-24	24″	.95
1989-36	36″	.95
1989-48	48″	1.00
1989-60	60″	1.05

MODEL 1989
(Specify Color)



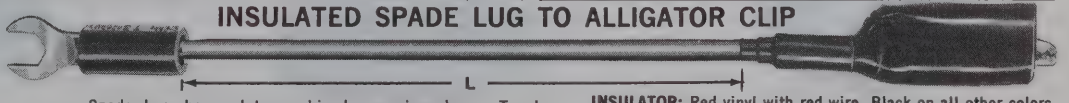
Spade lug, heavy duty machined one piece brass. Tough thermo-plastic molded to spade lug and pin tip body.
SPADE LUG: Brass 1/16″ thick, nickel plated.
PIN TIP: .080 dia. 1/2″ long. Brass nickel plated.

WIRE: 18 AWG, Strand. 65 x 36 T.C. Extra flexible polyvinyl insulation .144″ O.D.
RATED: 5 A. Cont., 10 A. Int. 10,000 W.V.D.C.
OPERATING TEMP.: —25°C to +105°C.
COLORS: Black, Red, Green, White.

INSULATED SPADE LUG TO ALLIGATOR CLIP

MODEL	LENGTH	NET
1960-12	12″	.95
1960-24	24″	.95
1960-36	36″	.95
1960-48	48″	1.00
1960-60	60″	1.05

MODEL 1960
(Specify Color)



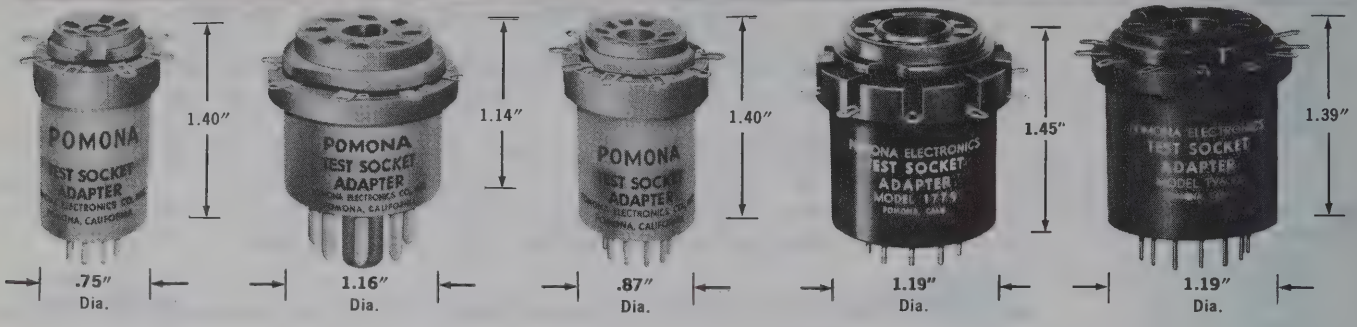
Spade lug, heavy duty machined one piece brass. Tough thermo-plastic molded to spade lug body.
SPADE LUG: Brass 1/16″ thick, nickel plated.
CLIP: Alligator, steel, cad plated.

INSULATOR: Red vinyl with red wire. Black on all other colors.
WIRE: 18 AWG, Strand. 65 x 36 T.C. Extra flexible polyvinyl insulation .144″ O.D.
OPERATING TEMP.: —25°C to +105°C.
COLORS: Black, Red, Green, White.

OTHER LENGTHS AVAILABLE TO ORDER

POMONA Electronics

TEST SOCKET TUBE ADAPTERS
BREADBOARD SOCKETS



MODEL TVS-7
7 PIN MIN.
NET 1.65

MODEL TVS-8
8 PIN OCTAL
NET 1.75

MODEL TVS-9
9 PIN MIN.
NET 1.85

NEW
MODEL 1779
9 PIN NOVAR
NET 2.25

MODEL TVS-12
12 PIN COMPACTRON
NET 2.55

Pomona Test Socket Tube Adapters are ideal for making measurements of voltage, resistance, audio and video without tracing complicated circuits from the bottom of the chassis. They feature: Extended test tabs for easy use with either alligator clips or test prods; Low loss MICA-FILLED molded phenolic construction per MIL-M-14, MFE. Power factor less than 0.010 at 10 Mc; high insulation resistance, the I.R. exceeds 500,000 megohms at 40% R.H., at 24°C; Distributed capacity, inter-element approximately 1 micro-micro farad; high voltage operation, voltage breakdown elements exceeds 1700 volts AC or DC Model TVS-12 and 1779 molded of electrical grade Black phenolic.

TVS-789 KIT SET OF THREE 5.25
(TVS-7, TVS-8, TVS-9)

TUNER TV TEST SOCKET TUBE ADAPTERS

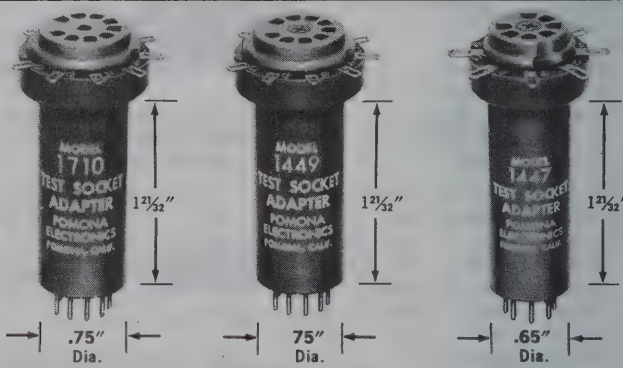
FOR USE WITH TUNERS HAVING CAPTIVE OR TELESCOPING TUBE SHIELDS

IT'S TALL • IT'S SLIM • IT FITS

- Extra height—exact fit—clears shields
- Ready access to socket connections
- Exposed operation saves time

A MUST for every modern TV Service Shop

The 7-, 9- or 10-HIGH adapter rises above the shields and places testing in the open. Shields or tuner covers do not have to be removed. All construction is the highest quality. Interelement distributed capacity is approximately 1.5 micro-micro farad. Voltage breakdown elements exceed 1800 V. AC or DC. The insulation resistance exceeds 5×10^5 megohms at 40% R.H. at 24°C.



MODEL 1710
10 HIGH
10 pin, Miniature
NET 2.25

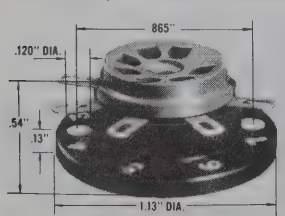
MODEL 1449
9 HIGH
9 pin, Miniature
NET 1.95

MODEL 1447
7 HIGH
7 pin, Miniature
NET 1.85

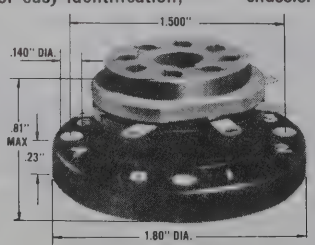
SURFACE MOUNTED BREADBOARD SOCKETS

IDEAL FOR ELECTRONIC AND EXPERIMENTAL USE

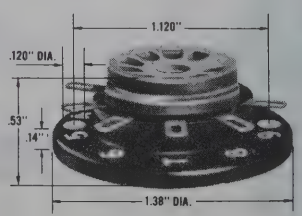
Surface Mounted Breadboard Sockets are used for experimental circuit design, portable and enclosed units, plug-in and packaged assemblies. They feature: An insulated base to prevent connections from shorting to chassis; Eliminates double chassis design; Circuits may be wired in an enclosed unit; The base connections are numbered for easy identification; Grade-A phosphor bronze spring contacts; Standard center to center mounting holes; For ease of installation the 7 and 9 Pin Miniatures may be mounted either in the center or on the sides, the 8 Pin Octal is mounted on the sides; Small mounting holes permit the re-use of experimental chassis.



MODEL XS-7
7 PIN MINIATURE
NET .59



MODEL XS-8
8 PIN OCTAL
NET .75

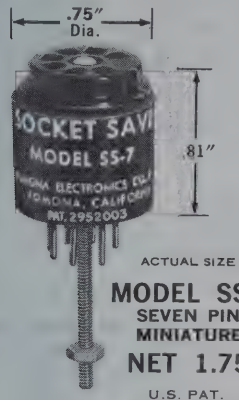


MODEL XS-9
9 PIN MINIATURE
NET .69

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POMONA *Electronics* SOCKET SAVERS

The Socket Saver® is designed to be installed on tube checkers and other electronic equipment to prevent wear and tear of sockets on original equipment. They are easy to install and remove. This eliminates the necessity of replacing and rewiring sockets on original equipment. Built of quality materials. BERYLLIUM COPPER LONG LIFE CONTACTS to give maximum service.



MODEL SS-7
SEVEN PIN
MINIATURE
NET 1.75
U.S. PAT.
NO. 2952003

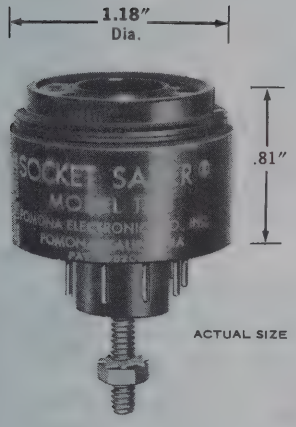


MODEL SS-8
EIGHT PIN
OCTAL
NET 1.75

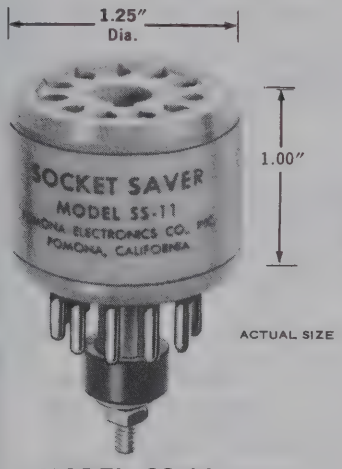


MODEL SS-9
NINE PIN
MINIATURE
NET 1.75
U.S. PAT.
NO. 2952003

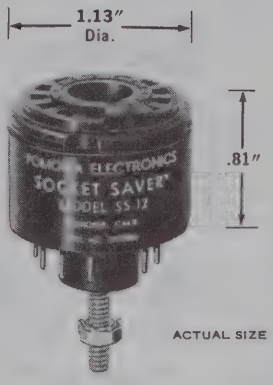
MODEL SS-789 KIT SET OF THREE 5.25
(SS-7, SS-8, SS-9)



MODEL 1751
9 PIN
NOVAR
NET 1.95



MODEL SS-11
11 PIN
OCTAL STYLE
NET 1.95



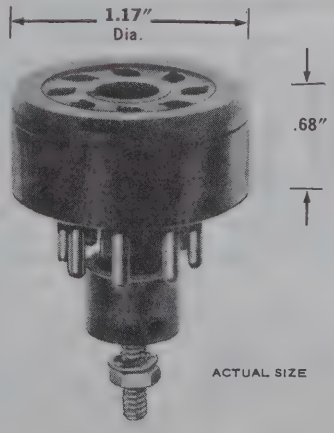
MODEL SS-12
12 PIN
COMPACTRON
NET 2.25

MINIATURIZED SOCKET SAVERS®

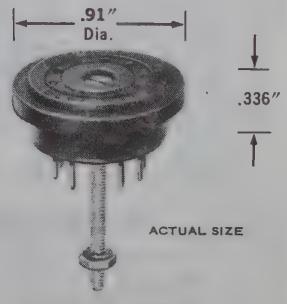
For use in applications where vertical height is restricted. Contacts made of beryllium copper, heat treated. Models 1847 and 1849 closed entry receptacles, contact and pin one piece formed beryllium copper, molded of black phenolic electrical grade.



MODEL 1847
7 PIN MINIATURE
NET 1.95



MODEL 1848
8 PIN OCTAL
NET 1.95



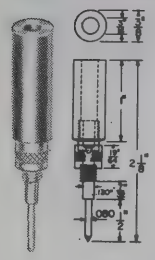
MODEL 1849
9 PIN MINIATURE
NET 1.95

 1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625 © U.C.P., Inc.

HERMAN H. SMITH, INC.

"IT'S SOUND PLANNING to SPECIFY SMITH for ELECTRONIC COMPONENTS"

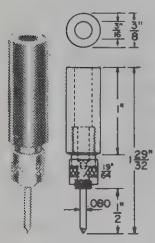
INSULATED TIP PLUG
Solderless



HANDLE: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR
BODY: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless: wire fits through body of tip then wrapped around screw portion and tightened with knurled collar. Threaded type. Fits standard phone tip jacks. Std. Pkg. 100

No.	Type	NET Per C
200	Senior	$15.00

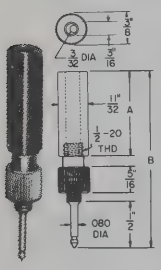
INSULATED TIP PLUG
Solderless



HANDLE: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR
BODY: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless: wire fits through body of tip then wrapped around screw portion and tightened with knurled collar. Threaded type. Fits standard phone tip jacks. Std. Pkg. 100

No.	Type	NET Per C
201	Junior	$15.00

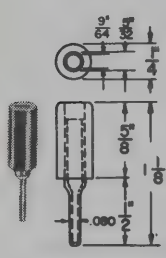
INSULATED TIP PLUG
Signal Corps Approved



HANDLE: ETHYL CELLULOSE, Type EM-1, per MIL-P-3412, Red, Black. SPECIFY COLOR
PLUG: Steel, case hardened to Signal Corps specs.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Recess at end of prod tip holds plugs more firmly in jack spring. Prevents tip from falling out when in an inverted position. Std. Pkg. 50

No.	Handle (A)	Overall (B)	NET Per C
250	1 inch	2⅛"	$54.00
358	3 inch	4⅛"	84.00

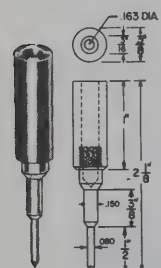
INSULATED TIP PLUG
Solder Type



HANDLE: MOLDED BUTYRATE, per FED. SPEC. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR
BODY: Brass, nickel plated our No. 158.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Drawn hollow tip for easy soldering. Fits standard phone tip jack. Std. Pkg. 100

No.	NET Per C
237	$11.00

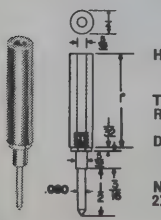
INSULATED TIP PLUG
Heavy Duty Type



HANDLE: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR
PLUG: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Large diameter well enables soldering of heavy duty wire directly into plug. Fits standard phone tip jacks. Std. Pkg. 100

No.	NET Per C
229	$15.00

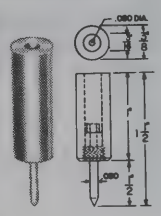
SUB-MINIATURE TIP PLUG



HANDLE: FIBRE, per MIL-F-148A, Grade CH. Red, Black. SPECIFY COLOR
TIP: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp rise, continuous duty.
DESCR.: Ideally suited for checking sub-miniature equipment. Fits standard phone tip jacks. Std. Pkg. 100

No.	NET Per C
270	$18.00

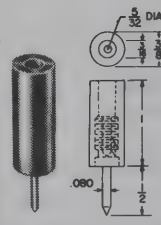
INSULATED SHORT TIP PLUG



HANDLE: MOLDED THERMOSETTING plastic, Red & Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR
PLUG: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Inserts flush to insulate handle, no metal exposed; eliminates possibility of shock or grounding. Fits standard phone tip jacks. Std. Pkg. 100

No.	NET Per C
203	$12.00

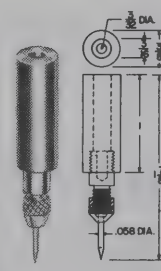
INSULATED SHORT TIP PLUG
Solderless



HANDLE: MOLDED THERMOSETTING plastic, Red & Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR
PLUG: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless: wire fits through handle and body of tip then wrapped around screw portion. Inserts flush to insulated handle, no metal exposed, eliminates possibility of shock or grounding. Fits standard phone tip jacks. Std. Pkg. 50

No.	NET Per C
283	$14.00

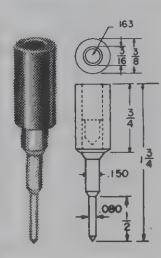
INSULATED TIP PLUG
Phono Needle



HANDLE: MOLDED THERMOSETTING plastic, Red & Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR
BODY: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Removable chuck for easy replacement of broken needle. Needle pierces corrosion or plating for positive reading. Std. Pkg. 50

No.	NET Per C
216	$18.00

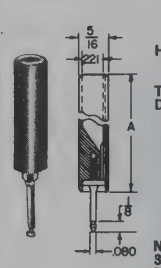
ADAPTER
Banana Plug to Tip Plug



HANDLE: MOLDED BUTYRATE, per FED. SPEC. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR
BODY: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Accepts standard banana plugs, adapts to standard tip plug. Std. Pkg. 100

No.	NET Per C
215	$15.00

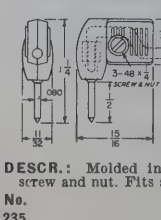
SUB-MINIATURE TIP PLUG
AND TEST PROD



HANDLE: Molded Nylon, per MIL-P-20693A. Available in Red or Black. SPECIFY COLOR
TIP: Brass, Silver plated.
DESCR.: Solderless assembly. Ideal for use with sub-miniature printed-circuit tip jacks. Sharp tip breaks flux or oxide coating on printed-circuit pattern for positive contact when used as prod. Grooved head or prod makes positive contact when laid across wires. Fits all standard .080" tip jacks. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
348	1 inch	1⅛"	$15.00
349	4 inches	4⅛"	30.00

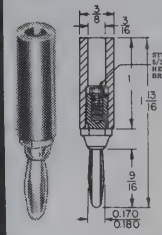
METER TIP PLUG



HANDLE: MOLDED THERMOSETTING plastic, per MIL-M-14 CFG. Red and Black. SPECIFY COLOR
TIP: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Molded in two halves for easy assembly with screw and nut. Fits standard phone tip jacks. Std. Pkg. 50

No.	NET Per C
235	$27.00

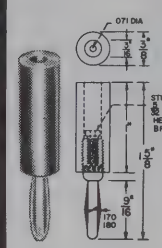
INSULATED BANANA PLUG



HANDLE: MOLDED THERMOSETTING plastic, Red & Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR
PLUG: Hex brass, nickel or silver plated.
SPRING: Four-leaved phosphor bronze or beryllium copper, nickel or silver plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to plug for solderless connection. Fits standard banana jacks. Std. Pkg. 100

No.	Spring Material	Plating	NET Per C
212	Phosphor Bronze	Nickel	$22.00
232	Phosphor Bronze	Silver	24.00
242	Beryllium Copper	Nickel	30.00
262	Beryllium Copper	Silver	33.00

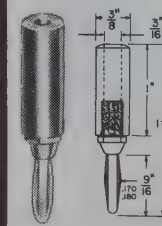
INSULATED BANANA PLUG



HANDLE: MOLDED THERMOSETTING plastic, Red & Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR
PLUG: Brass, nickel or silver plated.
SPRING: Four-leaved phosphor bronze or beryllium copper, nickel or silver plated.
RATING: 15 Amps AC for 10° Temp. rise, continuous duty.
DESCR.: Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to plug for solderless connection. Fits standard banana jacks. Std. Pkg. 100

No.	Spring Material	Plating	NET Per C
211	Phosphor Bronze	Nickel	$19.00
261	Phosphor Bronze	Silver	21.00
271	Beryllium Copper	Nickel	24.00
281	Beryllium Copper	Silver	27.00

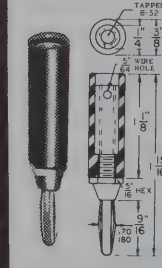
INSULATED BANANA PLUG
Solderless



HANDLE: MOLDED THERMOSETTING plastic, Red & Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR
PLUG: Hex brass, nickel or silver plated.
SPRING: Four-leaved phosphor bronze or beryllium copper, nickel or silver plated.
RATING: 15 AC Amps for 10°C Temp. rise, continuous duty.
DESCR.: Solderless: Wire fits through handle and body of tip then wrapped around screw portion. Fits standard banana jacks. Std. Pkg. 50

No.	Spring Material	Plating	NET PER C
295	Phosphor Bronze	Nickel	$22.00
296	Phosphor Bronze	Silver	24.00
297	Beryllium Copper	Nickel	30.00
298	Beryllium Copper	Silver	33.00

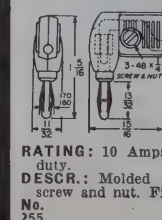
INSULATED BANANA PLUG
Solderless



HANDLE: MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red, Black. SPECIFY COLOR
BODY: Hex brass, nickel plated with mating brass spacer.
SPRING: Four-leaved phosphor bronze, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Cross drilled hole in spacer enables quick solderless connection of wire to plug. Fits standard banana jacks. Std. Pkg. 100

No.	NET Per C
236	$35.00

METER BANANA PLUG



HANDLE: MOLDED THERMOSETTING plastic, per MIL-M-14 CFG. Red and Black. SPECIFY COLOR
PLUG: Brass, nickel plated.
SPRING: Four-leaved phosphor bronze, nickel plated.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Molded in two halves for easy assembly with screw and nut. Fits standard banana jacks. Std. Pkg. 50

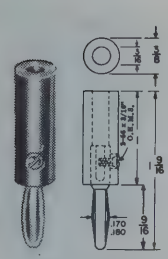
No.	NET Per C
255	$36.00

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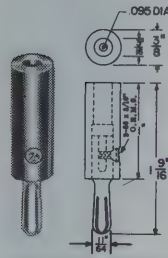
INSULATED BANANA PLUG With Side Screw



HANDLE: MOLDED THERMOSETTING plastic, Red & Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR
PLUG: Brass, nickel plated.
SPRING: Four-leaved phosphor bronze or beryllium copper, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Set screw secures wire without soldering. Fits standard banana jacks. **Std. Pkg. 100**

No.	Spring	NET Per C
204	Phosphor Bronze	$19.00
254	Beryllium Copper	27.00

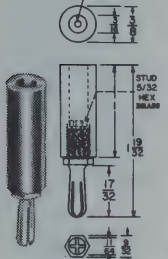
INSULATED BANANA PLUG Split Type With Side Screw



HANDLE: MOLDED THERMOSETTING plastic, Red & Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR
PLUG: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Cross-slotted for spring tension. Set screw secures wire, without soldering. Fits standard banana jacks. **Std. Pkg. 100**

No.	NET Per C
213	$18.00

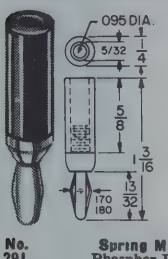
INSULATED BANANA PLUG Split Type With Internal Stud



HANDLE: MOLDED THERMOSETTING plastic, Red & Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR
PLUG: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Cross-slotted for spring tension. Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to plug for solderless connection. Fits standard banana jacks. **Std. Pkg. 100**

No.	NET Per C
253	$19.00

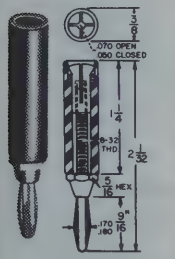
INSULATED BANANA PLUG Midget Type



HANDLE: MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red, Black. SPECIFY COLOR
PLUG: Brass, nickel or silver plated.
SPRING: Phosphor bronze or beryllium copper, nickel or silver plated.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Wire soldered directly into stud. Fits standard banana jacks. **Std. Pkg. 50**

No.	Spring Material	Plating	NET Per C
291	Phosphor Bronze	Nickel	$19.00
292	Phosphor Bronze	Silver	21.00
293	Beryllium Copper	Nickel	24.00
294	Beryllium Copper	Silver	27.00

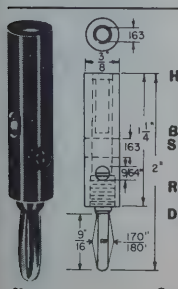
INSULATED BANANA PLUG With Internal Spring Collett



HANDLE: MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red or Black. SPECIFY COLOR
BODY: Hex brass, nickel plated.
SPRING: Four-leaved phosphor bronze, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless: Spring collett provides quick connect and disconnect of wire. Tin wire for secure contact. Fits standard banana jack. **Std. Pkg. 100**

No.	NET Per C
289	$41.00

STACK BANANA PLUG Solderless



HANDLE: MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red, Black, Yellow or Green. SPECIFY COLOR
BODY: Brass, nickel plated.
SPRING: Four-leaved phosphor bronze or beryllium copper, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless connection. Accepts standard banana plugs in top and side. Interconnects unlimited amount of multiple circuits. **Std. Pkg. 50**

No.	Spring Material	NET Per C
1511	Phosphor Bronze	$30.00
1512	Beryllium Copper	33.00

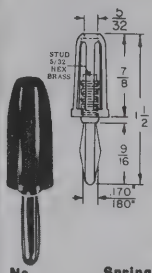
NYLON PLUGS COLOR CODE SUFFIX

Add to Catalog Number as required

— 101 WHITE	— 104 GREEN	— 106 ORANGE	— 112 PURPLE
— 102 RED	— 105 BLUE	— 107 YELLOW	— 113 GREY
— 103 BLACK		— 108 BROWN	

BANANA PLUG TYPE

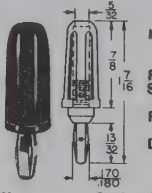
NYLON BANANA PLUG



HANDLE: MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.
PLUG: Brass, nickel plated.
SPRING: Phosphor bronze or beryllium copper nickel or silver plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to plug for solderless connection. Fits standard banana jacks. **Std. Pkg. 100**

No.	Spring Material	Plating	NET Per C
476	Phosphor Bronze	Nickel	$21.00
477	Phosphor Bronze	Silver	24.00
478	Beryllium Copper	Nickel	27.00
479	Beryllium Copper	Silver	30.00

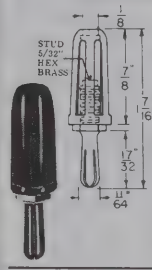
NYLON BANANA PLUG Midget



HANDLE: MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.
PLUG: Brass, nickel or silver plated.
SPRING: Phosphor bronze or beryllium copper nickel or silver plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Wire soldered directly into stud. Fits standard banana jacks. **Std. Pkg. 100**

No.	Spring Material	Plating	NET Per C
426	Phosphor Bronze	Nickel	$18.00
427	Phosphor Bronze	Silver	21.00
428	Beryllium Copper	Nickel	24.00
429	Beryllium Copper	Silver	27.00

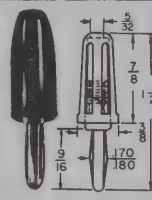
NYLON BANANA PLUG Split Type



HANDLE: MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.
PLUG: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Cross-slotted for spring tension. Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to plug for solderless connection. Fits standard banana jacks. **Std. Pkg. 100**

No.	NET Per C
494	$18.00

NYLON BANANA PLUG Solderless

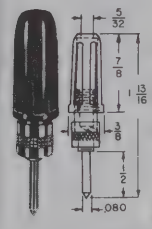


HANDLE: MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.
PLUG: Brass, nickel or silver plated.
SPRING: Phosphor bronze or beryllium copper nickel or silver plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless: Wire fits through handle and body of tip then wrapped around screw portion. Inserts flush to handle, no metal exposed, eliminates possibility of shock or grounding. Fits standard banana jacks. **Std. Pkg. 100**

No.	Spring Material	Plating	NET Per C
455	Phosphor Bronze	Nickel	$21.00
456	Phosphor Bronze	Silver	24.00
457	Beryllium Copper	Nickel	27.00
458	Beryllium Copper	Silver	30.00

PIN TIP TYPE

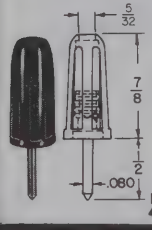
NYLON TIP PLUG Solderless



HANDLE: MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.
PLUG: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless: wire fits through body of tip then wrapped around screw portions and tightened with knurled collar. Threaded type. Fits standard phone tip jacks. **Std. Pkg. 100**

No.	NET Per C
490	$16.80

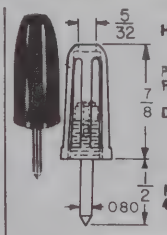
NYLON SHORT TIP PLUG Solderless



HANDLE: MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.
PLUG: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless: Wire fits through handle and body of tip then wrapped around screw portion. Inserts flush to handle, no metal exposed, eliminates possibility of shock or grounding. Fits standard phone tip jacks. **Std.Pkg.100**

No.	NET Per C
492	$15.00

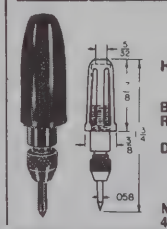
NYLON SHORT TIP PLUG



HANDLE: MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.
PLUG: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Inserts flush to insulated handle, no metal exposed; eliminates possibility of shock or grounding. Fits standard phone tip jacks. **Std. Pkg. 100**

No.	NET Per C
491	$13.80

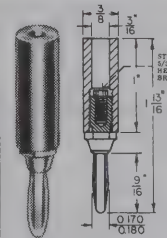
NYLON TIP PLUG Phono Needle



HANDLE: MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Removable chuck for easy replacement of broken needles. Needle pierces corrosion or plating for positive reading. **Std. Pkg. 50**

No.	NET Per C
493	$16.80

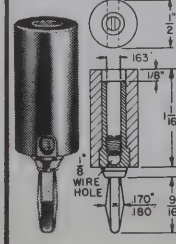
HIGH TEMPERATURE BANANA PLUG



HANDLE: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR
PLUG: Hex brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Withstands temperature to 1200 degrees F. Full resiliency—non-oxidizing. Excellent for thermocouple connection on plastic extruding die heads. **Std. Pkg. 10**

No.	NET Per C
388	$72.00

STACK BANANA PLUG



BODY: MOLDED POLYSTYRENE, per Fed. Spec. L-P416, Type I for electrical characteristics. Red or Black. SPECIFY COLOR
PLUG: Brass, nickel plated.
SPRING: Four-leaved phosphor bronze, nickel plated.
SCREW: Steel, cadmium plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Internal set screw for wire or phone tip connection. Can be stacked for multiple connections. **Std. Pkg. 25**

No.	NET Ea.
324	$48.00

DUAL BANANA PLUG

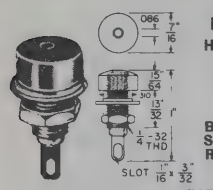


BODY: MOLDED POLYSTYRENE, per Fed. Spec. L-P416 Type I for electrical characteristics. Red or Black.
PLUG: Brass, nickel plated. SPECIFY COLOR
SPRING: Four-leaved phosphor bronze, nickel plated.
SCREW: Steel, cadmium plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 5K Volts 60 cycle AC continuous working voltage. CAPACITANCE 1.0 mmfd. between conductors.
DESCR.: Mates with standard dual binding post ¾" centers. Polarity indicated on top and side. Wire held with internal set screw. Can be stacked for multiple connections. **Std. Pkg. 25**

No.	NET Per C
210	$72.00

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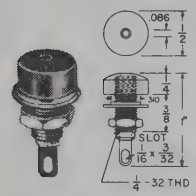
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INSULATED PHONE TIP JACK

HEAD: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR
BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.
DESCR.: Positive contact with standard phone tip plugs. Supplied complete with hex nut and fibre washer. Mounts in 5/16" hole in panels up to 3/8" thick. Accepts standard phone tip plugs. **Std. Pkg. 100**

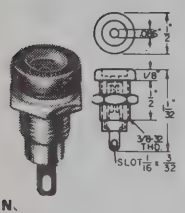
No.	NET Per C
202	$14.00



INSULATED PHONE TIP JACK

HEAD: MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red, Black, Yellow, Green. SPECIFY COLOR
BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.
DESCR.: Complete with hex nut and fibre washer. Mounts in 5/16" hole in panels up to 3/8" thick. Accepts standard phone tip plugs. **Std. Pkg. 50**

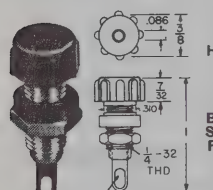
No.	NET Per C
223	$21.00



MOLDED NYLON TIP JACK

BODY: MOLDED NYLON, per MIL-P-20693A. Red, Black, Yellow, Green, Blue. SPECIFY COLOR
CONTACT: Phosphor bronze.
CAP: Brass, nickel plated.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty. 5 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 3.0 mmfd.
DESCR.: Mounts in 3/8" hole in panels up to 5/16" thick. Accepts standard phone tip plugs. **Std. Pkg. 100**

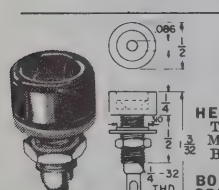
No.	NET Per C
240	$18.00



INSULATED PHONE TIP JACK

HEAD: Fluted Head, MOLDED NYLON, per MIL-P-20693A. With molded nylon washer. Red, Black, Yellow, Green, Blue. SPECIFY COLOR
BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.
DESCR.: Extruded portion of head and washer provides excellent insulation from panel. Supplied with hex nut. Mounts in 5/16" hole in panels up to 1/4" thick. Accepts standard tip plugs. **Std. Pkg. 100**

No.	NET Per C
241	$19.00

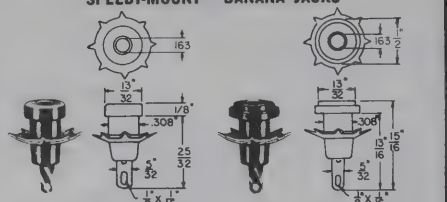


INSULATED TIP JACK Meter Type

HEAD: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue per LC-726-1. SPECIFY COLOR
BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.
DESCR.: Supplied complete with hex nut and fibre washer. Mounts in 5/16" hole in panels up to 3/8" thick. Recessed jack body prevents possibility of shock or grounding. Accepts standard phone tip plugs. **Std. Pkg. 50**

No.	NET Per C
282	$17.00

"SPEEDI-MOUNT" BANANA JACKS

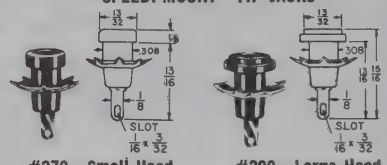


#398—Small Head #399—Large Head

BODY: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, per LC-726-1. SPECIFY COLOR
CONTACT: Brass, cadmium plated.
WASHER: Steel cadmium plated, internal and external tooth.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty. 3 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.
DESCR.: Unusual dished lockwasher permits fast assembly. Teeth embed into jack and panels, prevent pulling out and turning. Mounts in 5/16" hole in panels up to 3/16" thick. Accepts standard banana plug. **Std. Pkg. 100**

No.		NET Per C
398	Small Head 13/32"	$6.60
399	Large Head 1/2"	$6.60

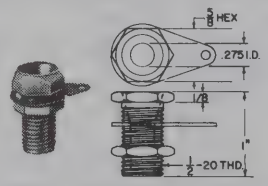
"SPEEDI-MOUNT" TIP JACKS



#279—Small Head #299—Large Head

BODY: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR
SPRING: Phosphor bronze.
WASHER: Steel cadmium plated, internal and external tooth.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty. 3 K Volts 60 cycle AC continuous working voltage. CAACITANCE 3.0 mmfd.
DESCR.: Unusual dished lockwasher permits fast assembly. Teeth embed into jack and panels, prevents pulling out and turning. Mounts in 5/16" hole in panels up to 3/16" thick. Accepts standard phone tip plugs. **Std. Pkg. 100**

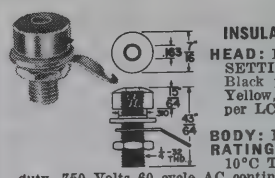
No.		NET Per C
279	Small Head 13/32"	$6.60
299	Large Head 1/2"	$6.60



GIANT BANANA JACK

BODY: HEX BRASS, nickel plated.
RATING: 25 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut and brass tinned lug, mounts in 1/2" hole in panels up to 5/8" thick. **Std. Pkg. 25**

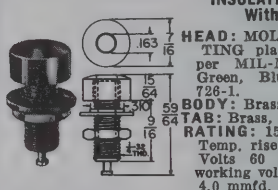
No.	NET Per C
157	$30.00



INSULATED BANANA JACK

HEAD: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.
DESCR.: Supplied with hex nut, fibre washer, and brass tinned lug. Mounts in 5/16" hole in panels up to 3/8" thick. Accepts standard banana plugs. **Std. Pkg. 100**

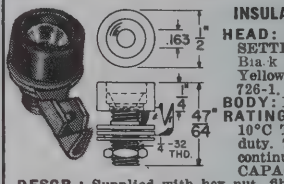
No.	NET Per C
205	$14.00



INSULATED BANANA JACK With Solder Tab

HEAD: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR
BODY: Brass, nickel plated.
TAB: Brass, cadmium plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.
DESCR.: Supplied with hex nut and fibre washer. Mounts in 5/16" hole in panels up to 5/8" thick. Solder direct to tab Accepts standard banana plugs. **Std. Pkg. 100**

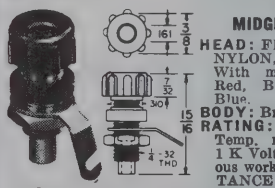
No.	NET Per C
256	$15.00



INSULATED BANANA JACK

HEAD: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue per LC-726-1. SPECIFY COLOR
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.
DESCR.: Supplied with hex nut, fibre washer, lockwasher and brass tinned lug. Mounts in 5/16" hole in panels up to 3/8"thick. Jack body recessed for snug contact. Accepts standard banana plugs. **Std. Pkg. 100**

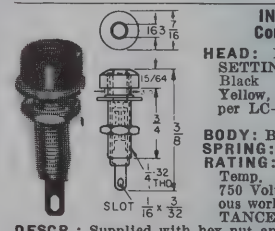
No.	NET Per C
219	$16.00



INSULATED MIDGET BANANA JACK

HEAD: Fluted Head, MOLDED NYLON, per MIL-P-20693A. With molded nylon washer. Red, Black, Yellow, Green, Blue. SPECIFY COLOR
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.
DESCR.: Extruded portion of head and washer provides excellent insulation from panel. Supplied with hex nut, brass tinned lug. Mounts in 5/16" hole in panels up to 1/4" thick. Accepts standard banana plugs. **Std. Pkg. 100**

No.	NET Per C
221	$19.00



INSULATED JACK Combination Type

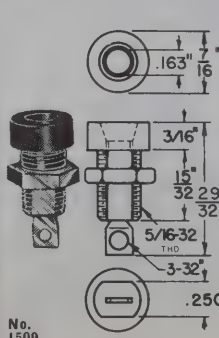
HEAD: MOLDED THERMOSETTING, plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, Blue, White per LC-726-1. SPECIFY COLOR
BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.
DESCR.: Supplied with hex nut and fibre washer. Accepts standard phone tip plugs or standard banana plugs. **Std. Pkg. 100**

No.	NET Per C
206	$17.00

NYLON BANANA JACKS

COLOR CODE SUFFIX — Add to Catalog Number as required

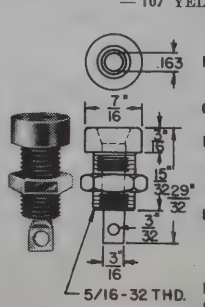
— 101 WHITE	— 104 GREEN	
— 102 RED	— 105 BLUE	— 108 BROWN
— 103 BLACK	— 106 ORANGE	— 112 PURPLE
	— 107 YELLOW	— 113 GREY



"DOUBLE-D" BODY

BODY: MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.
CONTACT: Brass, cadmium plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous working voltage. CAPACITANCE 5.5 mmfd.
DESCR.: Mounts in 5/16" hole in panels up to 5/16" thick. Accepts standard banana plugs. Wide temperature and humidity range. "Double-D" body mounts in round or punched hole to fit. **Std. Pkg. 50**

No.	NET Per C
1509	$12.00



FULL ROUND BODY

BODY: MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.
CONTACT: Brass, cadmium plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 5.0 mmfd.
DESCR.: Mounts in 5/16" hole in panels up to 5/16" thick. Accepts standard banana plugs. Wide temperature and humidity range. **Std. Pkg. 50**

No.	NET Per C
1508	$12.00

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HERMAN H. SMITH, INC.

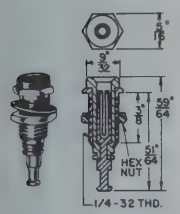
"IT'S SOUND PLANNING to SPECIFY SMITH for ELECTRONIC COMPONENTS"

NYLON TIP JACKS

With Metal Shell
Made to Meet MS-16108 Spec.

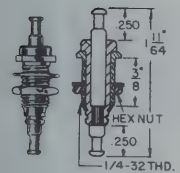
COLOR CODE SUFFIX
(Add to Catalog Number as Required)

— 101 WHITE	— 105 BLUE	— 108 BROWN
— 102 RED	— 106 ORANGE	— 112 PURPLE
— 103 BLACK	— 107 YELLOW	— 113 GREY
— 104 GREEN		



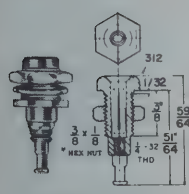
Molded Nylon Tip Jack. Metal shell eliminates possibility of stripping threads during assembly. Meets following requirements:

1. Salt Spray Test — Withstands 100 hours.
2. Rating — 15 Amps AC for 10°C Temp. rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 10.0 mmfd.
3. Insulation Resistance — 5,000 megohms.
4. Operating Conditions —
   - A. Continuous: 23 hours on, 1 hour off.
   - B. Elevation: Up to 5,000 ft.
   - C. Temperature: —55 to + 85°C.
   - D. Humidity: Up to 95%.
5. Material Specifications —
   - A. Insulator: Molded Nylon, per MIL-P-20693A. Specify color as coded above.
   - B. Shell and Nut: Brass Nickel Plated per QQ-N-290, type V (FC).
   - C. Lockwasher: Phosphor Bronze Nickel Plated per Spec. QQ-N-290, type V (FC).
   - D. Center Contact: Heat Treated Bery, Copper, Silver plated per QQ-S-365, Gold plated overall.
6. Non-Operating Conditions —
   - A. Elevation: Up to 50,000 ft.
   - B. Temperature: Continuous exposure for 72 hours at +160°F and 240 hours at —80°F.
   - C. Humidity: Up to 100%.



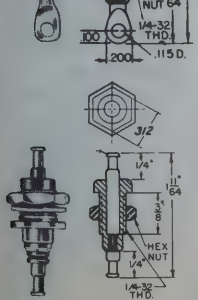
No.	Type	Std. Pkg.	NET Per C
1501	Wrap Around	25	$28.80
1502	Spade Terminal	25	42.00
1503	Feed Through	25	39.00

All Nylon



Completely Molded Nylon Jack. Fits all standard phone tip plugs. Contact recessed in head for safe contact. Hexagon head for grip in tightening. Mounts in ¼" hole in panels up to ¼" thick. Meets following requirements:

1. Salt Spray Test — Withstands 100 hours.
2. Rating: 15 Amps AC for 10°C Temp. rise, continuous duty. 5 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 3.0 mmfd.
3. Insulation Resistance — 5,000 megohms.
4. Operating Temperature— —55 to +150°C.
5. Material Specifications —
   - A. Body: Molded Nylon, per MIL-P-20693A. Specify Color as coded above.
   - B. Center contact: Heat treated Beryllium Copper, Silver plated per QQ-S-365, Gold plated overall. No. 1507 Brass, per QQ-B-626, Comp. 22, plated as above.
   - C. Hex Nut: Brass Nickel Plated.

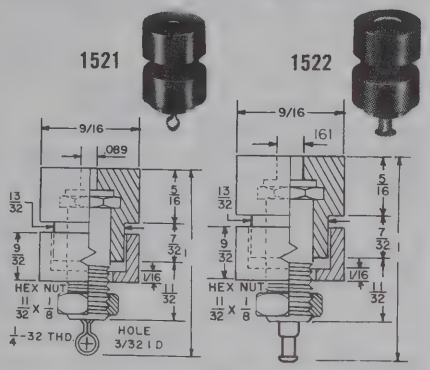


No.	Type	Std. Pkg.	NET Per C
1505	Wrap Around	25	$21.00
1506	Spade Terminal	25	30.00
1507	Feed Through	25	28.20

HIGH VOLTAGE NYLON JACKS

Color Code Suffix
Add to Catalog Number as Required

— 101 WHITE	— 105 BLUE
— 102 RED	— 106 ORANGE
— 103 BLACK	— 107 YELLOW
— 104 GREEN	— 108 BROWN



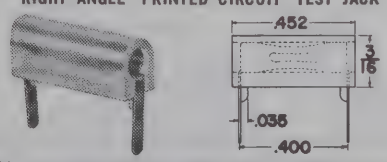
Made to meet MS-16107 Spec.

Heavy molded nylon body and cup washer prevent high-voltage flashover to panel. Meets following requirements:

1. Salt Spray Test — Withstands 100 hours.
2. Electrical Rating — 15 Amps AC for 10°C Temp. rise, continuous duty, 5 KV 60 cycle AC continuous working voltage. Millivolt drop per MIL-J-6751.
3. Material Specifications—
   - A. Insulator and Washer: Nylon Grade FM 10001, in accordance with MIL-P-17091 spec.
   - B. Insert Shell and Nut: Brass, Nickel plated per spec. QQ-N-290, type V (FC). Insert gold washed overall.
   - C. Contact: Phosphor bronze or beryllium copper, gold washed.
   - D. Terminal style: Optional formed cylinder or slotted flat terminals as shown.

No.		Std. Pkg. 25 NET Per C
1521	TIP JACK	$45.00
1522	BANANA JACK	$45.00

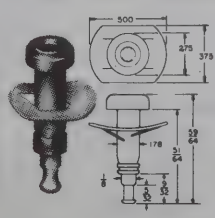
RIGHT ANGLE PRINTED CIRCUIT TEST JACK



BODY: MOLDED NYLON, PER MIL-P-20693A. Specify color as coded above.
SPRING: Beryllium Copper, per QQ-C-533.
FINISH: Silver underplate, .0002" min., per QQ-S-365, Type I, with .00003" Gold overplate; per MIL-F-14072, M310.
RATINGS: 5 Amps AC for 10°C Temp. rise, continuous duty. 1.5 KV. 60 cycle AC continuous working voltage. Contact resistance 5 milliohms max. at rated current. Capacitance less than 5 mmfd at 1 Mc.
MOUNTING: Mounts in .052" dia. holes, on .400" centers, in boards up to 3/16" thick. Can be spaced side-by-side on .60" on centers min.
MECHANICAL DATA: Thermal shock, vibration, humidity, insulation resistance, and salt spray tests per MIL-STD-202B. Solderability per MIL-S-6872. Insertion and withdrawal force: 8 oz. min., 5 lbs. max. with .080" (±.001") dia. probe.
DECR.: Double-entry design probe inserts from either end of jack. Closed entry construction will not accept probes larger than .084", will contact probes down to .074". Closed bottom construction keeps jack from fouling with solder or flux. Locking ears hold jack firmly in board until soldered. Precise dimensions allow for automated assembly on boards. Std. Pkg. 100

No.	NET Per C
430	$10.00

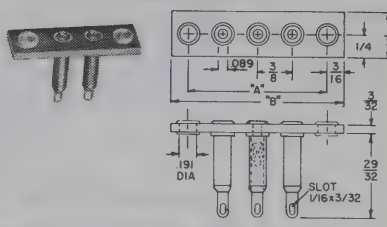
NYLON TEST TIP JACK



BODY: Nylon, Grade FM 10001. SPECIFY COLOR
CONTACT: Phosphor bronze, gold plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 3 KV 60 cycle AC continuous working voltage.
DESCR.: Mounts in 5/16" hole, with Tinnerman Speed Nut for fast permanent assembly. Teeth embed into jack body, preventing pulling out and turning. Accepts standard phone tip plugs. Std. Pkg. 25

No.	NET Per C
1598	$15.00

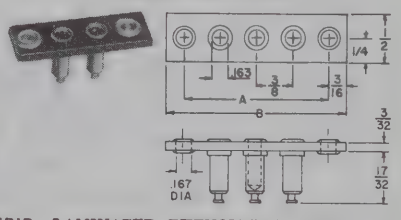
PIN JACK STRIPS



STRIP: LAMINATED PHENOLIC, XP, Black. Meets Federal Spec. L-L-31, Type I.
BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 KV, 60 cycle AC continuous working voltage.
DESCR.: From 2 to 10 pin jacks assembled on ⅜" centers on a heavy-duty board. Provides positive contact with standard phone tip plugs. Mounting holes accept screws up to #8. Std. Pkg. 25

No.	Jacks	Mtg. Ctrs. ("A")	Length ("B")	NET Per C
1982	2	1⅛"	1½"	$21.00
1983	3	1½"	1⅞"	27.00
1984	4	1⅞"	2¼"	36.00
1985	5	2¼"	2⅝"	45.00
1986	6	2⅝"	3"	51.00
1987	7	3"	3⅜"	60.00
1988	8	3⅜"	3¾"	69.00
1989	9	3¾"	4⅛"	75.00
1990	10	4⅛"	4½"	84.00

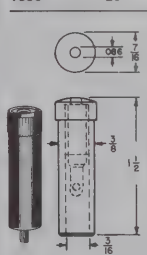
BANANA JACK STRIPS



STRIP: LAMINATED PHENOLIC, XP, Black, Meets Federal Spec. L-L-31, Type 1.
BODY: Brass, nickle plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 KV, 60 cycle AC continuous working voltage.
DESCR.: From 2 to 10 Banana jacks assembled on⅜" centers on a heavy-duty board. Provides positive contact with standard banana plugs. Mounting holes accept screws up to #8. Std. Pkg. 25

No.	Jacks	Mtg. Ctrs. ("A")	Length ("B")	Net Per C
1972	2	1⅛"	1½"	$21.00
1973	3	1½"	1⅞"	27.00
1974	4	1⅞"	2¼"	36.00
1975	5	2¼"	2⅝"	45.00
1976	6	2⅝"	3"	51.00
1977	7	3"	3⅜"	60.00
1978	8	3⅜"	3¾"	69.00
1979	9	3¾"	4⅛"	75.00
1980	10	4⅛"	4½"	84.00

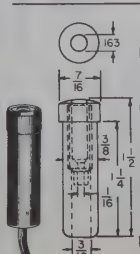
IN-LINE PHONE TIP JACK



HANDLE: MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red, Black, Yellow, Green. SPECIFY COLOR
CAP.: MOLDED THERMOSETTING plastic Red and Black per MIL-M-14 CFG. Yellow, Green, per LC-726-1.
BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Suitable for test lead extension where long leads are required. Accepts standard phone tip plug. Std. Pkg. 50

No.	NET Per C
248	$21.00

IN-LINE BANANA JACK



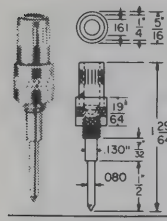
HANDLE: MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red, Black, Yellow, Green. SPECIFY COLOR
CAP: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, per LC-726-1.
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Suitable for test lead extension where long leads are required. Accepts standard banana plugs. Std. Pkg. 50

No.	NET Per C
251	$21.00

HERMAN H. SMITH, INC.

"IT'S SOUND PLANNING to SPECIFY SMITH for ELECTRONIC COMPONENTS"

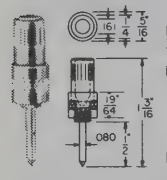
SOLDERLESS TIP PLUG



BODY: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless; wire fits through body of tip then wrapped around screw portion and tightened with knurled collar. Force fit type. Fits standard phone tip jacks.
Std. Pkg. 100

No.	Type	NET Per C
105	Senior	$11.00

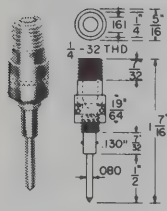
SOLDERLESS TIP PLUG



BODY: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless; wire fits through body of tip then wrapped around screw portion and tightened with knurled collar. Force fit type. Fits standard phone tip jacks.
Std. Pkg. 100

No.	Type	NET Per C
106	Junior	$11.00

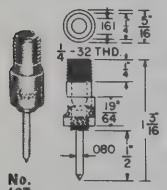
SOLDERLESS TIP PLUG Threaded Sr.



BODY: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless; wire fits through body of tip, then wrapped around screw portion and tightened with knurled collar. Threaded for easy assembly in plastic handle. Fits standard phone tip jacks.
Std. Pkg. 100

No.	Type	NET Per C
124	Senior	$12.00

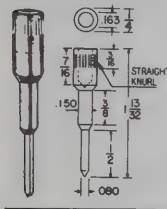
SOLDERLESS TIP PLUG Threaded Jr.



BODY: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Solderless; wire fits through body of tip, then wrapped around screw portion and tightened with assembly in plastic handle. Fits knurled collar. Threaded for easy standard phone tip jacks.
Std. Pkg. 50

No.	Type	NET Per C
127	Junior	$12.00

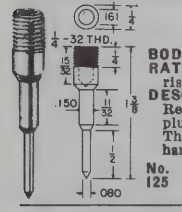
HEAVY DUTY TIP PLUG Force-Fit



BODY: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise continuous duty.
DESCR.: Extra large well for soldering. Rear of plug accepts standard banana plugs. Fits all standard phone tip jacks.
Std. Pkg. 25

No.	Type	NET Per C
156	Force Fit	$11.00

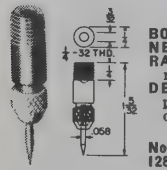
HEAVY DUTY TIP PLUG Threaded



BODY: Brass, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Extra large well for soldering. Rear of plug accepts standard banana plugs. Fits standard phone tip jacks. Threaded for easy assembly in plastic handle.
Std. Pkg. 50

No.	Type	NET Per C
125	Threaded	$12.00

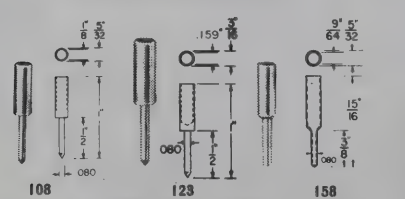
NEEDLE TIP AND CHUCK



BODY: Brass, nickel plated.
NEEDLE: Steel, nickel plated.
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Removable chuck for easy replacement. Needle pierces plating or corrosion for positive reading.
Std. Pkg. 50

No.	NET Per C
128	$14.00

SOLDER TYPE PHONE TIPS

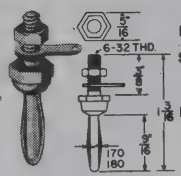


108 123 158

Brass, Nickel Plated
RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.
Std. Pkg. 100

No.	Type	NET Per C
108	Standard	$21.00
123	Large I.D.	26.40
158	Drawn	15.00

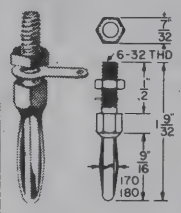
BANANA PLUG



BODY: HEX BRASS, nickel plated.
SPRING: Four-leaved phosphor bronze, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut and phosphor bronze lug. Threaded stud for panel mounting. Fits standard banana jacks.
Std. Pkg. 100

No	NET Per C
102	$18.00

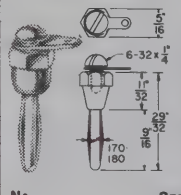
BANANA PLUG



BODY: HEX BRASS, nickel plated.
SPRING: Four-leaved phosphor bronze, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut and phosphor bronze lug. Threaded stud for panel mounting. Fits standard banana jacks.
Std. Pkg. 100

No.	NET Per C
103	$18.00

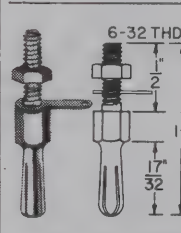
BANANA PLUG



BODY: HEX BRASS, nickel plated.
SPRING: Four-leaved phosphor bronze or beryllium copper, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with screw and phosphor bronze tinned lug. Internal female permits use on all size panels. Fits standard banana jacks.
Std. Pkg. 100

No.	Spring Material	NET Per C
100	Phosphor Bronze	$18.00
190	Beryllium Copper	24.00

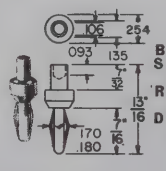
BANANA PLUG Split Type



BODY: HEX BRASS, nickel plated, cross-slotted.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Fits all standard banana jacks. Supplied with hex nut and phosphor bronze lug, threaded stud for panel mounting. Fits standard banana jacks.
Std. Pkg. 100

No.	NET Per C
104	$14.00

MIDGET BANANA PLUG Rivet Type



BODY: BRASS, silver plated.
SPRING: Four-leaved phosphor bronze, silver plated.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Can be furnished in varying types to meet Jan specs. Fits all standard banana jacks.
Std. Pkg. 100

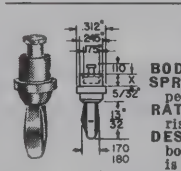
No.	NET Per C
121	$16.20

MIL-SPEC. TYPE

Same as above, made to meet Signal Corps Drawings SC-C2231.
Std. Pkg. 100

No.	NET Per C
122	$18.00

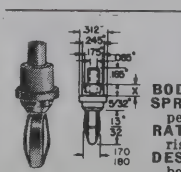
RIVET TYPE BANANA PLUG Wrap Around Type



BODY: BRASS, nickel plated.
SPRING: Four leaved, beryllium copper, nickel plated.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Rivets to panel or bakelite board. Wire wraps around stud and is then soldered.
Std. Pkg. 100

No.	"X" Dim.	Panel	NET Per C
2082	.105	1/16"	$18.00
2083	.135	3/32"	18.00
2084	.165	1/8"	18.00

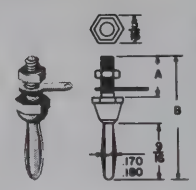
RIVET TYPE BANANA PLUG Solder Well Type



BODY: BRASS, nickel plated.
SPRING: Four-leaved beryllium copper, nickel plated.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Rivets to panel or bakelite board. Wire solders to well in rear of plug.
Std. Pkg. 100

No.	"X" Dim.	Panel	NET Per C
2067	.105	1/16"	$18.00
2068	.135	3/32"	18.00
2069	.165	1/8"	18.00

BANANA PLUG

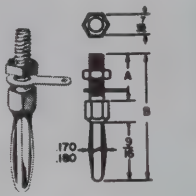


BODY: HEX BRASS, nickel or silver plated.
SPRING: Phosphor bronze or beryllium copper, nickel or silver plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut and tinned phosphor bronze lug threaded stud for panel mounting. Fits standard banana jacks.
Std. Pkg. 50

PHOS. BR. SPRING Nickel Plated Overall			BERYL. COP. SPRING Nickel Plated Overall	
No.	NET Per C	A	B	No.	NET Per C
431	$15.00	6-32x3/8"	1 7/32"	443	$18.00
432	15.00	6-32x1/2"	1 11/32"	444	18.00
433	15.00	6-32x5/8"	1 19/32"	445	18.00
434	15.00	8-32x3/8"	1 7/32"	446	18.00
435	15.00	8-32x1/2"	1 11/32"	447	18.00
436	15.00	8-32x5/8"	1 19/32"	448	18.00

PHOS. BR. SPRING Silver Plated Overall			BERYL. COP. SPRING Silver Plated Overall	
No.	NET Per C	A	B	No.	NET Per C
437	$18.00	6-32x3/8"	1 7/32"	449	$21.00
438	18.00	6-32x1/2"	1 11/32"	450	21.00
439	18.00	6-32x5/8"	1 19/32"	451	21.00
440	18.00	8-32x3/8"	1 7/32"	452	21.00
441	18.00	8-32x1/2"	1 11/32"	454	21.00
442	18.00	8-32x5/8"	1 19/32"	453	21.00

BANANA PLUG

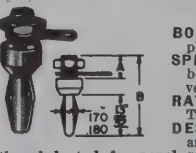


BODY: HEX BRASS, nickel or silver plated.
SPRING: Phosphor bronze or beryllium copper, nickel or silver plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut and tinned phosphor bronze lug threaded stud for panel mounting. Fits standard banana jacks.
Std. Pkg. 50

PHOS. BR. SPRING Nickel Plated Overall			BERYL. COP. SPRING Nickel Plated Overall	
No.	NET Per C	A	B	No.	NET Per C
401	$15.00	6-32x3/8"	1 7/32"	414	$18.00
403	15.00	6-32x1/2"	1 11/32"	415	18.00
404	15.00	6-32x5/8"	1 19/32"	416	18.00
405	15.00	8-32x3/8"	1 7/32"	417	18.00
406	15.00	8-32x1/2"	1 11/32"	418	18.00
407	15.00	8-32x5/8"	1 19/32"	419	18.00

PHOS. BR. SPRING Silver Plated Overall			BERYL. COP. SPRING Silver Plated Overall	
No.	NET Per C	A	B	No.	NET Per C
408	$18.00	6-32x3/8"	1 7/32"	420	$21.00
409	18.00	6-32x1/2"	1 11/32"	421	21.00
410	18.00	6-32x5/8"	1 19/32"	422	21.00
411	18.00	8-32x3/8"	1 7/32"	423	21.00
412	18.00	8-32x1/2"	1 11/32"	424	21.00
413	18.00	8-32x5/8"	1 19/32"	425	21.00

MIDGET BANANA PLUG

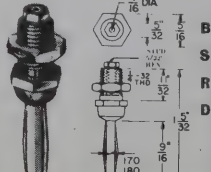


BODY: BRASS, nickel or silver plated.
SPRING: Phosphor bronze or beryllium copper. Nickel or silver plated.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut and tinned phosphor bronze lug threaded stud for panel mounting. Fits standard banana jacks.
Std. Pkg. 50

PHOS. BR. SPRING Nickel Plated Overall			BERYL. COP. SPRING Nickel Plated Overall	
No.	NET Per C	A	B	No.	NET Per C
460	$15.00	4-40x3/8"	15/16"	468	$18.00
461	15.00	4-40x1/2"	1 1/16"	469	18.00
462	15.00	6-32x3/8"	15/16"	470	18.00
463	15.00	6-32x1/2"	1 1/16"	471	18.00

PHOS. BR. SPRING Silver Plated Overall			BERYL. COP. SPRING Silver Plated Overall	
No.	NET Per C	A	B	No.	NET Per C
464	$18.00	4-40x3/8"	15/16"	472	$21.00
465	18.00	4-40x1/2"	1 1/16"	473	21.00
466	18.00	6-32x3/8"	15/16"	474	21.00
467	18.00	6-32x1/2"	1 1/16"	475	21.00

BANANA PLUG



BODY: HEX BRASS, nickel plated.
SPRING: Phosphor bronze or beryllium copper, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut. Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to plug for solderless connection.
Std. Pkg. 50

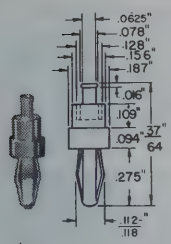
No.	Spring Material	NET Per M
145	Phosphor Bronze	$18.00
135	Beryllium Copper	27.00

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HERMAN H. SMITH, INC.

"IT'S SOUND PLANNING to SPECIFY SMITH for ELECTRONIC COMPONENTS"

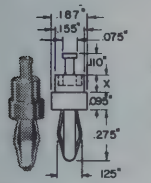
SUBMINIATURE PLUGS & JACKS



SUB MINIATURE BANANA PLUG
Rivet Type

BODY: BRASS, silver plated.
SPRING: Four leaved beryllium copper, silver plated.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: One piece beryllium copper spring insures positive and lasting contact. **Std. Pkg. 50**

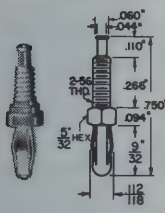
No.	NET Per C
191	$15.00



Swager Type
SUB MINIATURE BANANA PLUG

BODY: BRASS, silver plated.
SPRING: Four leaved beryllium copper, silver plated.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: One piece beryllium copper spring insures positive and lasting contact. **Std. Pkg. 100**

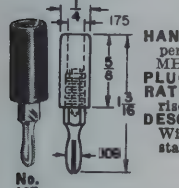
No.	"X" Dim.	Panel	NET Per C
2073	.105	1/16"	$15.00
2074	.135	5/32"	15.00
2075	.165	1/8"	15.00



SUB MINIATURE BANANA PLUG

BODY: BRASS, silver plated.
SPRING: Four leaved beryllium copper, silver plated.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: One piece beryllium copper spring insures positive and lasting contact. **Std. Pkg. 50**

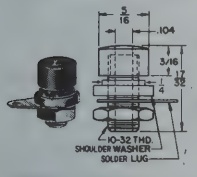
No.	NET Per C
192	$15.00



INSULATED BANANA PLUG
Sub Miniature

HANDLE: MACHINED BUTYRATE, per Fed. Spec. L-P344, Type I, Class MH. Red or Black. SPECIFY COLOR
PLUG: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Cross-slotted for spring tension. Wire solders directly into plug. Fits standard midget banana jacks. **Std. Pkg. 100**

No.	NET Per C
197	$16.00

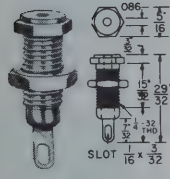


INSULATED BANANA JACK
Sub Miniature

HEAD: MACHINED BUTYRATE, per Fed. Spec. L-P344, Type I, Class MH. Red or Black. SPECIFY COLOR
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 750 Volts 60 cycle AC continuous working voltage. CAPACITANCE 6.0 mmfd.
DESCR.: Supplied with hex nut, fibre washer and tinned lug. Mounts in ¼" hole in panels up to ⅜" thick. Accepts standard midget banana plugs. **Std. Pkg. 100**

No.	NET Per C
198	$16.00

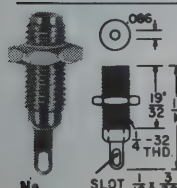
STANDARD TIP JACKS



PHONE TIP JACK

BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Positive contact with standard phone tip plugs. Supplied with hex nut. Mounts in ¼" hole in panels up to ⅝" thick. **Std. Pkg. 100**

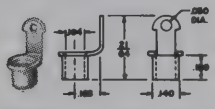
No.	NET Per C
107	$11.00



HEADLESS PHONE TIP JACK

BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut. Used with plastic molded instrument cases, where jack body is screwed into case. Accepts standard phone tip plugs. **Std. Pkg. 100**

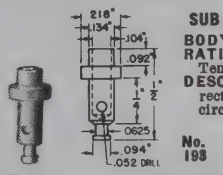
No.	NET Per C
147	$6.00



SUB MINIATURE BANANA JACK

BODY: BRASS, silver plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: This jack is riveted directly to chassis or to printed circuit board for easy assembly. **Std. Pkg. 100**

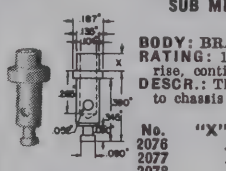
No.	NET Per C
194	$.90



SUB MINIATURE BANANA JACK

BODY: BRASS, silver plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: This jack is riveted directly to chassis or to printed circuit board for easy assembly. **Std. Pkg. 50**

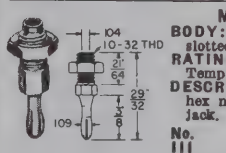
No.	NET Per C
193	$9.00



SUB MINIATURE BANANA JACK
Panel Mount

BODY: BRASS, silver plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: These jacks are riveted directly to chassis or bakelite board. **Std. Pkg. 100**

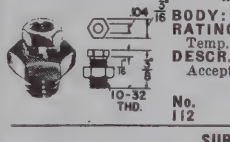
No.	"X" Dim.	Panel	NET Per C
2076	.105	1/16"	$9.00
2077	.135	5/32"	9.00
2078	.165	1/8"	9.00



MIDGET BANANA PLUG

BODY: BRASS, nickel plated, cross-slotted.
RATING: 10 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Cross-slotted, supplied with hex nut. Fits our No. 112 midget jack. **Std. Pkg. 50**

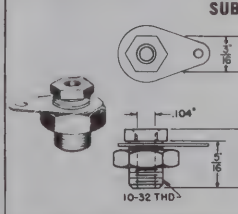
No.	NET Per C
111	$10.20



MIDGET BANANA JACK

BODY: BRASS, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut. Accepts our No. 111 midget plug. **Std. Pkg. 50**

No.	NET Per C
112	$7.80

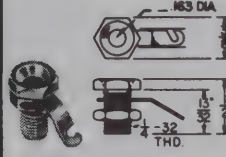


SUB MINIATURE BANANA JACK

BODY: HEX BRASS, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut and tinned lug Mounts in .196 (#10) hole in panels up to ⅛" thick. Accepts standard midget banana plugs. **Std. Pkg. 100**

No.	NET Per C
195	$7.80

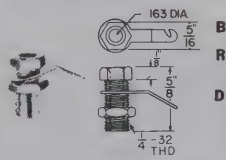
STANDARD BANANA JACKS



BANANA JACK

BODY: Hex brass nickel plated with recessed head.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut and brass tinned lug. Mounts in ¼" hole; fits panels up to ⅝" thick. Accepts standard banana plugs. **Std. Pkg.100**

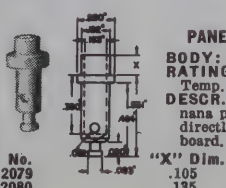
No.	NET Per C
101	$11.00



BANANA JACK

BODY: Hex brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut and brass tinned lug. Mounts in ¼" hole in panels up to ⅝" thick. Accepts standard banana plugs.

No.	Std. Pkg. 100	NET Per C
109		$11.00

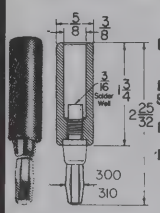


PANEL MOUNT BANANA JACK

BODY: BRASS, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Accepts all standard banana plugs. These jacks are riveted directly to chassis or bakelite board. **Std. Pkg. 100**

No.	"X" Dim.	Panel	NET Per C
2079	.105	1/16"	$10.80
2080	.135	5/32"	10.80
2081	.165	1/8"	10.80

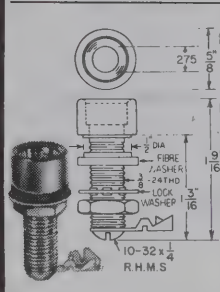
GIANT BANANA PLUGS & JACKS



INS. GIANT BANANA PLUG

HANDLE: MACHINED PHENOLIC plastic, per MIL-P-77B, Type I. Red or Black. SPECIFY COLOR
BODY: Hex brass, nickel plated.
SPRING: Six-leaved, phosphor bronze, nickel plated.
RATING: 25 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Large deep internal well for soldering heavy duty wire. Recessed so that no metal portions are exposed when plugged into mating jack, in order to prevent shocks or grounding. **Std. Pkg. 50**

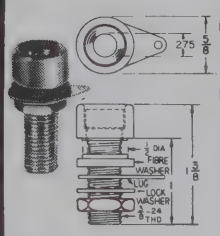
No.	NET Per C
285	$60.00



INS. GIANT BANANA JACK

HEAD: MACHINED BUTYRATE, per Fed. Spec. L-P344, Type I, class MH. Red or Black. SPECIFY COLOR
BODY: Hex brass, nickel plated.
RATING: 25 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 7.0 mmfd.
DESCR.: Supplied with hex nut, fibre washer, lock-washer, screw and tinned copper lug. Jack body recessed for snug contact. Mounts in ½" hole in panel up to ¾" thick. **Std. Pkg. 50**

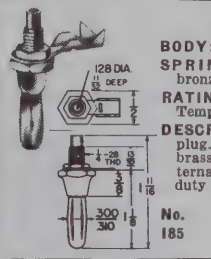
No.	NET Per C
286	$42.00



INS. GIANT BANANA JACK

HEAD: MACHINED BUTYRATE, per Fed. Spec. L-P344, Type I, class MH, Red or Black. SPECIFY COLOR
BODY: Brass, nickel plated.
RATING: 25 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 7.0 mmfd.
DESCR.: Supplied with hex nut, fibre washer, lock-washer, and brass tinned lug. Jack body recessed for snug contact. Mounts in ½" hole in panel up to ¾" thick. **Std. Pkg. 50**

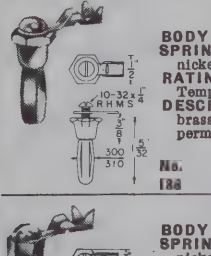
No.	NET Per C
287	$42.00



GIANT BANANA PLUG

BODY: HEX BRASS, nickel plated.
SPRING: Six-leaved phosphor bronze, nickel plated.
RATING: 25 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Plug portion of #285 plug. Supplied with hex nut and brass tinned lug. Large deep internal well for soldering heavy duty wire. **Std. Pkg. 25**

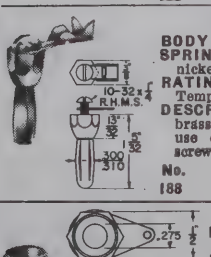
No.	NET Per C
185	$42.00



GIANT BANANA PLUG

BODY: HEX BRASS, nickel plated.
SPRING: Six-leaved phosphor bronze, nickel plated.
RATING: 25 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with screw and brass tinned lug. Internal female permits use on all size panels. **Std. Pkg. 25**

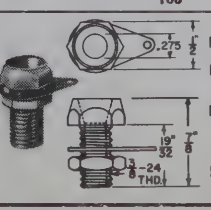
No.	NET Per C
188	$42.00



GIANT BANANA PLUG

BODY: HEX BRASS, nickel plated.
SPRING: Six-leaved phosphor bronze, nickel plated.
RATING: 25 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with screw and brass tinned lug. Female permits use on all size panels. Internal screw. **Std. Pkg. 25**

No.	NET Per C
188	$42.00



GIANT BANANA JACK

BODY: HEX BRASS, nickel plated.
RATING: 25 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied with hex nut and brass tinned lug, mounts in ¾" hole in panels up to ⅛" thick. **Std. Pkg. 25**

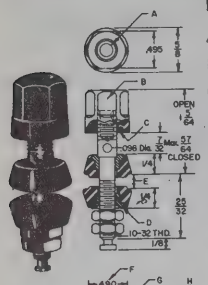
No.	NET Per C
187	$30.00

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HERMAN H. SMITH, INC.

"IT'S SOUND PLANNING to SPECIFY SMITH for ELECTRONIC COMPONENTS"

BINDING POST - Multipurpose



NOTES:
- A Banana Plug Receptacle, .161 I.D.
- B Head non-removable from stud.
- C Molded-in Brass Bushing in Head.
- D Molded-in Brass Bushing in Washers.
- E For Panels 1/16" to 1/4" thick.
- F Drill 1/2" hole for mounting washers.
- G Wire Hole is at right angle to Flat on insulated Washers.
- H Production Punch for keyed Slot for mounting Washers. (Sample Washer Sent on Request.)

RATING: 30 Amps AC for 10°C Temp. rise, continuous working voltage. CAPACITANCE 5.0 mmfd.
CURRENT: 30 amps safe current carrying capacity.
ACCEPTS: Phone tip plug, spade lug, banana plug, alligator clip or wire strand.
DESCR.: MOLDED NYLON, per MIL-P-20693A, head and washer completely insulates post from panel. Mounts in 1/2" or keyed hole as indicated. Wrap around type—direct solder connection to stud. Metal parts brass.
COLORS: Red, Black, Yellow, Green, Blue, White. Specify color. Std. Pkg. 100

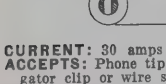
No. 257 — NET Per C $36.00

MIL-SPEC BINDING POST

Same as our #257 above, made to meet MIL-P-55149/1. Std. Pkg. 50

No. 267 — NET Per C $43.00

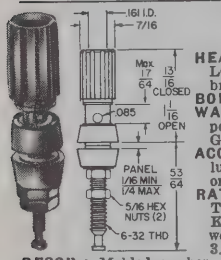
PIN JACK TYPE



Same as above, with Beryllium copper, gold plated pin tip receptacle replacing Note "A" above. All other specifications apply. Std. Pkg 100

No. 258 — NET per C $42.00

NYLON BINDING POST
Insulated

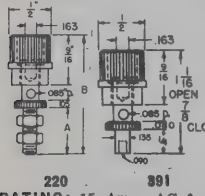


HEAD: CAPTIVE, MOLDED NYLON, per MIL-P-20693A, with brass Gold-Plated Insert.
BODY: Brass, Gold Plated
WASHERS: MOLDED NYLON, per MIL-P-20693A, with brass Gold-plated inserts.
ACCEPTS: Phone tip plug, spade lug, banana plug, alligator clip, or wire strand.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 3.0 mmfd.
DESCR.: Molded washers completely insulate post from panel. Miniature washers and narrow fluted head require minimum panel space. Mounts in 3/8" round or "D" hole in panel as indicated. Wrap-around solder terminal on stud for direct connection.
COLORS: Red, Black, Yellow, Green, Blue, White.

SPECIFY COLOR — Std. Pkg. 100

No. 1517 — NET Per C $33.00

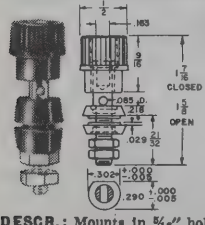
BINDING POST
Five-Way Grounding Type



HEAD: CAPTIVE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black.
SPECIFY COLOR
BODY: Brass, nickel plated.
ACCEPTS: Phone tip plug, spade lug, banana plug, alligator clip or wire strand.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage, when insulated from panel as recommended. CAPACITANCE 6.0 mmfd.
DESCR.: Can be insulated from panel with our 2155 and 2163 fibre washers; supplied with 2 hex nuts. Std. Pkg. 100

No.	Description	NET Per C
220	8-32 x 1/2 Stud	$18.00
230	6-32 x 3/8 Stud	18.00
391	Rivet Type	15.00
	With brass nickel plated insert in head	
280	8-32 Stud	$24.00
284	6-32 Stud	24.00
394	Rivet Type	15.00

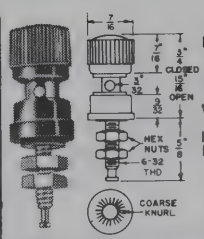
All Insulated Type



HEAD: As above.
BODY: As above.
WASHERS: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. With brass inserts.
ACCEPTS: Phone tip plug, spade lug, banana plug, alligator clip or wire strand.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 3.0 mmfd
DESCR.: Mounts in 5/16" hole in panel with milled slot for locking, supplied with two hex nuts. Std. Pkg. 100

No.	Description	NET Per C
260	8-32 Stud	$30.00
250	6-32 Stud	30.00
	With brass nickel plated insert in head	
290	8-32 Stud	$35.00
231	6-32 Stud	35.00

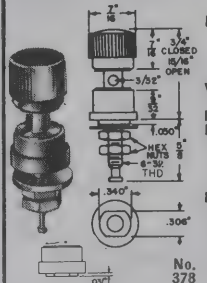
NYLON BINDING POSTS
Grounding Type



HEAD: CAPTIVE: MOLDED NYLON, per MIL-P-20693A. Red or Black with brass nickel plated insert.
SPECIFY COLOR
WASHER: Molded nylon with brass nickel plated insert.
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage, when insulated from panel as recommended. CAPACITANCE 6.0 mmfd.
DESCR.: Supplied with 2 hex nuts. Grounds to panel but supplied with nylon washer for uniformity of height with No. 378 when used on same panel. Can be insulated from panel by using our No. 2150 shoulder washer. Std. Pkg. 100

No. 377 — NET Per C $30.00

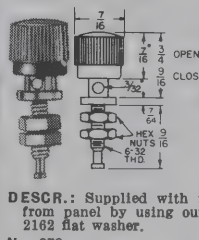
ALL INSULATED



HEAD: CAPTIVE: MOLDED NYLON, per MIL-P-20693A. Red or Black with brass nickel plated insert.
SPECIFY COLOR
WASHER: Molded nylon with brass nickel plated insert.
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 4.0 mmfd.
DESCR.: Supplied with two hex nuts. Boss washer insulates post from chassis when used with bakelite washer supplied. Min. Panel Std. Pkg. 100

No.	Thickness	NET Per C
378	1/16"	$30.00
198	1/32"	30.00

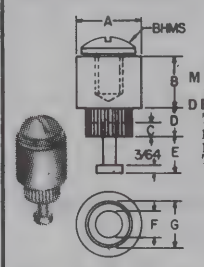
GROUNDING TYPE



HEAD: CAPTIVE: MOLDED NYLON, per MIL-P-20693A. Red or Black with brass nickel plated insert.
SPECIFY COLOR
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage, when insulated from panel as recommended. CAPACITANCE 7.0 mmfd.
DESCR.: Supplied with two hex nuts. Can be insulated from panel by using our No. 2150 shoulder washer and 2162 flat washer. Std. Pkg. 100

No. 379 — NET Per C $24.00

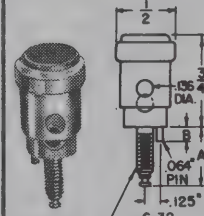
COMBINATION TERMINALS



MATERIAL: BRASS, alloy
DESCR.: Combination Screw and Turret Terminal. Knuried shank prevents turning. Supplied complete with BHMS and Internal Tooth Lockwasher, unassembled. Std. Pkg. 25

No.	A	B	C	D	E	F	G	BHMS	Thk	Net Panel Per C
2045	5/16	1/4	1/16	9/64	13/64	1/8	.220	6-32	3/32	$11 40
2046	11/32	5/16	5/64	11/64	15/64	9/64	.250	8-32	1/8	11.40
2047	3/8	3/8	3/32	15/64	15/64	5/32	.257	10-32	5/16	11.40

SPRING LOADED BINDING POSTS



HEAD: CAPTIVE, Brass nickel plated.
CAP: STYRENE, per Fed. Spec. L-P-406, Type I, Black.
BODY: Brass, nickel plated.
PIN: Nickel Silver.
ACCEPTS: Standard phone tip or wire in side hole and locks them in place on release of pressure on cap.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Side dowel pin locates and prevents post from turning when mounted in panel. Std. Pkg. 50

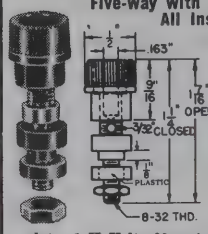
With Dowel Pin A	B	No.	NET Per C	Less Dowel Pin No.	NET Per C
1/4"	1/8"	2701	$36.00	2801	$30.00
5/16"	1/8"	2702	39.00	2802	33.00
7/16"	1/4"	2703	42.00	2803	36.00
1/2"	1/4"	2704	45.00	2804	39.00
5/8"	1/4"	2705	48.00	2805	42.00
7/8"	3/8"	2706	51.00	2806	45.00
1"	3/8"	2707	54.00	2807	48.00
1 1/4"	3/8"	2708	57.00	2808	51.00
1 1/8"	1/2"				
2"	3/4"				



Same as above less threaded stud. Supplied with 6-32 internal mounting thread.

No.	Description	NET Per C
2709	With 1/8" lg. Dowel Pin	$33.00
2809	Without Dowel Pin	27.00

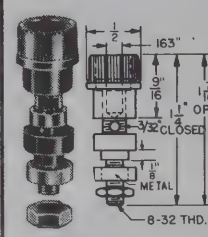
BINDING POST
Five-Way With Molded Mounting Washers
All Insulated Type



HEAD: CAPTIVE: MOLDED BUTYRATE, per Fed Spec. L-P349A, Type 3, Class MS. Red or Black.
SPECIFY COLOR
BODY: Brass, nickel plated.
WASHERS: MOLDED BUTYRATE, per Fed Spec. L-P349A, Type 3, Class MS.
ACCEPTS: Phone tip plug, spade lug, banana plug, alligator clip or wire strand.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 5.0 mmfd.
DESCR.: Mounts in 1/4" hole in panel. Supplied with one hex nut. Std. Pkg. 100

No. 386 — NET Per C $25.00

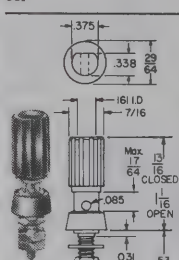
Grounding Type



HEAD: CAPTIVE: MOLDED BUTYRATE, per Fed Spec. L-P349A, Type 3, Class MS. Red or Black.
SPECIFY COLOR
BODY: Brass, nickel plated.
WASHERS: MOLDED BUTYRATE, per Fed Spec. L-P349A, Type 3, Class MS. Mounting Washer — Molded plastic. Back-up Washer — Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Mounts in 1/4" hole in panel. Grounded to panel by back-up washer. Supplied with one hex nut. Std. Pkg. 100

No. 387 — NET Per C $25.00

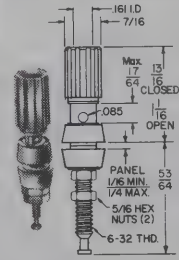
METAL BINDING POST
Grounded



HEAD: CAPTIVE, Fluted Brass, Gold-plated.
BODY: Brass, Gold-plated.
WASHER: MOLDED BLACK NYLON, per MIL-P-20693A, with brass Gold-plated insert.
ACCEPTS: Phone tip plug, spade lug, banana plug, alligator clip, or wire strand.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Fluted-head metal post to match our No. 1517. For use where direct ground connection is made to panel or chassis. Supplied with brass, gold-plated flat metal washer for grounding. Std. Pkg. 100

No. 1518 — NET Per C $40.00

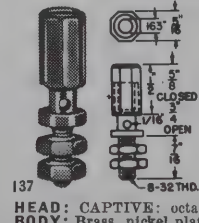
METAL BINDING POST
Insulated



HEAD: CAPTIVE, Fluted Brass, Gold-plated.
BODY: Brass, Gold-plated.
WASHER: MOLDED BLACK NYLON, per MIL-P-20693A, with brass Gold-plated insert.
ACCEPTS: Phone tip plug, spade lug, banana plug, alligator clip, or wire strand.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts, 60 cycle AC continuous working voltage. CAPACITANCE 3.0 mmfd.
DESCR.: Fluted-head metal post to match our No. 1517. Molded washers insulate post from panel for use where internal ground circuit is isolated from chassis or panel. Std. Pkg. 100

No. 1519 — NET Per C $45.00

BINDING POST - Metal Five-Way



HEAD: CAPTIVE: octagonal brass, nickel plated.
BODY: Brass, nickel plated.
ACCEPTS: Phone tip, spade lug, banana plug, alligator clip or wire strand.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 1 K Volts 60 cycle AC continuous working voltage, when insulated from panel as recommended. CAPACITANCE 5.0 mmfd.
DESCR.: Can be completely insulated from panel by using our 2155 and 2163 fibre washers. Supplied with two hex nuts. Std. Pkg. 100

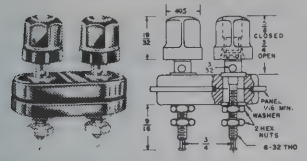
No.	Description	NET Per C
137	Standard	$25.00
208	Wrap-around	25.00

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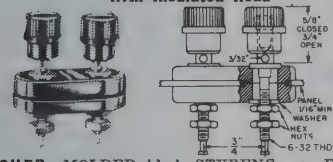
DUAL ASSEMBLY With Insulated Head



WASHER: MOLDED black STYRENE, per Fed. Spec. L-P416, Type I, cross slotted (+) to accept standard phone tips in post either forward or sideways.
BODY: Brass, nickel plated.
HEAD: Captive: MOLDED NYLON, per MIL-P-20693A, with molded in brass insert.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 2.0 mmfd. between conductors, 3.0 mmfd. to panel.
DESCR.: Mounts in two ½" holes on ¾" mounting centers in panels up to ¼" thick. Accommodates single or dual banana plugs. Supplied with 4 hex nuts, 2 flat washers.
Std. Pkg. 10

No.	Description	NET Per C
269BB	Two Black Heads	$66.00
269RR	Two Red Heads	66.00
269RB	One Red, One Black Head	66.00

DUAL ASSEMBLY With Insulated Head



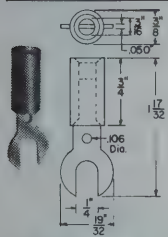
WASHER: MOLDED black STYRENE, per Fed. Spec. L-P416, Type I, cross slotted (+) to accept standard phone tips in post either forward or sideways.
BODY: Brass, nickel plated.
HEAD: Captive. MOLDED BUTYRATE, per Fed Spec. L-P349A, Type 3, Class MS. Red or Black.
SPECIFY COLOR
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 2.0 mmfd. between conductors, 3.0 mmfd. to panel.
DESCR.: Mounts in two ½" holes on ¾" mounting centers in panels up to ¼" thick. Accommodates single or dual banana plugs. Supplied with 4 hex nuts, 2 flat washers.
Std. Pkg. 10

No.	Description	NET Per C
224BB	Two Black Heads	$54.00
224RR	Two Red Heads	54.00
224RB	One Red, One Black Head	54.00

Same as above with brass nickel plated insert in head

263BB	Two Black Heads	66.00
263RR	Two Red Heads	66.00
263RB	One Red, One Black Head	66.00

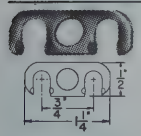
INSULATED SPADE LUG



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black.
SPECIFY COLOR
LUG: Brass, .050 thick, nickel plated.
RATING: 30 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: ¼" I.D. fits all standard Multi-purpose binding posts. Accepts up to #10 insulated wire, which solders in front hole.
Std. Pkg. 100

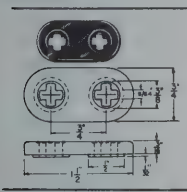
No.	NET Per C
400	$12.00

SHORTING LINK



MATERIAL: Spring brass, nickel plated. .033" thick.
RATING: 50 Amps AC continuous duty, for 10°C Temp. rise.
DESCR.: Snaps over contact barrels of dual binding posts with standard ¾" mounting centers.
Std. Pkg. 50
No. 327 NET Per C $6.00

BLACK STYRENE INSULATOR



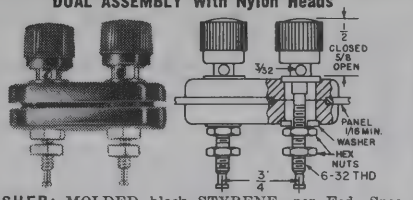
INSUL.: STYRENE, per Fed. Spec. L-P416, Type I.
RATING: 2 K Volts 60 cycle AC continuous working voltage.
DESCR.: Mounts in two 1/2" holes on 3/4" mounting centers in panels up to 1/4" thick.
Std. Pkg. 100
No. 207 NET per C $6.00

DUAL TIP JACK ASSEMBLY



WASHER: MOLDED black STYRENE, per Fed. Spec. L-P416, Type I.
BODY: Recessed, brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 2.0 mmfd. between conductors, 4.0 mmfd. to panel.
DESCR.: Mounts in two ½" holes on ¾" mounting centers in panels up to ¼" thick. Accommodates standard phone tip plugs. Supplied with two hex nuts.
Std. Pkg. 10
No. 488 NET Per C $55.00

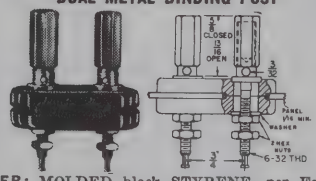
DUAL ASSEMBLY With Nylon Heads



WASHER: MOLDED black STYRENE, per Fed. Spec. L-P416, Type I, cross slotted (+) to accept standard phone tips in post either forward or sideways.
BODY: Brass, nickel plated.
HEAD: Captive: MOLDED NYLON, per MIL-P-20693A, with molded in brass insert.
RATING: 15 Amps AC for 10°C Temp. rise, continuous working voltage. CAPACITANCE 2.0 mmfd. between conductors, 3.0 mmfd. to panel.
DESCR.: Mounts in two ½" holes on ¾" mounting centers in panels up to ¼" thick. Supplied with 4 hex nuts, 2 flat washers.
Std. Pkg. 10

No.	Description	NET Per C
284BB	Two Black Heads	$60.00
284RR	Two Red Heads	60.00
284RB	One Red, One Black Head	60.00

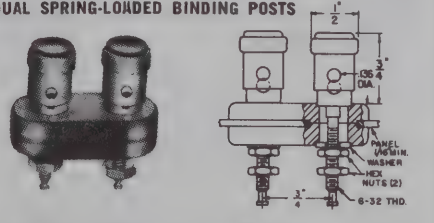
DUAL METAL BINDING POST



WASHER: MOLDED black STYRENE, per Fed. Spec. L-P416, Type I, cross slotted (+) to accept standard phone tips in post either forward or sideways.
BODY: Brass, nickel plated.
HEAD: Captive: Hex brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 2.0 mmfd. between conductors, 3.0 mmfd. to panel.
DESCR.: Mounts in two ½" holes on ¾" mounting centers in panels up to ¼" thick. Accommodates single or dual banana plugs. Supplied with 4 hex nuts, 2 flat washers.
Std. Pkg. 10

No.	NET Per C
209	$60.00

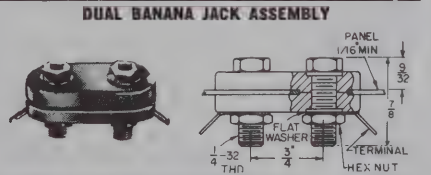
DUAL SPRING-LOADED BINDING POSTS



WASHER: MOLDED black STYRENE, per Fed Spec. L-P416, Type I, cross slotted (+) to accept standard phone tips or wire in post either forward or sideways. Supplied in colors on special order.
HEAD: Captive, brass, nickel plated.
CAP: Molded black styrene, per Fed. Spec. L-P416.
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 5 KV 60 cycle AC continuous working voltage.
DESCR.: Accepts standard phone tips or wires in side holes, and locks them in place when pressure on cap is released.
Std. Pkg. 10

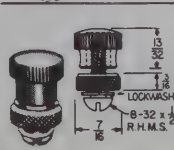
No.	NET Per C
2713	$75.00

DUAL BANANA JACK ASSEMBLY



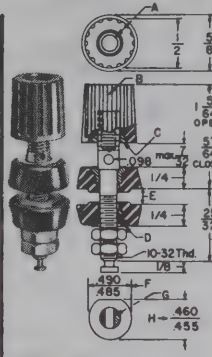
WASHER: MOLDED black STYRENE, per Fed. Spec. L-P416, Type I.
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 2 K Volts 60 cycle AC continuous working voltage. CAPACITANCE 2.0 mmfd. between conductors, 4.0 mmfd. to panel.
DESCR.: Mounts in two ½" holes on ¾" mounting centers in panels up to ¼" thick. Accommodates standard and dual banana plugs. Supplied with two hex nuts and brass tinned lugs.
Std. Pkg. 10
No. 489 NET Per C $50.00

BINDING POST



HEAD: MOLDED THERMO-SETTING plastic, per MIL-M-14 CFG, with molded-in brass threaded insert, Red or Black. SPECIFY COLOR
WASHER: Brass, nickel plated
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied complete with screw and lockwasher.
Std. Pkg. 100
No. 265 NET Per C $18.00

NYLON FLUTED HEAD MULTI-PURPOSE BINDING POST



NOTES:
A Banana Plug Receptacle, .161 I.D.
B Head non-removable from stud.
C Molded-in Brass Bushing in Head.
D Molded-in Brass Bushing in Washers.
E For Panels 1/16" to 1/4" thick.
F Drill 1/2" hole for mounting washers.
G Wire Hole is at right angle to Flat on insulated Washers.
H Production Punch for keyed Slot for mounting Washers. (Sample Washer Sent on Request.)

RATING: 30 Amps AC for 10°C Temp. rise, continuous working voltage. CAPACITANCE 5.0 mmfd.
CURRENT: 30 amps safe current carrying capacity.
ACCEPTS: Phone tip plug, spade lug, banana plug, alligator clip or wire strand.
DESCR.: MOLDED NYLON, per MIL-P-20693A, head and washer completely insulates post from panel. Mounts in ½" or keyed hole as indicated. Wrap around type—direct solder connection to stud. Metal parts brass.
COLORS: Red, Black, Yellow, Green, Blue, White. Specify color.
Std. Pkg. 100
No. 459 NET Per C $36.00

MIL-SPEC BINDING POST

Same as our #459 above, made to meet MIL-P- 55149/1.
Std. Pkg. 50

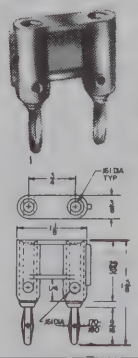
No.	NET Per C
495	$48.00

PIN JACK TYPE

Same as above with Beryllium copper, gold plated pin tip receptacle replacing Note "A" above. All other specifications apply.
Std. Pkg. 100

No.	NET Per C
497	$42.00

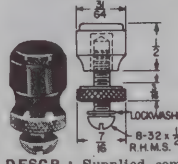
DUAL SHORTING PLUG



BODY: MOLDED BUTYRATE, per Fed. Spec. L-P416, Type I, Red, Black, Yellow, Green.
SPECIFY COLOR
PLUG: Brass, nickel plated.
SPRING: Four-leaved beryllium copper, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 5 KV 60 cycle AC continuous working voltage.
DESCR.: Internally shorted plug mates with standard dual binding posts on ¾" centers. Used for grounding or shorting input and output connections. Can be stacked for additional current rating. Rear banana jack holes allow connection to shorted posts.
Std. Pkg. 25

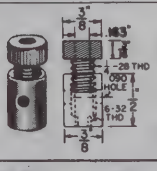
No.	NET Per C
1516	$72.00

BINDING POST



HEAD: MOLDED THERMO-SETTING plastic, per MIL-M-14 CFG, with molded-in brass threaded insert, Red or Black. SPECIFY COLOR
WASHER: Brass, nickel plated
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied complete with screw and lockwasher.
Std. Pkg. 100
No. 266 NET Per C $18.00

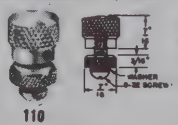
METAL BINDING POST



HEAD: BRASS, nickel plated.
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Accepts standard phone tips or banana plugs.
Std. Pkg. 50

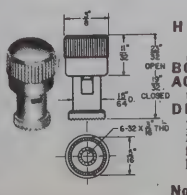
No.	NET Per C
136	$15.00

METAL BINDING POST



HEAD: BRASS, nickel plated.
BODY: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Supplied complete with screw and lockwasher.
Std. Pkg. 25
No. 110 NET Per C $18.00

BINDING POST
Compression Type



HEAD: Captive, brass nickel plated. Straight knurled for finger grip.
BODY: Brass, nickel plated.
ACCEPTS: Phone tips or wire (up to #10 gauge).
DESCR.: Head screws down to compress wire between body and sliding contact. Internally threaded for 6-32 mounting screw. Base knurled for positive grip to panel.
Std. Pkg. 50
No. 159 NET Per C $21.00

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SOLDERLESS TIP TEST LEAD

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
TIP: Solderless: Brass, nickel plated.
Std. Pkg. 6

No.	Meter End	NET Per Pr.
600	Phone Tips	$.87
601	Spade Lugs	.87
602	Alligator Clips	.93



PHONO NEEDLE TEST LEAD

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
BODY: Brass, nickel plated.
NEEDLE: Steel, nickel plated. **Std. Pkg. 6**

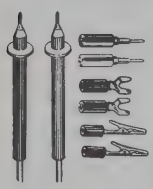
No.	Meter End	NET Per. Pr.
613	Phone Tips	$.87
614	Spade Lugs	.87
615	Alligator Clips	.93



ALL SOLDERLESS TEST LEAD

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
PLUG: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG.
TIP: Solderless: Brass, nickel plated.
Std. Pkg. 6

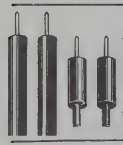
No.	NET Per Pr.
603	$1.26



HIGH TENSION TEST LEAD

HANDLE: FIBRE, per MIL-F-1148A, Grade CH. Red and Black.
PLUG: FIBRE, per MIL-F-1148A, Grade CH. Red and Black.
TIP: Brass, nickel plated.
Std. Pkg. 1

No.	Meter End	NET Per Pr.
620	Ins. Phone Tips	$1.98
621	Ins. Spade Lugs	1.98
622	Ins. Alligator Clips	2.40



SHORT TIP TEST LEAD

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Grade CH. Red and Black.
PLUG: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG.
TIP: Brass, nickel plated. **Std. Pkg. 6**
No. 624 **NET Per Pr. $1.05**



SLIM HANDLE TEST LEAD

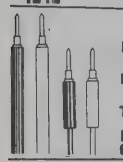
HANDLES: MACHINED BUTYRATE, per MIL-P10408A, Type 1, Class 2. Red and Black.
TIPS: Prod: Brass, Nickel Plated. Meter End: Drawn Brass Nickel Plated

No.	NET Per Pr.
670	$.66



BANANA PLUG TEST LEAD

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
PLUG: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG.
TIP: Solderless: Brass, nickel plated.
BODY: Brass, nickel plated.
SPRING: Four leaved phosphor bronze, nickel plated. **Std. Pkg. 6**
No. 628 **$1.50**



SUB MINIATURE TEST LEAD

HANDLE: FIBRE, per MIL-F-1148A, Grade CH. Red and Black.
PLUG: FIBRE, per MIL-F-1148A, Grade CH. Red and Black.
TIPS: Brass, nickel plated. **Std. Pkg. 6**

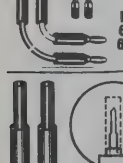
No.	NET Per Pr.
676	$1.26



TEST LEAD KIT

DESCR.: Each kit is supplied with one pair of test leads. One end test prods, other end ins. banana plugs.
FITTINGS: Two each: Phone tips, alligator clips, spade lugs. **Std. Pkg. 6**

No.	Type	NET Ea.
610	Solderless Prods	$1.80
611	Needle Tip Prods	1.80



SHIELDED TEST LEADS

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
TIP: Prod tip brass, nickel plated. Meter end, see type.
DESCR.: Plugs insert flush to insulated handle. Prods have retractable cover leaving no metal exposed. Eliminates possibility of shock or grounding. Supplied with either phone tip or banana plug meter ends. Other variations on special order. **Std. Pkg. 6**

No.	Type	NET Per Pr.
616	Phone Tip End	$1.80
617	Banana Plug End	1.86



ALLIGATOR CLIP TEST LEAD

HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black
TIPS: Solderless: Brass, nickel plated.
CLIPS: Steel, cadmium plated (No. 300).
BOOT: Vinyl Plastic. Red and Black
Std. Pkg. 6

No.	NET Per Pr.
672	$1.26



ALLIGATOR CLIP TEST LEAD

CLIPS: STEEL, cadmium plated.
Std. Pkg. 6

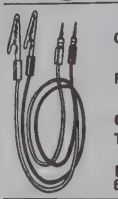
No.	Wire	NET Per Pr.
604	12 inches	$.57
605	24 inches	.63
606	36 inches	.72
607	48 inches	.81



ALLIGATOR CLIP TEST LEAD
With Boots

CLIPS: Steel, Cadmium Plated
BOOTS: Vinyl plastic Red and Black. **Std. Pkg. 6**

No.	Wire	NET Per Pr.
629	12 inches	$.81
657	24 inches	.87
658	36 inches	.96
659	48 inches	1.02



ALLIGATOR CLIP TEST LEAD

CLIP HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS, Red and Black
PLUG HANDLES: MOLDED THERMOSETTING PLASTIC, per MIL-M-14 CFG. Red and Black
CLIPS: Steel, cadmium plated
TIPS: Solderless: Brass, nickel plated. **Std. Pkg. 6**

No.	NET Per Pr.
627	$.99



ALLIGATOR CLIP TEST LEAD

CLIP HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS, Red and Black
CLIPS: Steel, cadmium plated.
ELBOWS: MOLDED THERMOSETTING PLASTIC, per MIL-M-14 CFG. Red and Black
TIPS: Brass, nickel plated. **Std. Pkg. 6**

No.	NET Per Pr.
628	$1.20



ALLIGATOR CLIP TEST LEAD

CLIP HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS, Red and Black
CLIPS: Steel, cadmium plated.
ELBOWS: MOLDED THERMOSETTING PLASTIC, per MIL-M-14 CFG. Red and Black
Std. Pkg. 6
No. 647 **NET Per Pr. $1.20**



ALLIGATOR CLIP TEST LEAD

CLIP HANDLES: MOLDED BUTYRATE, per Fed. Spec. L-349A, Type 3, Class MS, Red and Black
CLIPS: Steel, cadmium plated
LUGS: Steel, hot tinned
Std. Pkg. 6

No.	NET Per C
649	$1.20



CROCODILE CLIP TEST LEAD

CLIP: STEEL, cadmium plated.
BOOT: Vinyl plastic. Red and Black.
HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black
LUG: Steel, Hot tinned
Std. Pkg. 6

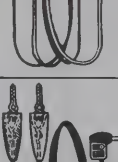
No.	NET Per Pr.
671	$1.20



CROCODILE CLIP TEST LEAD

CLIPS: Steel, Cadmium plated.
BOOTS: Vinyl plastic, Red and Black.
ELBOWS: MOLDED THERMOSETTING PLASTIC, per MIL-M-14 CFG. Red and Black
Std. Pkg. 6

No.	NET Per Pr.
648	$1.14



CROCODILE CLIP TEST LEAD

CLIPS: STEEL, cadmium plated.
BOOT: Vinyl plastic. Red and Black.
ELBOW: MOLDED THERMOSETTING PLASTIC, per MIL-M-14 CFG. Red and Black
TIP: Brass, nickel plated.
Std. Pkg. 6

No.	NET Per Pr.
675	$1.14



"UNIVERSAL TEST LEAD" Completely Interchangeable

Fifty Leads In One! One lead can make any required test lead combination. All parts adapt into prod handle or tip handle. Complete as shown. With plastic kit. **Std. Pkg. 6**

No.	NET Ea.
699	$2.40



"UNIVERSAL TEST LEAD" Miniature Accessories Completely Interchangeable

Fifty Leads In One. One lead can make any required test lead combination. All parts adapt into prod handle or meter tip. Supplied with miniature tips, clips, banana plugs and spade tips. Complete as shown. With plastic kit. **Std. Pkg. 6**

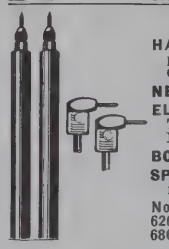
No.	NET Ea.
679	$2.40



METER TEST LEADS Solderless Prod

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
TIP: Solderless: Brass, nickel plated.
ELBOW: MOLDED THERMOSETTING plastic, per MIL-M-14 CFG. Red and Black.
BODY: Brass, nickel plated.
SPRING: Four leaved, phosphor bronze, nickel plated. **Std. Pkg. 6**

No.	Type	NET Per Pr.
625	Phone Tip Meter Tip	$1.95
685	Banana Meter Tip	1.50



NEEDLE PROD

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
NEEDLE: Steel, nickel plated.
ELBOW: MOLDED THERMOSETTING plastic, per MIL-M-14 CFG. Red and Black.
BODY: Brass, nickel plated.
SPRING: Four leaved, phosphor bronze, nickel plated. **Std. Pkg. 6**

No.	Type	NET Per P.r
626	Phone Tip Meter Tip	$1.35
686	Banana Meter Tip	1.50



SLIM JIM TEST LEAD

HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
PROBE: Steel, cadmium plated.
INSULATOR: Vinyl spaghetti tubing, Red and Black.
ELBOWS: MOLDED THERMOSETTING plastic, per MIL-M-14 CFG. Red and Black.
TIPS: Brass, nickel plated. **Std. Pkg. 6**

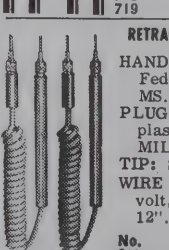
No.	NET Per Pr.
698	$1.14



MIDGET ALLIGATOR CLIP TEST LEAD

CLIPS: STEEL, Cadmium plated
BOOTS: Vinyl plastic Red and Black.
Std. Pkg. 6

No.	Wire	NET Per Pr.
716	12 inches	$.81
717	18 inches	.84
718	24 inches	.87
719	36 inches	.96



RETRACTILE ALL SOLDERLESS TEST LEAD

HANDLE: MOLDED BUTYRATE per Fed. Spec. L-P349A, Type 3, Class MS. Red and Black.
PLUG: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG.
TIP: Solderless brass, nickel plated.
WIRE #20 gauge, 41/36 strand, 4000 volt, nom. O.D. .165. Retracts to 12". Extends to 6 ft. **Std. Pkg. 6**

No.	NET Per Pr.
618	$2.95

TEST LEAD WIRE SPECIFICATIONS

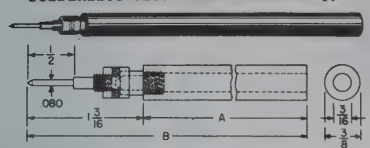
All test leads on this page are supplied with extra-flexible rubber-covered kinkless wire, 50-in. long, unless specified otherwise. **#20 wire, 26/34 strands, 5000 Volts, .125" O.D.**

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HERMAN H. SMITH, INC.

"IT'S SOUND PLANNING to SPECIFY SMITH for ELECTRONIC COMPONENTS"

SOLDERLESS TEST PROD—Threaded Type



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR

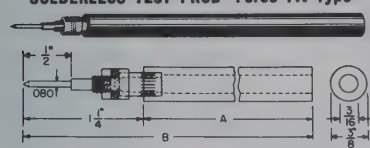
BODY: Brass, nickel plated.

RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.

DESCR.: Solderless: Wire fits through handle and body of plug then wrapped around screw portion and tightened with knurled collar. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
302	4"	5¼"	$30.00
303	5½"	6¾"	33.00

SOLDERLESS TEST PROD—Force Fit Type



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR

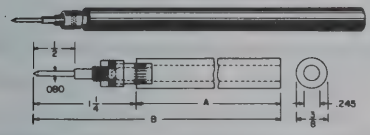
BODY: Brass, nickel plated.

RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.

DESCR.: Solderless: Wire fits through handle and body of plug then wrapped around screw portion and tightened with knurled collar. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
382	4"	5¼"	$24.00
383	5½"	6¾"	27.00

SOLDERLESS TEST PROD—Force Fit Type Extra Large Inside Diameter



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR

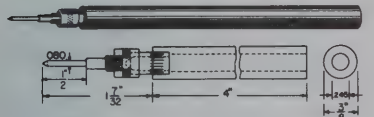
BODY: Brass, nickel plated.

RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.

DESCR.: Solderless: Wire fits through handle and body of plug then wrapped around screw portion and tightened with knurled collar. Extra large I.D. for heavy duty wire. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
352	4"	5¼"	$24.00
353	5½"	6¾"	27.00

SOLDERLESS FIBRE TEST PROD Extra Large Inside Diameter



HANDLE: FIBRE, per MIL-F-1148A, Grade CH. Red or Black. SPECIFY CLOR

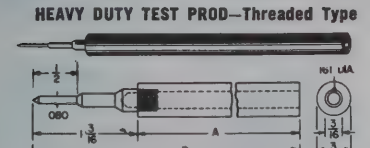
BODY: Brass, nickel plated.

RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.

DESCR.: Solderless: Wire fits through handle and body of plug then wrapped around screw portion and tightened with knurled collar. Large I.D. permits use of heavy duty wire. Std. Pkg. 25

No.	NET Per C
323	$30.00

HEAVY DUTY TEST PROD—Threaded Type



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR

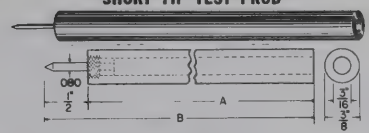
BODY: Brass, nickel plated.

RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.

DESCR.: Large diameter well enables soldering of heavy duty wire directly into plug. Fits standard phone tip jacks. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
319	4"	5 5/16"	$30.00
329	5½"	6 11/16"	33.00

SHORT TIP TEST PROD



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR

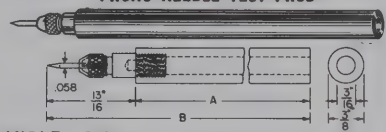
BODY: Brass, nickel plated.

RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.

DESCR.: Inserts flush with insulated handle, no metal exposed; eliminates possibility of shock or grounding. Fits standard phone tip jacks. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
363	4"	4½"	$21.00
364	5½"	6"	24.00

PHONO NEEDLE TEST PROD



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR

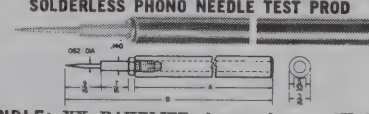
BODY: Brass, nickel plated.

RATING: 12 Amps AC for 10°C Temp. rise, cont. duty.

DESCR.: Removable chuck for easy replacement or broken needles. Needle pierces corrosion or plating for positive reading. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
317	4"	4 13/16"	$30.00
318	5½"	6 7/16"	33.00

SOLDERLESS PHONO NEEDLE TEST PROD



HANDLE: XX BAKELITE, lacquered, per MIL-P-79, Form TR. Red or Black. SPECIFY COLOR

BODY: Brass, nickel plated.

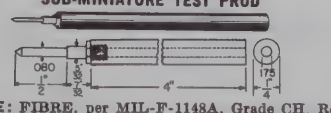
NEEDLE: Phono needle, steel.

RATING: 12 Amps AC for 10°C Temp. rise, cont. duty.

DESCR.: Wire can be soldered to brass stud or directly into plug itself. Stud also locks wire to pellet for solderless connections. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
314	4"	5 5/32"	$75.00
313	6"	7 5/32"	81.00

SUB-MINIATURE TEST PROD



HANDLE: FIBRE, per MIL-F-1148A, Grade CH. Red or Black. SPECIFY CLOR

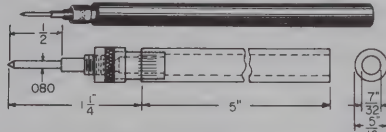
TIP: Brass, nickel plated.

RATING: 12 Amps AC for 10°C Temp. rise, cont. duty.

DESCR.: Threaded for easy assembly. Ideally suited for checking all types sub-miniature equipment. Std. Pkg. 25

No.	NET Per C
322	$30.00

PENCIL TYPE SOLDERLESS TEST PROD



HANDLE: MACHINED BUTYRATE, per MIL-P-10403A, Type I, Class 2, Red or Black. SPECIFY COLOR

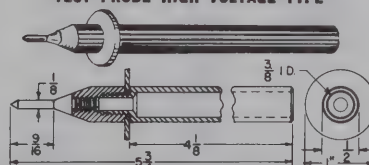
PLUG: Brass, nickel plated.

RATING: 12 Amps AC for 10°C Temp. rise, continuous duty.

DESCR.: Solderless: Wire fits through handle and body of plug, then wraps around screw portion and is tightened with knurled collar. Std. Pkg. 25

No.		NET Per C
384	Force Fit Type	$21.00

TEST PROBE HIGH VOLTAGE TYPE



HANDLE: FIBRE, per MIL-F-1148A, Grade CH. Red or Black. SPECIFY COLOR

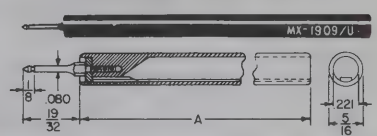
PROBE: Brass, nickel plated.

RATING: 12 Amps AC for 10°C Temp. rise, continuous duty. 15 KV 60 cycle AC continuous working voltage.

DESCR.: Heavy insulated fibre probe with flash-over shield for high-voltage applications. Large internal I.D. accommodates shielded cable or R.F. networks. Heavy duty removal tip. Std. Pkg. 10

No.		NET Ea.
630		$ .72
630D	Display of 12	8.64

NYLON HANDLE PRODS AND TIPS



HANDLE: MOLDED NYLON, per MIL-P20693A. Specify color as coded above.

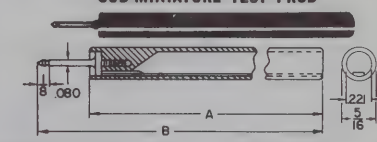
TIP: Brass, silver plated.

RATING: 10 Amps AC for 10°C Temp. rise, continuous duty.

DESCR.: Solderless. Made to meet Signal Corps Drawing SC-C-82761. Std. Pkg. 25

No.	Sig. Corps. Drawing and Part No.	Size ("A")	Color	NET Per C
176	MX-1906/U	1"	Red	$54.00
177	MX-1907/U	1"	Black	54.00
178	MX-1909/U	4"	Red	60.00
179	MX-1910/U	4"	Black	60.00

SUB-MINIATURE TEST PROD



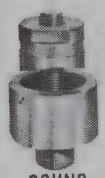
HANDLE: Molded Nylon, per MIL-P-20693A. Available in Red or Black. SPECIFY COLOR

TIP: Brass, Silver plated.

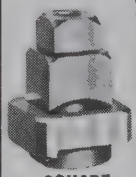
DESCR.: Solderless assembly. Ideal for use with sub-miniature printed-circuit tip jacks. Sharp tip breaks flux or oxide coating on printed-circuit pattern for positive contact when used as prod. Grooved head of prod makes positive contact when laid across wires. Fits all standard .080" tip jacks. Std. Pkg. 25

No.	Handle (A)	Overall (B)	NET Per C
348	1"	1 5/16"	$15.00
349	4"	4 5/16"	30.00

RADIO CHASSIS PUNCHES



ROUND



SQUARE



"KEY"



"D"

An assortment of round, square, "D", and Keyed holes can be punched by inserting in drilled pilot hole, and turning with wrench. Finished hole is smooth, accurately sized without burrs. Round punches are provided with center-line markings for enlarging holes larger than pilot hole. Individually packed in re-usable plastic box for keeping punch sharp and rust-free.

ROUND HOLE PUNCHES

No.	Hole Size	NET Ea.	No.	Hole Size	NET Ea.
3801	1/2"	$2.60	3814	1 1/4"	$3.00
3802	9/16"	2.60	3815	1 5/16"	3.60
3803	5/8"	2.60	3816	1 3/8"	3.60
3804	11/16"	2.60	3817	1 1/2"	4.10
3805	3/4"	2.60	3818	1 5/8"	4.85
3806	13/16"	2.60	3819	1 3/4"	5.50
3807	7/8"	2.60	3820	1 7/8"	6.85
3808	15/16"	2.85	3821	2"	7.40
3809	1"	2.85	3822	2 1/16"	11.00
3810	1 1/16"	3.00	3823	2 1/8"	7.95
3811	1 1/8"	3.00	3824	2 1/2"	13.00
3812	1 3/32"	3.00	3825	2 3/4"	18.00
3813	1 5/16"	3.00	3826	3"	25.00

SQUARE PUNCHES

3827	1/2"	4.85	3830	7/8"	6.55
3828	5/8"	5.00	3831	1"	6.80
3829	3/4"	5.70			

"KEY" PUNCHES

3832	15/32"	5.00	3834	1 11/64"	5.80
3833	17/64"	5.00	3835	1 7/64"	6.55

METER HOLE PUNCH

3836	2 35/64"	12.50

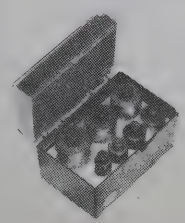
"D" PUNCHES

3837	1/2x15/32"	4.50	3838	5/8x19/32"	4.75

BALL BEARING DRIVE SCREWS

Reduces friction and effort when punching round holes 11/16" and larger. For use only with Round punches listed above.

No.	Use with Nos.	NET Ea.
3839	3804 to 3808	$1.00
3840	3809 to 3817	1.10
3841	3818 to 3819	2.60
3842	3820 to 3824 and 3836	2.75
3843	3825 to 3826	5.15



CHASSIS PUNCH SET

A set of 7 of the most often used chassis punch sizes for electronic construction. Packed in a plastic platform box to keep punches sharp and rust-free. Contains the following sizes: ½", 5/8", ¾", 7/8", 1", 1 1/16", 1 1/4".

No.	NET Ea.
3844	$21.00

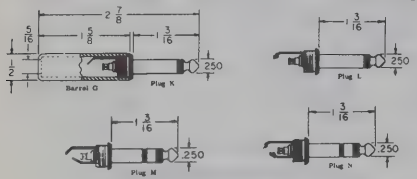
HERMAN H. SMITH, INC.

"IT'S SOUND PLANNING to SPECIFY SMITH for ELECTRONIC COMPONENTS"

IMPROVED "TURRET-CENTER" STYLE



BODY: Body, Tip, Ring, and sleeve —Brass, nickel plated.
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty. 1.5 KV 60 cycle AC continuous working voltage.
DESCR.: New, improved construction has co-axial "turret-terminal" tip lug and widely separated contacts for maximum voltage ratings. Styrene separator, Mylar sleeves, and Nylon bushings used for increased performance. Fits standard phone jacks. **Std. Pkg. 25**



Bakelite Barrel



BARREL: MOLDED THERMOSETTING plastic, per MIL-M-14 CFG. Red and Black. SPECIFY COLOR

No.	Circuit	Terminals	Plug	Barrel	NET Per C
171	2	Solder	K	G	$39.00
172	2	Screw	L	G	45.00
308	3	Solder	M	G	63.00
309	3	Screw	N	G	72.00

Shielded Barrel



Std. Pkg. 25

BARREL: BRASS, nickel plated with tubular insert.

No.	Circuit	Terminals	Plug	Barrel	NET Per C
173	2	Solder	K	J	$60.00
174	2	Screw	L	J	63.00
311	3	Solder	M	J	78.00
312	3	Screw	N	J	84.00

MINIATURE TELEPHONE JACKS

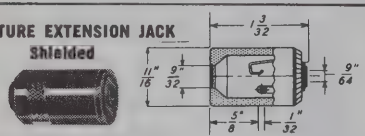


BUSHING: BRASS, nickel plated.
INSUL.: XXXP bakelite, type PBE-P per MIL-P-3115A.
SPRING: Nickel silver alloy, spring temper.
TERM.: Brass, hot tinned.
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty. 500 Volts 60 cycle AC continuous working voltage.
DESCR.: Notched insulation washers interlock springs and lugs, eliminate possibility of shifting which result in electrical shorts. Springs firmly hold mating plug. Supplied with hex brass nut and steel mounting washer all nickel plated. **Std. Pkg. 50**

No.	Circuit	NET Per C
482	Two Conductor, Open	$24.00
483	Two Conductor, Closed	27.00

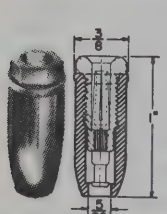
MINIATURE EXTENSION JACK

Shielded



BARREL: Brass, nickel plated.
BODY: Brass, nickel plated.
SPRING: Nickel silver alloy, spring temper.
INSUL.: Bakelite.
RATING: 5 Amps AC for 10°C Temp. rise, continuous duty. 500 Volts 60 cycle AC continuous working voltage.
DESCR.: Mates with Miniature Phone Plugs. **Std. Pkg. 25**
No. 487 **NET Per C $72.00**

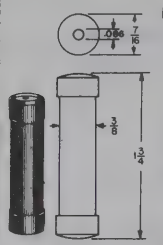
NYLON IN-LINE TIP JACK



Color Code Suffix
Add to Catalog Number as Required
– 101 WHITE
– 102 RED
– 103 BLACK
– 104 GREEN
– 105 BLUE
– 106 ORANGE
– 107 YELLOW
– 108 BROWN
– 112 PURPLE
– 113 GREY

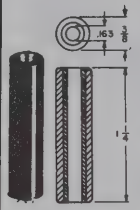
All Nylon
HANDLE: MOLDED NYLON, per MIL-P-20693A. Specify color as coded above.
BODY: Molded Nylon, per MIL-P-20693A.
CONTACT: Heat treated beryllium copper, gold washed.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty. 5 KV 60 cycle AC continuous working voltage.
DESCR.: Fits all standard phone-tip plugs, with recessed contact for safe connection. Ideally suited for use in patch and extension cords. Can also be used for panel mounting where wrap-around terminal connection must be insulated at rear. **Std. Pkg. 50**
No. 1513 **NET Per C $30.00**

PHONE TIP PLUG SPLICE



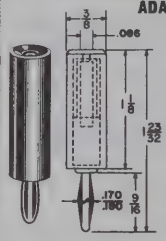
HANDLE: MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red, Black, Yellow, Green. SPECIFY COLOR
CAP: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG. Yellow, Green, per LC-726-1.
BODY: Brass, nickel plated.
SPRING: Phosphor bronze.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Invaluable for quick splicing connections or for test lead extension. Accepts standard phone tip plugs. **Std. Pkg. 50**
No. 246 **NET Per C $27.00**

BANANA PLUG SPLICE



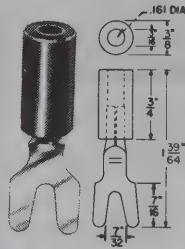
HANDLE: MACHINED BUTYRATE, per MIL-P-10408A, Type I, Class II. Red, Black, Yellow, Green. SPECIFY COLOR
INSERT: Brass.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Invaluable for quick splicing connections. Accepts standard banana plugs. **Std. Pkg. 50**
No. 245 **NET Per C $24.00**

ADAPTER Tip Plug to Banana Plug



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR
CAP: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG.
PLUG: Brass, nickel plated.
CONTACT: Phosphor Bronze.
SPRING: Four-leaved phosphor bronze, nickel plated.
JACK: Brass, nickel plated.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Accepts standard phone tip plugs and adapts to standard banana plugs. **Std. Pkg. 50**
No. 214 **NET Per C $30.00**

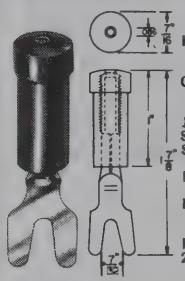
INSULATED SPADE LUG



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR
LUG: Steel, hot tinned, .030 thick.
RATING: 25 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Banana plug can be inserted into spade lug thru rear of handle. **Std. Pkg. 100**

No.	Description	NET Per C
218	Insulated Spade Lug	$10.80
129	Lug Only	1.20

ADAPTER Phone Tip to Spade Lug

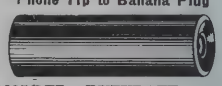


HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3 Class MS. Red or Black.
CAP.: MOLDED THERMOSETTING plastic, Red and Black per MIL-M-14 CFG.
JACK: Brass.
SPRING: Phosphor Bronze.
SPADE LUG: Steel hot tinned .030 thick.
RATING: 15 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Tip jack accepts standard phone tip plugs and adapts to spade lug. **Std. Pkg. 50**

No.	Deser.	NET Per C
249	Adapter	$35.00

COMBINATION SPLICE

Phone Tip to Banana Plug

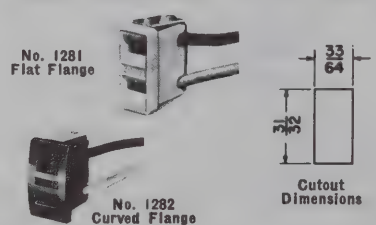


HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. Red or Black. SPECIFY COLOR
BODY Brass.
CONTACT: Beryllium copper, gold washed.
DESCR.: Invaluable for quick splice of test leads. Accepts standard Banana plug one end, .080 phone tip other end. **Std. Pkg. 50**
No. 496 **NET Per C $30.00**

CONVENIENCE OUTLETS

For small unit electrical appliances and Electronic devices. UL Approved RADIOS — CLOCK RADIOS — CLOCKS — T.V. SETS — LAMPS — TOASTERS, ETC.

SINGLE SCREW BRACKET TYPE WIRE LEADS

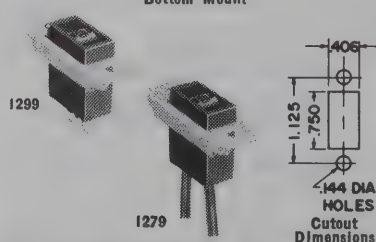


Can be dropped into opening and held in place by metal bracket and single central screw, supplied. UL Approved.
RATING: 15 Amps, 125 Volts AC or DC.
LEADS: Plastic wire #14 gauge, 6" long. **Std. Pkg. 50**

No.	Color	NET Per C
1281-103	Black	$17.00
1281-101	White	19.00
1282-103	Black	17.00
1282-101	White	19.00

BRACKET TYPE

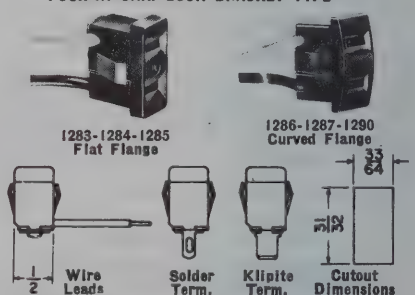
Bottom Mount



Flat steel bracket mounts with two #6 screws or equivalent size eyelets from top or bottom. UL Approved.
RATING: 15 Amps, 125 Volts AC or DC.
LEADS: No. 1279 has two leads, plastic wire #16 gauge, 8" long. UL Approved.

No.	Terminals	NET Per C
1299	Solder	$ 9.00
1279	Wire Leads	22.80

PUSH-IN SNAP-LOCK BRACKET TYPE



Carbon Steel spring clips lock unit securely in place when pushed into opening. UL Approved.
RATING: 15 Amps, 125 Volts AC or DC.
LEADS: Plastic wire #14 gauge, 6" long. **Std. Pkg. 50**

No.	Terminals	Color	NET Per C
1283-103	Wire Leads	Black	$17.00
1283-101	Wire Leads	White	19.00
1284-103	Solder	Black	15.00
1284-101	Solder	White	17.00
1285-103	Klipite	Black	15.00
1285-101	Klipite	White	17.00
1286-103	Wire Leads	Black	15.00
1286-101	Wire Leads	White	17.00
1287-103	Solder	Black	15.00
1287-101	Solder	White	17.00
1290-103	Kliptite	Black	15.00
1290-101	Kliptite	White	17.00

THREE WIRE OUTLET

(With grounding lead)



Carbon steel spring clips lock unit securely in place when pushed into opening. UL Approved.
RATING: 15 Amps, 125 Volts, AC or DC.
LEADS: Two #14 gauge 6" long plastic wire and one #16 gauge green ground lead 6" long. **Std. Pkg.50**

No.	Color	NET Per C
1280-103	Black	$25.00
1280-101	White	27.00

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HERMAN H. SMITH, INC.

"IT'S SOUND PLANNING to SPECIFY SMITH for ELECTRONIC COMPONENTS"

JUMPERS & PATCH CORDS

COLOR CODE SUFFIX
Add to Catalog Number as required

— 101 WHITE	— 106 ORANGE
— 102 RED	— 107 YELLOW
— 103 BLACK	— 108 BROWN
— 104 GREEN	— 112 PURPLE
— 105 BLUE	— 113 GREY

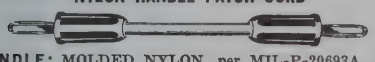
SUB-MINIATURE "CROSS PATCH" CORD



HANDLE: MOLDED BUTYRATE, per Fed. Spec. L-P349A, Type 3, Class MS. SPECIFY COLOR
BODY: Brass, silver plated.
SPRING: Four-leaved beryllium copper, silver plated.
WIRE: General purpose, PVC insulated, 1/64" wall. #18 AWG, 41/34 stranded conductor. Voltage rating up to 1 KV RMS.
DESCR.: Intercon[illegible]cts unlimited number of multiple circuits. Positive, lasting contact for banana plugs on top and side. Special lengths on request. Std. Pkg. 10

No.	Length ("A")	NET Per C
1590-6	6 inches	$60.00
1590-12	12 inches	69.00
1590-18	18 inches	75.00
1590-24	24 inches	84.00

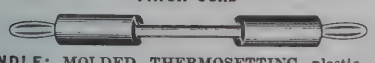
NYLON HANDLE PATCH CORD



HANDLE: MOLDED NYLON, per MIL-P-20693A. Red, Black, Yellow or Green. SPECIFY COLOR
BODY: Brass, nickel plated.
SPRING: Four-leaved beryllium copper, nickel plated.
WIRE: 10 KV PVC flexible wire, 65 strands #36 copper, #18 AWG, insulated to an O.D. of .140".
DESCR.: Uses our standard No. 478 banana plug to interconnect circuits. Fits standard banana jacks. Std. Pkg. 10

No.	Length	NET Per C
1520-8	8 inches	$54.00
1520-12	12 inches	60.00
1520-24	24 inches	66.00
1520-36	36 inches	72.00

PATCH CORD



HANDLE: MOLDED THERMOSETTING plastic. Red and Black per MIL-M-14 CFG. Yellow, Green and LC-721-1. SPECIFY COLOR
BODY: Brass, nickel plated.
SRING: Four-leaved beryllium copper, nickel plated.
WIRE: 10 KV PVC flexible wire ,65 strands #36 copper, insulated to an O.D. of .140".
DESCR.: Uses our standard No. 271 banana plug to interconnect circuits. Fits standard banana jacks. Std. Pkg. 10

No.	Length ("A")	NET Per C
690	8 inches	$48.00
691	12 inches	54.00
692	24 inches	60.00
693	36 inches	66.00

HIGH-CURRENT PATCH CORD



HANDLE: MACHINED PHENOLIC plastic, per MIL-P-77B, Type 1. Red or Black assemblies SPECIFY COLOR
BODY: Brass, nickle plated.
SPRINGS: Six-leaved, phosphor bronze, nickel plated.
WIRE: #10, PVC insulated stranded wire, 105 strands #30 tinned copper wire, insulated to an O.D of .215".
RATING: 25 Amps AC for 10°C Temp. rise, continuous duty.
DESCR.: Tapered recessed plug so that no metal portions are exposed when plugged into mating jacks. Std. Pkg. 10

No.	Length	NET Per C
1591-8	8 inches	$135.00
1591-12	12 inches	135.00
1591-24	24 inches	140.00
1591-36	36 inches	145.00

BNC MALE TO ALLIGATOR CLIPS



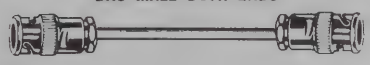
CONN.: UG-88C/U. (BNC Series)
CLIPS: Steel Cad. Plated (#300).
INSUL.: Molded Vinyl (#331).
WIRE: As specified above.
DESCR.: For testing of wave patterns etc. One end termination with UG-88C/U other end with insulated alligator clips, one red, one black. Std. Pkg. 10

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
———	1537-12	1587-12	12"	$3.75
———	1537-24	1587-24	24"	3.96
———	1537-36	1587-36	36"	4.08
———	1537-48	1587-48	48"	4.20
———	1437-60	1587-60	60"	4.30

CABLE TYPES AVAILABLE

	WIRE "A"	WIRE "B"	WIRE "C"
DESCRIPTION	2-cond. tw. 18 ga. 65/36 str.	Shielded audio cable	Coaxial Cable RG58C/U.
INSULATION	Vinyl	Polyethylene	Polyethylene
JACKET	Vinyl, Color Grey	Vinyl, Color Grey	Vinyl, Color Black
NOM. CAP.	30 mmf./ft.	25 mmf./ft.	28.5 mmf./ft.

BNC MALE BOTH ENDS



CONN.: UG 88 C/U. (BNC Series)
Std. Pkg. 10

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
———	1539-12	1589-12	12"	$4.00
———	1539-24	1589-24	24"	4.20
———	1539-36	1589-36	36"	4.32
———	1539-48	1589-48	48"	4.44
———	1539-60	1589-60	60"	4.55

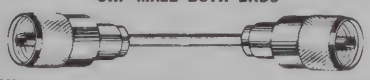
BNC FEMALE BOTH ENDS



CONN.: UG-89B/U. (BNC Series)
WIRE: RG-58C/U.

No.	Length	NET Ea.
1869-12	12 inches	$3.75
1869-24	24 inches	3.85
1869-36	36 inches	4.00
1869-48	48 inches	4.15
1869-60	60 inches	4.25

UHF MALE BOTH ENDS



CONN.: PL-259. (UHF Series) Std. Pkg. 10

No. RG-58C/U Wire	No. RG-11/U Wire	Length	NET Ea.
1871-12	1870-12	12 inches	$4.50
1871-24	1870-24	24 inches	4.62
1871-36	1870-36	36 inches	4.75
1871-48	1870-48	48 inches	4.88
1871-60	1870-60	60 inches	5.00

BNC FEMALE TO BNC MALE



CONN.: UG-89B/U. (BNC Series)
UG-89B/U. (BNC Series)
WIRE: RG-58C/U.

No.	Length	NET Ea.
1878-12	12 inches	$4.00
1878-24	24 inches	4.20
1878-36	36 inches	4.20
1878-48	48 inches	4.44
1878-60	60 inches	4.55

NYLON LACING CORD



MIL-T-713A, Type S. Composition P, Classes 3, 2 and 1. Supplied in 1-lb. tubes.

Natural Color

No.	Class	Test	Yardage	NET Ea.
734	1	70 lb.	600	$9.00
735	2	48 lb.	800	9.30
736	3	32 lb.	1140	9.60

Black Color

791	1	70 lb.	600	$10.80
792	2	48 lb.	800	11.10
793	3	32 lb.	1140	11.40

NYLON LACING TAPE
Braided — MGD Finish

#18 size meets MIL-T-13 A, Type P, Class 2. 500-yard spools.

Natural Color

No.	Size	Width	Thick	Test	NET Each
766	18	.090	.0125	50 lbs.	$9.50
767	21	.0625	.009	25 lbs.	7.00

Black Color

769	18	.090	.0125	50 lbs.	$10.00
770	21	.0625	.009	25 lbs.	7.50

Commercial Type

Has all application of above but at a much lower cost. Supplied in 1-lb tubes in natural color.

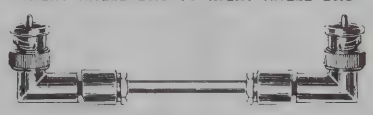
No.	Width	Yardage	NET Ea.
743	1/8"	620	$5.10

DACRON LACING CORD

Conforms to the physical requirements of MIL-T-713A. Greater tensile strength with minimal stretch than nylon. Fungus, acid and abrasion resistance. Supplied in 1 lb. tubes in natural color.

No.	Class	Test	Yardage	NET Ea.
722	1	78 lbs.	750	$9.60
723	2	57 lbs.	1000	9.90
724	3	37 lbs.	1500	10.20

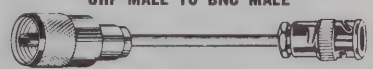
RIGHT ANGLE BNC TO RIGHT ANGLE BNC



CONN.: UC-913/U. (BNC Series)
WIRE: As specified above.
DESCR.: Used for patching and jumping. Each end terminates with UG-913/U.

No. Wire "A"	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
———	1538-12	1588-12	12"	$5.88
———	1538-24	1588-24	24"	6.00
———	1538-36	1588-36	36"	6.12
———	1538-48	1588-48	48"	6.24
———	1538-60	1588-60	60"	6.35

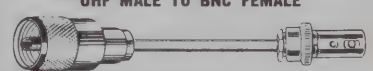
UHF MALE TO BNC MALE



CONN.: UG-88C/U. (BNC Series)
PL-259. (UHF Series)
WIRE: RG-58C/U.

No.	Length	NET Ea.
1879-12	12 inches	$4.00
1879-24	24 inches	4.20
1879-36	36 inches	4.32
1879-48	48 inches	4.44
1879-60	60 inches	4.55

UHF MALE TO BNC FEMALE



CONN.: UG-89B/U. (BNC Series)
PL-259. (UHF Series)
WIRE: RG-58C/U.

No.	Length	NET Ea.
1880-12	12 inches	$4.20
1880-24	24 inches	4.40
1880-36	36 inches	4.52
1880-48	48 inches	4.64
1880-60	60 inches	4.75

UHF MALE TO ALLIGATOR CLIPS



CONN.: PL-259. (UHF Series)
CLIPS: Steel Cad. Plated (#300).
INSUL.: Molded Vinyl (#331).
WIRE: As specified above.
DESCR.: For testing of wave patterns, etc. One end terminates with PL-259, other end with insulated alligator clips one red, one black. Std. Pkg. 10

No. BG-11/U Wire	No. Wire "B"	No. Wire "C"	Lgth.	NET Ea.
1872-12	1536-12	1586-12	12"	$3.75
1872-24	1536-24	1586-24	24"	3.96
1872-36	1536-36	1586-36	36"	4.08
1872-48	1536-48	1586-48	48"	4.20
1872-60	1536-60	1586-60	60"	4.30

For VARIATIONS of these standard parts to meet your SPECIAL requirements, or for entirely NEW parts made to your specifications, WE WELCOME YOUR INQUIRY!



LINEN LACING CORD

Mildew proofed. Spec. MIL-T-713-A. Type N.

Natural Color

No.	Tube	Ply	Class	Ydg.	NET Ea.
725	4 oz.	4	—	210	$1.65
726	8 oz.	4	—	425	3.00
727	1 lb.	4	—	850	5.40
728	4 oz.	6	3	150	1.65
729	8 oz.	6	3	300	3.00
730	1 lb.	6	3	600	5.40
737	4 oz.	8	2	115	1.65
738	8 oz.	8	2	235	3.00
739	1 lb.	8	2	470	5.40
731	4 oz.	9	—	100	1.65
732	8 oz.	9	—	200	3.00
733	1 lb.	9	—	400	5.40
740	4 oz.	12	1	75	1.65
741	8 oz.	12	1	150	3.00
742	1 lb.	12	1	300	5.40

Black Color

794	1 lb.	4	—	850	$6.00
795	1 lb.	6	3	600	6.00
796	1 lb.	8	2	470	6.00
797	1 lb.	9	—	400	6.00
798	1 lb.	12	1	300	6.00

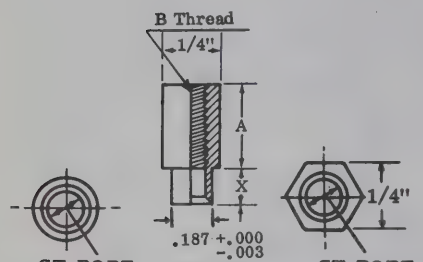
HERMAN H. SMITH, INC.

"IT'S SOUND PLANNING to SPECIFY SMITH for ELECTRONIC COMPONENTS"

BRASS THREADED SWAGE STANDOFFS

Nickel Plated

Std. Pkg. 100



No.	Per C NET Per C	A	B	X	No.	Per C NET Per C
4100	$4.50	1/4	4/40	.105	4200	$5.10
4101	4.50	1/4	4/40	.135	4201	5.10
4102	4.50	1/4	4/40	.165	4202	5.10
4103	5.10	3/8	4/40	.105	4203	5.70
4104	5.10	3/8	4/40	.135	4204	5.70
4105	5.10	3/8	4/40	.165	4205	5.70
4106	5.70	1/2	4/40	.105	4206	6.45
4107	5.70	1/2	4/40	.135	4207	6.45
4108	5.70	1/2	4/40	.165	4208	6.45
4109	6.90	5/8	4/40	.105	4209	7.35
4110	6.90	5/8	4/40	.135	4210	7.35
4111	6.90	5/8	4/40	.165	4211	7.35
4112	8.10	3/4	4/40	.105	4212	8.40
4113	8.10	3/4	4/40	.135	4213	8.40
4114	8.10	3/4	4/40	.165	4214	8.40
4115	10.50	1	4/40	.105	4215	11.10
4116	10.50	1	4/40	.135	4216	11.10
4117	10.50	1	4/40	.165	4217	11.10
4118	4.50	1/4	6/32	.105	4218	5.10
4119	4.50	1/4	6/32	.135	4219	5.10
4120	4.50	1/4	6/32	.165	4220	5.10
4121	5.10	3/8	6/32	.105	4221	5.70
4122	5.10	3/8	6/32	.135	4222	5.70
4123	5.10	3/8	6/32	.165	4223	5.70
4124	5.70	1/2	6/32	.105	4224	6.45
4125	5.70	1/2	6/32	.135	4225	6.45
4126	5.70	1/2	6/32	.165	4226	6.45
4127	6.90	5/8	6/32	.105	4227	7.35
4128	6.90	5/8	6/32	.135	4228	7.35
4129	6.90	5/8	6/32	.165	4229	7.35
4130	8.10	3/4	6/32	.105	4230	8.40
4131	8.10	3/4	6/32	.135	4231	8.40
4132	8.10	3/4	6/32	.165	4232	8.40
4133	10.50	1	6/32	.105	4233	11.10
4134	10.50	1	6/32	.135	4234	11.10
4135	10.50	1	6/32	.165	4235	11.10
4136	4.50	1/4	8/32	.105	4236	5.10
4137	4.50	1/4	8/32	.135	4237	5.10
4138	4.50	1/4	8/32	.165	4238	5.10
4139	5.10	3/8	8/32	.105	4239	5.70
4140	5.10	3/8	8/32	.135	4240	5.70
4141	5.10	3/8	8/32	.165	4241	5.70
4142	5.70	1/2	8/32	.105	4242	6.45
4143	5.70	1/2	8/32	.135	4243	6.45
4144	5.70	1/2	8/32	.165	4244	6.45
4145	6.90	5/8	8/32	.105	4245	7.35
4146	6.90	5/8	8/32	.135	4246	7.35
4147	6.90	5/8	8/32	.165	4247	7.35
4148	8.10	3/4	8/32	.105	4248	8.40
4149	8.10	3/4	8/32	.135	4249	8.40
4150	8.10	3/4	8/32	.165	4250	8.40
4151	10.50	1	8/32	.105	4251	11.10
4152	10.50	1	8/32	.135	4252	11.10
4153	10.50	1	8/32	.165	4253	11.10

FIBRE SPACERS



These fibre bushings are ideal for use in raising sub panels, chassis, condensers, transformers, etc.

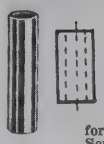
Std. Pkg. 100

1/4" O.D.

Length	for #4 Screw No.	for #6 Screw No.	for #8 Screw No.	NET Per C
1/4"	2335	2130	2140	$3.90
3/8"	2336	2131	2141	4.95
1/2"	2337	2132	2142	6.00
3/4"	2338	2133	2143	7.20
1"	2339	2134	2144	8.25

BRASS SPACERS

Cadmium Plated



These brass bushings are ideal for use in raising sub panels, chassis, condensers, transformers, etc. Hole in bushing to accommodate a #4, #6, or #8 screw.

Std. Pkg. 100

1/4" O.D.

Length	for #4 Screw No.	for #6 Screw No.	for #8 Screw No.	NET Per C
1/4"	2340	2100	2105	$3.30
3/8"	2341	2101	2106	4.35
1/2"	2342	2102	2107	5.28
3/4"	2343	2103	2108	6.30
1"	2344	2104	2109	7.20

3/8" O.D.

1/4"	2345	2110	2115	$5.28
3/8"	2346	2111	2116	6.30
1/2"	2347	2112	2117	7.20
3/4"	2348	2113	2118	8.25
1"	2349	2114	2119	9.30

BRASS THREADED SPACERS

Cadmium Plated



1/4" O.D. Threaded 4-40, 6-32 and 8-32.

Length	THD 4-40 No.	THD 6-32 No.	THD 8-32 No.	NET Per C
1/4"	2370	2120	2125	$3.90
3/8"	2371	2121	2126	4.95
1/2"	2372	2122	2127	6.00
3/4"	2373	2123	2128	7.20
1"	2374	2124	2129	8.25

BRASS HEX SPACERS

Cadmium Plated



Std. Pkg. 100

1/4" HEX

Length	for #4 Screw No.	for #6 Screw No.	for #8 Screw No.	NET Per C
1/4"	2380	2300	2305	$3.60
3/8"	2381	2301	2306	4.65
1/2"	2382	2302	2307	5.58
3/4"	2383	2303	2308	6.75
1"	2384	2304	2309	7.80

3/8" HEX

1/4"	2385	2310	2315	6.18
5/16"	2386	2311	2316	7.20
1/2"	2387	2312	2317	8.25
3/4"	2388	2313	2318	9.90
1"	2389	2314	2319	10.50

BRASS THREADED HEX SPACERS

Cadmium Plated



1/4" HEX

Length	THD 4-40 No.	THD 6-32 No.	THD 8-32 No.	NET Per C
1/4"	2330	2320	2325	$4.20
3/8"	2331	2321	2326	5.25
1/2"	2332	2322	2327	6.30
3/4"	2333	2323	2328	7.65
1"	2334	2324	2329	8.85

CERAMIC STANDOFFS

MADE TO JAN. SPECS.



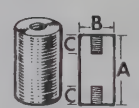
Grade L-5 Ceramic made to JAN 1 - 8 and JAN 1 - 10 Specs. Outside of ceramic is glazed.

Std. Pkg. 50

No.	Type	A	B	C	Thd.	NET Per C
2600	NL633W01-004	1/2"	3/8"	5/32"	6-32	$15.90
2601	NL633W01-005	5/8"	3/8"	1/4"	6-32	16.50
2602	NL633W01-006	3/4"	3/8"	1/4"	6-32	16.50
2603	NL633W01-008	1"	3/8"	3/8"	6-32	18.00
2604	NL633W01-010	1 1/4"	3/4"	3/8"	6-32	21.00
2605	NL633W01-012	1 1/2"	3/8"	3/8"	6-32	24.00
2606	NL633W01-016	2"	3/8"	3/8"	6-32	22.20
2607	NL633W02-005	5/8"	1/2"	5/16"	8-32	15.00
2608	NL633W02-006	3/4"	1/2"	1/4"	8-32	17.40
2609	NL633W02-008	1"	1/2"	3/8"	8-32	16.50
2610	NL633W02-010	1 1/4"	1/2"	3/8"	8-32	19.80
2611	NL633W02-012	1 1/2"	1/2"	3/8"	8-32	27.00
2612	NL633W02-016	2"	1/2"	3/8"	8-32	27.60
2613	NL633W02-020	2 1/2"	1/2"	3/8"	8-32	29.40
2614	NL633W02-024	3"	1/2"	3/8"	8-32	31.80
2615	NL633W03-008	1"	3/4"	3/8"	10-32	25.50
2616	NL633W03-010	1 1/4"	3/4"	3/8"	10-32	22.20
2617	NL633W03-012	1 1/2"	3/4"	3/8"	10-32	34.20
2618	NL633W03-016	2"	3/4"	3/8"	10-32	35.00
2619	NL633W03-020	2 1/2"	3/4"	3/8"	10-32	36.00
2620	NL633W03-024	3"	3/4"	3/8"	10-32	39.00
2621	NL633W03-032	4"	3/4"	3/8"	10-32	48.00
2622	NL633W04-010	1 1/4"	1"	1/4"	1/4-20	29.40
2623	NL633W04-012	1 1/2"	1"	1/2"	1/4-20	42.00
2624	NL633W04-016	2"	1"	5/8"	1/4-20	45.00
2625	NL633W04-020	2 1/2"	1"	5/8"	1/4-20	50.00
2626	NL633W04-024	3"	1"	5/8"	1/4-20	55.00
2627	NL633W04-032	4"	1"	5/8"	1/4-20	66.00
2628	NL633W04-040	5"	1"	5/8"	1/4-20	78.00
2629	NL633W04-048	6"	1"	5/8"	1/4-20	90.00

CERAMIC STANDOFFS

COMMERCIAL



Grade L5 Ceramic with outside glazed.

Std. Pkg. 50

No.	A	B	C	Thd.	NET Per C
2640	1/4"	1/4"	Thru	6-32	$12.60
2641	1/2"	1/4"	5/32"	6-32	13.20
2642	3/8"	3/8"	5/32"	6-32	13.80
2643	1/2"	3/8"	3/16"	6-32	14.40
2644	1/2"	1/2"	3/64"	6-32	15.00
2645	3/4"	1/2"	1/4"	6-32	16.00
2646	1"	1/2"	3/8"	6-32	15.00
2647	1 1/2"	1/2"	3/16"	6-32	21.00
2648	2 1/2"	1/2"	1/2"	6-32	30.00
2649	2 1/2"	3/4"	3/4"	1/4-20	36.00
2650	4"	3/4"	3/4"	1/4-20	50.00

ALUMINUM SPACERS

Irridite 14-2 per MIL-C-5541 Std. Pkg. 100

ROUND—CLEAR HOLE



LENGTH "L"	.250 O.D. for #4 screw No.	for #6 screw No.	for #8 screw No.	NET Per C	.312 O.D. for #10 screw No.	NET Per C
.125	8480	8500	8520	$ 9.75	8540	$ 8.50
.250	8481	8501	8521	10.50	8541	10.75
.375	8482	8502	8522	11.00	8542	11.50
.500	8483	8503	8523	11.75	8543	12.25
.625	8484	8504	8524	12.50	8544	13.00
.750	8485	8505	8525	14.25	8545	14.50
.875	8486	8506	8526	14.50	8546	14.75
1.000	8487	8507	8527	15.00	8547	15.25
1.250	8488	8508	8528	20.00	8548	21.50
1.500	8489	8509	8529	21.50	8549	22.50
1.750	8490	8510	8530	21.75	8550	23.50
2.000	8491	8511	8531	22.25	8551	25.50
2.50	8492	8512	8532	24.00	8552	28.00
3.00	8493	8513	8533	28.00	8553	28.75
3.50	8494	8514	8534	30.00	8554	46.00
4.00	8495	8515	8535	32.00	8555	48.00
5.00	8496	8516	8536	40.00	8556	54.00
6.00	8497	8517	8537	44.00	8557	62.00

ROUND—TAPPED HOLE



LENGTH "L"	.250 O.D. 4-40 THD	6-32 THD	8-32 THD	NET Per C	.312 O.D. 10-32 THD	NET Per C
.125	8320	8340	8360	$ 8.75	8380	$ 9.00
.250	8321	8341	8361	12.00	8381	12.75
.375	8322	8342	8362	12.50	8382	13.00
.500	8323	8343	8363	13.00	8383	14.00
.625	8324	8344	8364	14.75	8384	15.25
.750	8325	8345	8365	15.50	8385	17.75
.875	8326	8346	8366	17.00	8386	18.75
1.000	8327	8347	8367	18.00	8387	19.75
1.250	8328	8348	8368	19.50	8388	20.50
1.500	8329	8349	8369	20.25	8389	21.50
1.750	8330	8350	8370	21.50	8390	22.50
2.00	8331	8351	8371	21.75	8391	24.00
2.50	8332	8352	8372	24.00	8392	26.00
3.00	8333	8353	8373	25.50	8393	28.00
3.50	8334	8354	8374	29.00	8394	31.00
4.00	8335	8355	8375	32.00	8395	34.00

HEX—CLEAR HOLE



LENGTH "L"	.250 O.D. for #4 screw No.	for #6 screw No.	for #8 screw No.	NET Per C	.312 O.D. for #10 screw No.	NET Per C
.125	8560	8580	8600	$ 9.25	8620	$11.50
.250	8561	8581	8601	11.00	8621	13.50
.375	8562	8582	8602	12.00	8622	14.25
.500	8563	8583	8603	12.25	8623	15.00
.625	8564	8584	8604	13.50	8624	16.00
.750	8565	8585	8605	15.00	8625	16.50
.875	8566	8586	8606	15.50	8626	17.00
1.000	8567	8587	8607	20.00	8627	17.50
1.250	8568	8588	8608	21.00	8628	22.00
1.500	8569	8589	8609	22.00	8629	23.75
1.750	8570	8590	8610	22.50	8630	25.50
2.00	8571	8591	8611	23.00	8631	26.00

HEX—TAPPED HOLE



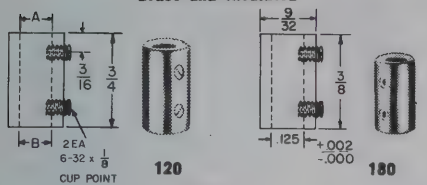
LENGTH "L"	.250 O.D. 4-40 THD	6-32 THD	8-32 THD	NET Per C	.312 O.D. 10-32 THD	NET Per C
.125	8400	8420	8440	$11.00	8460	$12.25
.250	8401	8421	8441	12.00	8461	15.00
.375	8402	8422	8442	13.50	8462	16.00
.500	8403	8423	8443	14.00	8463	16.75
.625	8404	8424	8444	15.25	8464	17.50
.750	8405	8425	8445	16.00	8465	20.00
.875	8406	8426	8446	18.00	8466	20.50
1.000	8407	8427	8447	18.50	8467	21.00
1.250	8408	8428	8448	20.25	8468	21.75
1.500	8409	8429	8449	22.00	8469	22.75
1.750	8410	8430	8450	21.50	8470	26.00
2.00	8411	8431	8451	22.50	8471	28.00
2.50	8412	8432	8452	25.00	8472	30.00
3.00	8413	8433	8453	26.50	8473	32.00
3.50	8414	8434	8454	30.00	8474	33.00
4.00	8415	8435	8455	31.00	8475	38.00

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HERMAN H. SMITH, INC.

"IT'S SOUND PLANNING to SPECIFY SMITH for ELECTRONIC COMPONENTS"

COUPLERS
Brass and Insulated



120 180

Std. Pkg. 25

With Two Set Screws

No.	A B	O.D.	Material	NET Per C
120	¼"-¼"	7/16"	Brass N.P.	$18.00
140	¼"-¼"	7/16"	Fibre	20.00
131	3/8"-½"	½"	Brass N.P.	18.00
141	3/8"-½"	½"	Fibre	20.00
133	3/8"-3/8"	½"	Brass N.P.	18.00
142	3/8"-3/8"	½"	Fibre	20.00

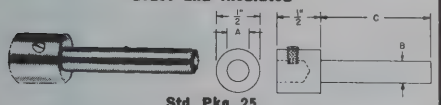
With Four Set Screws

138	¼"-¼"	7/16"	Brass N.P.	28.00

MINIATURE COUPLER
With Allen Head Set Screws

180	1/8"-1/8"	9/32"	Brass N.P.	$40.00

EXTENDERS
Brass and Insulated



Std. Pkg. 25

Long Shaft Type

No.	A B	C	Material	NET Per C
150	¼"-¼"	1½"	Brass N.P.	$25.00
130	¼"-¼"	1½"	Fibre	30.00
132	3/8"-½"	1½"	Brass N.P.	25.00
134	3/8"-¼"	1½"	Fibre	30.00

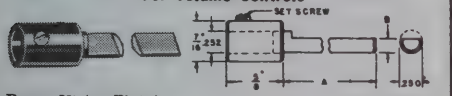
Short Shaft Type

No.	A B	C	Material	NET Per C
160	¼"-¼"	⅝"	Brass N.P.	$22.00
161	¼"-¼"	⅝"	Fibre	22.00
162	3/8"-½"	⅝"	Brass N.P.	22.00
163	3/8"-¼"	⅝"	Fibre	22.00

MINIATURE EXTENDER
With Allen Head Set Screws

189	1/8"-1/8"	⅜"	Brass N.P.	$25.00

SHAFT EXTENDERS
For Volume Controls



Brass, Nickel Plated. Std. Pkg. 25

No.	A	B	NET Per C
2356	2"	.250"	$21.00
2357	3"	.250"	24.00
2358	4"	.250"	27.00
2359	2"	.219"	21.00
2360	3"	.219"	24.00
2361	4"	.219"	27.00
2362	2"	.156"	21.00
2363	3"	.156"	24.00
2364	4"	.156"	27.00

BUSHING EXTENDERS
For Volume Controls



Brass, Nickel Plated. Std. Pkg. 25

No.	A	B	NET Per C
2350	5/8"	9/16"	$36.00
2351	5/8"	¾"	36.00
2352	5/8"	⅝"	36.00
2353	1 1/16"	⅝"	36.00
2354	1 1/16"	½"	36.00
2355	¾"	½"	36.00

BRASS THREADED RODS



Std. Pkg. 10

1-Ft. Length No.	NET Ea.	Threaded	2-Ft. Length No.	NET Ea.
1400-1	$.24	6-32	1400-2	$.48
1401-1	.24	8-32	1401-2	.48
1402-1	.36	10-32	1402-2	.72
1403-1	.54	¼-20	1403-2	1.08

NYLON THREADED RODS

Std. Pkg. 10

1-Ft. Length No.	NET Ea.	Threaded	2-Ft. Length No.	NET Ea.
1420-1	$ .90	6-32	1420-2	$1.08
1421-1	1.02	8-32	1421-2	2.04
1422-1	1.50	10-32	1422-2	3.00
1423-1	1.80	¼-20	1423-2	3.60

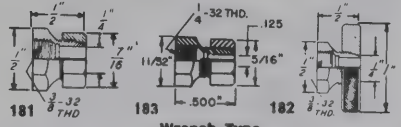
Brass Fibre and Nylon PLAIN RODS



Std. Pkg. 10

¼" DIA No.	Net Ea.	Type	Length	⅛" DIA No.	NET Ea.
1404	$.20	Brass N.P.	6"	1431	$.20
1405	.40	Brass N.P.	12"	1432	.40
1406	.15	Fibre	6"	1433	.15
1407	.30	Fibre	12"	1434	.30
1408	.30	Nylon	6"	1440	.30
1409	.60	Nylon	12"	1441	.60

SHAFT LOCKS Brass Nickel Plated



181 183 182

Wrench Type

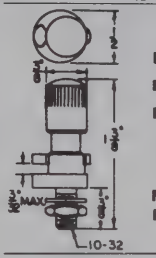
No.	Shaft	Std. Pkg.	NET Per C
181	¼"	100	$24.00

Miniature Wrench Type

183	⅛"	25	24.00

Thumb Type

182	¼"	25	33.00



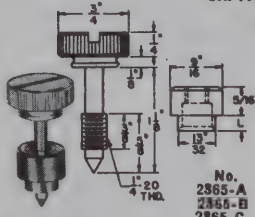
DIAL LOCK

HEAD: Captive: Brass, nickel plated.

BODY: Brass nickel plated.

DESCR.: Prevents detuning of the dial when locked by means of the captive knurled nut.
Supplied with hex nut & lockwasher. Std. Pkg. 25

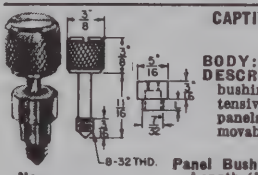
No.	NET Per C
199	$66.00



CAPTIVE SCREW & BUSHING
Large Head

BODY: BRASS, nickel plated.
DESCR.: Supplied with panel bushing as shown. Used extensively for quick removal of panels from chassis. Non-removable from panel. Std. Pkg. 50

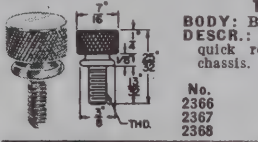
No.	Panel Bushing Length (L)	NET Per C
2365-A	5/32"	$75.00
2365-B	7/32"	75.00
2365-C	9/32"	75.00



CAPTIVE SCREW & BUSHING
Small Head

BODY: BRASS, nickel plated.
DESCR.: Supplied with panel bushing as shown. Used extensively for quick removal of panels from chassis. Non-removable from panel. Std. Pkg. 50

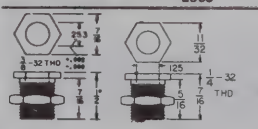
No.	Panel Bushing Length (L)	NET Per C
2375-A	5/32"	$75.00
2375-B	7/32"	75.00
2375-C	9/32"	75.00



THUMB SCREW

BODY: BRASS, nickel plated.
DESCR.: Used extensively for quick removal of panels from chassis. Std. Pkg. 25

No.	Thread	NET Per C
2366	6-32	$24.00
2367	8-32	24.00
2368	10-32	24.00

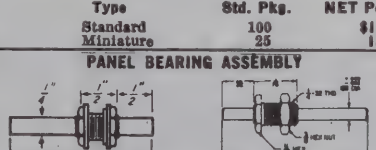


PANEL BEARINGS
Brass, Nickel Plated

119 184

No.	Type	Std. Pkg.	NET Per C
119	Standard	100	$15.00
184	Miniature	25	15.00

PANEL BEARING ASSEMBLY



148 1448

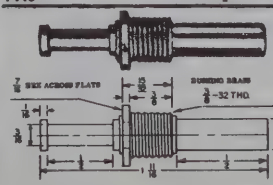
Uses our standard #119 Panel Bearing. Nickel plated overall. Std. Pkg. 25

No.	A	NET Per C
148	3"	$33.00
149	6"	39.00

MINIATURE PANEL BEARING ASSEMBLY

Miniature ⅛" shaft assembly, using our standard #184 Panel Bearing. Brass, nickel plated overall. Std. Pkg. 25

No.	Length "A"	NET Per C
1448	2"	$33.00
1449	4"	39.00

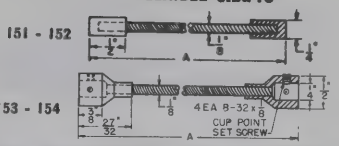


DIAL DRIVE ASSEMBLY
Brass, Nickel Plated

Std. Pkg. 25

No.	NET Per C
126	$33.00

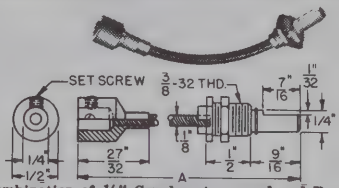
FLEXIBLE SHAFTS



High quality phosphor bronze non-magnetic, non-rusting flexible shafts. Remote control when necessary to mount condensers and potentiometers away from panel at unusual angles. Turns at any angle up to 90°; free from back lash. Std. Pkg. 25

No.	Size "A"	Description	NET Per C
151	3"	With ¼" hub	$45.00
152	6"	With ¼" hub	60.00
153	3⅝"	With ¼" coupler	90.00
154	6⅝"	With ¼" coupler	105.00

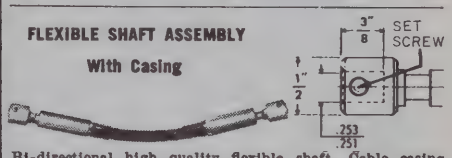
BI-DIRECTIONAL FLEXIBLE SHAFT AND PANEL BEARING



Combination of ¼" Coupler at one end and Panel Bearing Assembly at other. High quality phosphor bronze non-magnetic, non-rusting flexible shaft, turns at any angle up to 90°. Free from backlash. Std. Pkg. 25

No.	Length "A"	NET Ea.
165	4 1/16"	$1.35
166	7 1/16"	1.50

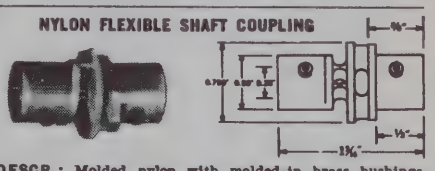
FLEXIBLE SHAFT ASSEMBLY
With Casing



Bi-directional high quality flexible shaft. Cable casing acts as a support and reduces amount of deflection in cable. Metal parts steel cadmium plated.

No.	Length	NET Ea.
169	8"	$6.00
170	12"	6.80

NYLON FLEXIBLE SHAFT COUPLING



DESCR.: Molded nylon with molded-in brass bushings. Hi-temp nylon not influenced by moisture. Designed for long reach shaft coupling. Supplied with 2 Allen head set screws. Std. Pkg. 25

No. 164 NET Ea. $1.05

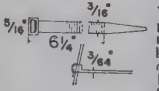
SHAFT WRENCH



Specially designed offset, double-end wrenches for most hex sizes encountered in electronic construction. Made of heavy gauge, cadmium plated steel, clearly marked with size. No. 999 is especially useful for Toggle Switch and Volume Control mounting nuts. Std. Pkg. 25

No.	For Nut Sizes	NET Per C
997	Set of 2	$42.00
998	5/16" - 3/8"	21.00
999	1/2" - 9/16"	21.00

NYLON LOCKING CLAMP



Wedge and ratchet design makes for positive holding and locking. Accommodates cables from ⅛" to 1¾". No knot tying, just slip clamp around cable, insert tongue and pull tight.

No.	Std. Pkg.	NET Per C
800	100	$9.00

NYLON MOUNTING TABS



For use with No. 800 locking clamp when premounted assembly points are desired. Furnished with .203 mounting hole. Std. Pkg. 100

No.	NET Per C
801	$3.00

NYLON PERFORATING STRAPPING



For bundling of wire, cable and tubing. Time saver for harnessing. Use No. 803 ratchet buckle for fast assembly. Supplied on 50' rolls.

No.	NET Per Roll
802	$15.00

NYLON RATCHET BUCKLE



For No. 802 strapping. Quick and easier assembly with this ingenious item. Std. Pkg. 100

No.		NET Per C
803	For ½" Strapping	$10.20

TIGHTENING TOOL



Used with strapping for fast assembly.

No.	NET Ea.
804	$18.00

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HERMAN H. SMITH, INC.

"IT'S SOUND PLANNING to SPECIFY SMITH for ELECTRONIC COMPONENTS"

RUBBER GROMMETS



Std. Pkg. 100

No.	A	B	C	D	E	NET Per C
2185	5/16"	1/8"	3/16"	3/16"	1/16"	$2.31
2172	1/4"	3/16"	5/16"	3/16"	1/16"	1.98
2170	5/8"	1/4"	3/8"	1/4"	1/16"	2 31
2174	5/8"	5/16"	7/16"	1/4"	1/16"	2.16
2175	1 1/16"	3/8"	1/2"	1/4"	1/16"	2.31
2177	3/4"	7/16"	9/16"	1/4"	1/16"	2.16
2186	1 1/16"	1/2"	3/4"	5/16"	1/16"	4.80
2187	1 1/8"	5/8"	7/8"	5/16"	1/16"	4.20
2188	1 1/16"	9/16"	3/4"	5/16"	1/16"	4.20
2189	1"	3/4"	7/8"	5/32"	1/32"	5.10

VINYL GROMMETS

DESCR.: Exceptional aging qualities. High dielectric properties. Oil resistant. Durometer hardness 45 to 85.

No.	A	B	C	D	E	NET Per C
2145	11/32	1/8	1/4	3/16	1/16	$.90
2146	7/16	3/16	5/16	1/32	1/16	.96
2147	5/16	1/4	3/8	1/4	1/16	1.32
2148	5/8	3/8	1/2	1/4	1/16	1.50
2149	13/16	1/2	5/8	9/32	1/16	2.28

GROMMETS



Formerly listed by Radio Essentials, Inc., and American Radio Hardware Inc., (Their catalog numbers as below, minus first digit.)

No.	A	B	C	D	E	NET Per C
91100	3/8"	13/64"	1/2"	13/32"	9/64"	$7.50
91101	7/8"	1 5/16"	1 1/4"	5/8"	3/16"	13.20
91102	9/32"	5/8"	13/32"	3/8"	5/32"	3.15
91103	5/16"	9/16"	15/32"	3/8"	1/8"	3.00
91104	1/4"	7/8"	5/8"	15/32"	3/16"	6.50
91106	5/16"	5/8"	1/2"	1/2"	3/16"	6.60
91107	3/8"	5/8"	7/16"	5/16"	3/32"	3.30
91108	1/4"	5/8"	1/2"	17/32"	5/32"	7.50
91109	3/8"	1 1/16"	7/8"	3/8"	1/4"	13.50
91110	13/64	3/8 1/2"	9/32"	7/32"	3/32"	6.00
91111	3/8"	7/8 1"	1 1/16"	13/32"	9/64	7.00
91112	49/64	1 5/8"	1 3/32"	5/16"	1/16	7.05
91113	21/64	5/8"	13/32"	1/4"	1/16	2.85
91114	1/8"	1 1/32"	1/4"	3/16"	1/16	2.34
91115	1/4"	9/16"	3/8"	1/2"	5/32"	6.50
91116	5/16"	3/4"	1/2"	3/8"	1/8"	4 35
91117	3/8"	9/16"	15/32"	5/16"	1/8"	3.15
91118	3/16"	7/16"	5/16"	7/32"	1/16"	2.40
91119	11/64"	9/16"	13/32"	1/4"	1/16"	2.55
91120	19/64	5/8"	7/16"	1/4"	1/16"	3.00
91121	3/8"	1 1/16"	1/2"	1/4"	1/16"	2.85
91122	1/4"	1/2"	1 1/32"	5/32"	1/16"	2.85
91123	9/32"	1 1/16"	1/2"	7/16"	1/4"	5.10
91124	7/16"	3/4"	9/16"	1/4"	1/16"	3.45

RECESS RUBBER BUMPERS

Std. Pkg. 100



FIG 1

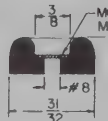


FIG. 2

No.	Fig.	A	B	C	NET Per C
2192	1	7/32"	17/32"	1/4"	$1.50
2193	1	1/4"	5/8"	5/16"	1.95
2194	1	9/32"	9/16"	3/8"	3.00
2184	1	1/4"	5/8"	9/32"	3.00
		With molded-in metal washer			
2135	2	5/8"	31/32"	5/8"	4.80

With Screw

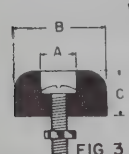


FIG 3



FIG. 4

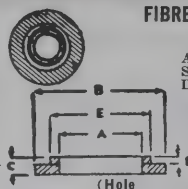
Supplied complete with 1/2" mounting screw and hex nut For panels up to 1/4" thick. Specify longer screw for thicker panels

Std. Pkg. 100

No.	Fig.	A	B	C	Screw	NET Per C
2196	3	7/32"	17/32"	1/4"	6-32	$6.60
2197	3	1/4"	5/8"	5/16"	6-32	6.90
2198	3	9/32"	3/4"	3/8"	6-32	7.50
2199	3	1/4"	5/8"	9/32"	6-32	7.50
		With molded-in metal washer				
2195	4	3/8"	31/32"	3/8"	8-32	9.30

FIBRE WASHERS

SHOULDER WASHERS



All material based on N.E.M.A. Standard and A.S.P.M. Spec. D-710.

A. Inside Diameter
B. Outside Diameter
C. Thickness Overall
D. Height of Shoulder
E. Diameter of Shoulder

Std. Pkg. 100

No.	A	(Hole Size)	B	C	D	E	NET Per C	NET Per M
2150	.140	No. 6	.375	.093	.031	.237	$.94	$6.90
2151	.110	No. 4	.250	.062	.031	.187	.82	5.70
2152	.136	No. 6	.250	.093	.031	.187	.85	6.00
2153	.136	No. 6	.312	.093	.031	.187	.91	6.60
2154	.250	1/4"	.500	.068	.028	.312	.97	7.20
2155	.172	No. 8	.375	.093	.031	.246	.91	6.60
2156	.196	No.10	.375	.093	.031	.308	.91	6.60
2158	.265	17/64"	.500	.097	.031	.365	1.09	7.20
2157	.375	3/8"	.750	.093	.031	.500	.99	8.70
2158	.385	3/8"	.625	.093	.031	.500	1.12	8.40

FLAT WASHERS



All material based on N.E.M.A. Standard and A.S.P.M. Spec. D-710.

No.	(Hole Size)	A I.D.	B O.D.	C Thickness	NET Per C	NET Per M
2160	No. 6	.136	.250	1/16	$ .82	$5.70
2161	No. 4	.110	.250	1/16	.82	5.70
2162	No. 6	.140	.375	1/16	.78	5.10
2163	No. 8	.172	.375	1/16	.76	5.10
2164	No. 10	.196	.375	1/16	.76	5.10
2165	1/4"	.250	.500	1/16	.79	5.40
2166	1/4"	.250	.500	3/32	.82	5.70
2167	5/16"	.312	.500	1/16	.79	5.40
2168	3/8"	.385	.625	1/16	.91	6.60
2169	3/8"	.375	.750	1/16	1.09	8.40

NYLON WASHERS

SHOULDER WASHERS

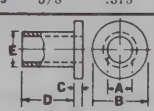
MATERIAL: Natural Nylon per MIL-P-20693A.

No.	A	(Hole Size)	B	C	D	E	NET Per C	NET Per M
2660	.140	No. 6	.375	.093	.031	.237	$2.25	$18.00
2661	.110	No. 4	.250	.062	.031	.187	1.90	15.00
2662	.136	No. 6	.250	.093	.031	.187	1.90	15.00
2663	.136	No. 6	.312	.093	.031	.187	2.05	16.20
2664	.250	1/4"	.500	.068	.028	.312	2.15	17.25
2665	.172	No. 8	.375	.093	.031	.246	2.25	18.00
2666	.196	No. 10	.375	.093	.031	.308	2.25	18.00
2669	.265	17/64"	.500	.097	.031	.365	3.15	25.00
2667	.375	3/8"	.750	.093	.031	.500	5.65	45.00
2668	.385	3/8"	.625	.093	.031	.500	3.75	30.00

FLAT WASHERS

No.	(Hole Size)	A I.D.	B O.D.	C Thickness	NET Per C	NET Per M
2514	No. 4	.115	.281	.047	$1.80	$18.00
2670	No. 6	.136	.250	1/16	1.60	12.90
2671	No. 4	.110	.250	1/16	1.60	12.90
2672	No. 6	.140	.375	1/16	2.05	16.20
2515	No. 6	.140	.312	.047	1.88	18.80
2673	No. 8	.172	.375	1/16	2.25	18.00
2516	No. 8	.170	.375	.062	2.10	21.00
2674	No. 10	.196	.375	1/16	2.05	16.30
2517	No. 10	.200	.437	.062	2.22	22.20
2675	1/4"	.250	.500	1/16	2.25	18.00
2676	1/4"	.250	.500	3/32	2.65	21.00
2518	1/4"	.260	.562	.062	2.40	24.00
2677	5/16"	.312	.500	1/16	2.25	18.00
2678	3/8"	.385	.625	1/16	2.45	19.50
2679	3/8"	.375	.750	1/16	2.70	21.75

NYLON SPACER BUSHINGS



Natural Color, MIL-P-20693A. Std. Pkg. 100

No.	I.D.(A)	B	C	D	E	NET Per C	NET Per M
2534	#4 (.115)	.235	3/64	1/4	.147	$2.10	$21.00
2535	#6 (.140)	.290	3/64	1/4	.170	2.10	21.00
2536	#8 (.170)	.344	1/16	3/8	.205	2.22	22.20
2537	#10 (.200)	.399	1/16	3/8	.260	2.40	24.00
2538	1/4"(.260)	.513	1/16	3/8	.312	2.70	27.00

NYLON SCREWS

Natural Color, MIL-P-30693A. Std. Pkg. 100

Size	A No.	B No.	C No.	D No.	E No.	F No.	NET Per C	NET Per M
4-40 x 1/4	2500	2520	2540	2560	2580	2480	$3.00	$30.00
4-40 x 3/8	2501	2521	2541	2561	2581	2481	3.06	30.60
4-40 x 1/2	2502	2522	2542	2562	2582	2482	3.12	31.20
6-32 x 1/4	2503	2523	2543	2563	2583	2483	3.06	30.60
6-32 x 3/8	2504	2524	2544	2564	2584	2484	3.06	30.60
6-32 x 1/2	2505	2525	2545	2565	2585	2485	3.12	31.20
6-32 x 5/8	2506	2526	2546	2566	2586	2486	3.12	31.20
6-32 x 3/4	2507	2527	2547	2567	2587	2487	3.18	31.80
8-32 x 1/4	2509	2529	2549	2569	2589	2489	3.06	30.60
8-32 x 3/8	2510	2530	2550	2570	2590	2490	3.12	31.20
8-32 x 1/2	2511	2531	2551	2571	2591	2491	3.12	31.20
8-32 x 5/8	2512	2532	2552	2572	2592	2492	3.18	31.80

NYLON HEX NUT

Natural Color, MIL-P-20693A. Std. Pkg. 100

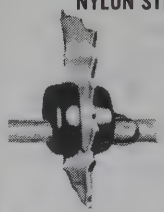
2554	4-40 x 1/4"	$6.00
2555	6-32 x 5/16"	6.30
2556	8-32 x 11/32"	6.60
2556	10-32 x 3/8"	6.90

FIBRE WASHER KIT

Each kit contains about 1,000 Flat and Shoulder Washers, packed in an 18-compartment plastic box, in the following approximate quantities of SMITH standard washers:
100 each #2151, 2161, 2153, 2160; 75 each #2150, 2162; 60 each #2155, 2163; 50 each #2156, 2164, 2154, 2165; 35 each #2159, 2167; 25 each #2158, 2168; 10 each #2157, 2169.

No.		NET Each
2173	Kit of 1,000 Washers	$6.50

NYLON STRAIN RELIEF BUSHINGS



One piece construction. Eliminates grommets, wire knots and costly labor. Completely insulates wire from chassis and prevents cord pull push and twist. No. 937 ideal for small mike cables; No. 938 for line cords; No. 939 for Co-Ax Wire.

Std. Pkg. 50

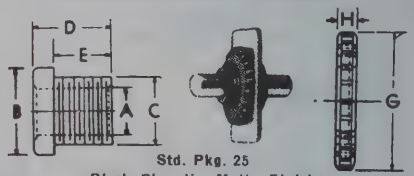
A: Chassis Hole
B: Diameter of head
C: Length
D: Chassis Thickness

No.	Wire Size	A	B	C	D	NET Per C
937	1/8-3/16"	.375	.440	.415	to 1/16"	$3.60
938	SP-1 & SPT-1	.437	.468	.406	to 1/16"	3.60
939	.235-.265	.500	.560	.438	to 3/32"	4.20



No. 940 Setting Pliers — NET Each $16.80

INSULATED GROMMET BUSHINGS

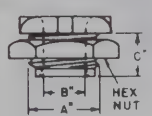


Std. Pkg. 25

Black Phenolic—Matte Finish

No.	BUSHING A	B	C	D	COLLAR E	G	H	NET Per C
931	1/8"	5/8"	1/4"—32	.3750"	1/4"	1/2"	1/8"	$24.00
932	5/16"	7/8"	5/16"—32	.4250"	5/16"	5/8"	1/8"	24.00
933	1/4"	1/2"	3/8"—27	.4375"	5/16"	11/16"	1/8"	24.00
934	5/16"	5/8"	15/32"—32	.4500"	5/16"	7/8"	1/8"	24.00
935	5/8"	5/4"	5/8"—27	.4500"	5/16"	1"	1/8"	27.00

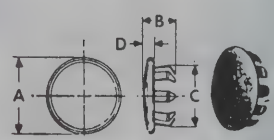
BAKELITE INSULATING BUSHINGS



BODY: MOLDED, bakelite, black, U.L. approved recommended for temperatures up to 300 degrees Fahrenheit.
NUT: Steel, cadmium plated.

Std. Pkg. 50

No.	A	B	C	NET Per C
2136	15/32"	17/64"	1/4"	$8.40
2137	17/32"	5/16"	5/16"	9.00
2138	21/32"	29/64"	7/16"	9.60
2139	27/32"	9/16"	11/32"	10.20



SNAP BUTTON HOLE PLUGS

Steel Nickel-plated plugs for covering punched or drilled holes in metal, plastic or wood.

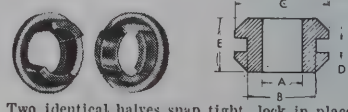
Std. Pkg. 100

No.	Hole	A	B	C	D Prongs	NET Per C
650	1/4"	13/32	1/4	17/64	5/64 6	$2.00
651	5/16"	7/16	1/4	21/64	1/16 6	2.00
652	3/8"	17/16	3/8	25/64	5/64 6	2.00
653	1/2"	21/32	17/64	17/32	5/64 8	2.80
654	5/8"	51/64	9/32	41/64	5/64 8	2.80
655	3/4"	15/16	19/64	49/64	3/32 12	2.80
608	7/8"	1 11/16	13/64	57/64	1/16 12	3.30
612	1"	15/32	19/64	1 1/64	5/64 12	4.50
*656	1"	15/32	19/64	1 1/32	5/64 12	13.80

* Vent

SNAP-LOCK PLASTIC GROMMETS

- Snaps in Place—FAST!
- Stays Put—LOCKED IN!



Two identical halves snap tight, lock in place. Provides a rigid bearing surface, greater dielectric, extreme chemical and wear resistance. Identical halves form complete grommet. Color, black.

Std. Pkg. 100

No.	A	B	C	D	E	NET Per C
2178	3/16"	5/16"	7/16"	1/16"	1/4"	$2.76
2179	1/4"	3/8"	1/2"	1/16"	1/4"	2.88
2180	3/8"	1/2"	5/8"	1/16"	1/4"	3.00

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HERMAN H. SMITH, INC.

"IT'S SOUND PLANNING to SPECIFY SMITH for ELECTRONIC COMPONENTS"

INSTRUMENT KNOBS



Plain — With Pointer — With Skirt

Molded black bakelite instrument knobs with molded in brass insert for ¼" shafts. **Style B** pointer knobs have white vinyl pointer. **Style C** skirt type have white indicator line. **Style D** same as style A except with protruding brass insert for mounting special dials and pointers.

Std. Pkg. 10

No.	Style	O.D.	Pointer Size	Height	NET Per C
2200	A	1⅛"		⅝"	$28.20
2201	A	1⅜"		11/16"	29.40
2202	A	1⅝"		¾"	33.60
2203	A	2⅜"		⅞"	48.00
2204	B	1⅛"	¾" pointer	11/16"	44.40
2205	B	1⅜"	1 1/16" pointer	¾"	45.00
2206	B	1⅝"	1 3/16" pointer	13/16"	48.00
2207	B	2⅜"	1¾" pointer	15/16"	64.20
2208	C	1⅛"	1½" Skirt	13/16"	53.40
2209	C	1⅜"	1¾" Skirt	⅞"	55.20
2210	C	1⅝"	2 1/16" Skirt	29/32"	65.40
2211	C	2⅜"	3" Skirt	1 1/32"	85.80
2212	D	1⅛"		29/32"	34.80
2213	D	1⅜"		25/32"	35.40
2214	D	1⅝"		27/32"	40.20
2215	D	2⅜"		31/32"	55.20
			SKIRT ONLY		
2216		1½"	Skirt only		10.80
2217		1⅜"	Skirt only		12.60
2218		2 1/16"	Skirt only		14.40
2219		3"	Skirt only		21.00

Matte Finish — Made to Meet MS-91531

Molded Black, Matte finish bakelite instrument knobs, with molded-in brass insert for ¼" shafts. All knobs supplied with two (2) Allen-head set-screws. Style B pointer knobs have white vinyl pointer. Style C skirt knobs have white indicator line on skirt.

Std. Pkg. 10

No.	Style	O.D.	Pointer size	Height	NET Per C
2460	A	1⅛"		⅝"	$81.00
2461	A	1⅜"		¾"	99.00
2462	A	2⅜"		⅞"	122.00
2463	B	1⅛"	¾" pointer	11/16"	92.00
2464	B	1⅜"	1 1/16" pointer	13/16"	106.00
2465	B	2⅜"	1 3/16" pointer	15/16"	132.00
2466	C	1⅛"	1½" skirt	13/16"	123.00
2467	C	1⅜"	2 1/16" skirt	29/32"	152.00
2468	C	2⅜"	3" skirt	1 1/32"	191.00

FLUTED INSTRUMENT KNOBS



Molded black bakelite fluted instrument knobs, supplied with white-filled line on crown and skirt, opposite set-screw. Supplied with ¼" plain hole with set-screw.

Std. Pkg. 10

No.	Skirt Dia.	Height	NET Per C
2391	¾"	1/2"	$21.00
2392	1⅛"	5/8"	22.00
2393	1½"	3/4"	24.00
2394	1½"	7/8"	27.00
2395	2"	15/16"	45.00
	With ⅛" plain hole with set-screw		
2396	¾"	1/2"	$22.00

CONCENTRIC FLUTED

Molded black and Red bakelite dual-concentric fluted instrument knobs. Outside knob is black with white filled line on skirt. Inner knob is red with white-filled line on skirt and crown. Both knobs supplied with set-screws.

Std. Pkg. 10

No.	NET Per C
2397	$44.00

POINTER KNOBS



A — Length 1¼" Hgt. ⅝" — B — Length 2" Hgt. ⅝" — C — Length 1¼" Hgt. ⅝"

Molded bakelite pointer knobs, supplied with ¼" plain hole or brass inset. Complete with set screw.

Std. Pkg. 25

No.	Style	Type Hole	Color	NET Per C
2220	A	¼" Plain	Black	$10.80
2221	A	¼" Plain	Walnut	11.40
2222	A	¼" Plain	Ivory	12.00
2223	A	¼" Brass Insert	Black	16.80
2224	A	¼" Brass Insert	Walnut	17.40
2225	A	¼" Brass Insert	Red	18.00
2226	B	¼" Plain	Black	21.60
2227	B	¼" Plain	Walnut	22.20
2228	B	¼" Brass Insert	Black	27.00
2229	B	¼" Brass Insert	Walnut	27.00
2230	C	¼" Plain	Black	13.80
2231	C	¼" Plain	Walnut	14.40

HERMAN H. SMITH, INC.

More than 2,000 electronic component parts manufactured under one roof.

CONTROL KNOBS



Molded bakelite control knobs. Supplied with ¼" molded hole; complete with set screw. *Recessed for locknut.

Std. Pkg. 25

No.	Style	O.D.	Height	Color	NET Per C
2240	A	¾"	19/32"	Black	$12.00
2241	A	¾"	19/32"	Walnut	12.00
2242	B	1 1/16"	13/32"	Black	9.60
2243	B	1 1/16"	13/32"	Walnut	9.60
2244*	B	1"	½"	Black	13.20
2245*	B	1"	½"	Walnut	13.80
2275†	B	1 1/16"	13/32"	Black	21.60
2276†	B	1 1/16"	13/32"	Red	23.40
2246	C	1 1/16"	13/32"	Black	9.60
2247	C	1 1/16"	13/32"	Walnut	9.60
2273†	C	1 1/16"	13/32"	Black	21.60
2274†	C	1 1/16"	13/32"	Red	22.20
2248*	D	1"	½"	Black	16.80
2249*	D	1"	½"	Walnut	17.40
2250*	E	1⅛"	5/16"	Black	14.40
2251*	E	1⅛"	5/16"	Walnut	15.00
2252*	F	1½"	1/4"	Black	17.40
2253*	F	1½"	1/4"	Walnut	18.00
2254*	F	1½"	1/4"	Ivory	19.20
2258	G	⅞"	3/4"	Black	15.00
2259	G	⅞"	3/4"	Walnut	15.60
2265	H	29/32"	19/32"	Black	13.80
2266	H	29/32"	19/32"	Red	14.40
2267	J	1 3/16"	5/8"	Black	12.60
2268	J	1 3/16"	5/8"	Red	13.80
2269	K	⅞"	5/8"	Black	14.40
2270	K	⅞"	5/8"	Red	18.60
2283	L	⅞"	½"	Black	19.20
2284	L	⅞"	½"	Red	19.80

† Supplied with brass insert.

LEVER KNOBS



Molded bakelite lever knobs with ¼" brass insert, complete with set screw.

Std. Pkg. 25

No.	Style	Length	Height	Color	NET Per C
2232	A	1⅝"	19/32"	Black	$22.20
2233	A	1⅝"	19/32"	Walnut	22.80
2234	B	1 13/16"	19/32"	Black	38.40
2235	B	1 13/16"	19/32"	Walnut	38.40
2236	C	2½"	5/8"	Black	24.00
2237	C	2½"	5/8"	Walnut	24.00
2238	D	2 13/16"	5/8"	Black	43.20
2239	D	2 13/16"	5/8"	Walnut	43.80

KNOB DIAL PLATES



2261 — 2262 — 2290

DIAL: BRASS, chrome silver, 1⅝" O.D.
KNOB: Molded bakelite black (our 2250).
DESCR.: For matching dials on instruments, receivers, amplifiers. Dial has clear black etched numbers. Knob fits 1'4" shaft.

Std. Pkg. 10

No.	Type	NET Each
2261	10 to 0 180 Degrees	$.75
2262	10 to 0 270 Degrees	.75
	DIAL PLATES ONLY ½" I.D.	
2263	10 to 0 180 Degrees	.45
2264	10 to 0 270 Degrees	.45

DIAL: Nickel silver, 1⅝" O.D.
KNOB: Molded bakelite.
DESCR.: Engraved numerals, varnish coated. 10 to 0, in 360 degrees. Knob fits ¼" shaft.

Std. Pkg. 10

No.	NET Each
2290	$.75

PUSH BUTTON KNOBS



Std. Pkg. 25

No.	Style	O.D.	Height	Color	NET Per C
2277	A	½"	51/64"	Black	$7.20
2278	A	½"	51/64"	Red	8.40
2279	B	31/64"	9/16"	Black	4.80
2280	B	31/64"	9/16"	Red	6.00

CONTROL PLATES

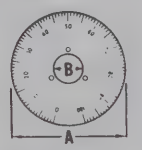


MATERIAL: Brass Black Satin Finish. Etched silver numerals.
DIMENSION: 13/32" I.D. x O.D. as specified, x .020" thick.

Std. Pkg. 5

Clockwise Calib. 0-100 No.	Counter-Clockwise Calib. 100-0 No.	Degrees	O.D.	NET Per C
2900	2906	180	2"	$45.00
2901	2907	270	2"	45.00
2902	2908	325	2"	45.00
2903	2909	180	3½"	90.00
2904	2910	270	3½"	90.00
2905	2911	325	3½"	90.00

DIAL PLATES



MATERIAL: Brass Chrome Silver Finish. .020" thick.
DESCR.: Mounting Holes 9/64".

Std. Pkg. 5

Clockwise Calib. 0-100 No.	Counter-Clockwise Calib. 100-0 No.	Degrees	A	B	NET Per C
2912	2928	180	1⅛"	3/8"	$45.00
2913	2929	270	1⅛"	3/8"	45.00
2914	2930	325	1⅛"	3/8"	45.00
2915	2931	360	1⅛"	3/8"	45.00
2916	2932	180	1¾"	31/64"	60.00
2917	2933	270	1¾"	31/64"	60.00
2918	2934	325	1¾"	31/64"	60.00
2919	2935	360	1¾"	31/64"	60.00
2920	2936	180	2¾"	3/4"	75.00
2921	2937	270	2¾"	3/4"	75.00
2922	2938	325	2¾"	3/4"	75.00
2923	2939	360	2¾"	3/4"	75.00
2924	2940	180	4"	15/16"	120.00
2925	2941	270	4"	15/16"	120.00
2926	2942	325	4"	15/16"	120.00
2927	2943	360	4"	15/16"	120.00

DIAL AND KNOB ASSEMBLY



DIAL: Brass Chrome Silver Finish. .020" thick.
KNOB: Molded Bakelite with ¼" Brass insert.

Std. Pkg. 5

Clockwise Calib. 0-100 No.	Counter-Clockwise Calib. 100-0 No.	Degrees	O.D.	NET Each
2960	2976	180	1½"	$1.35
2961	2977	270	1½"	1.35
2962	2978	325	1⅛"	1.35
2963	2979	360	1½"	1.35
2964	2980	180	1⅝"	1.41
2965	2981	270	1⅝"	1.41
2966	2982	325	1⅝"	1.41
2967	2983	360	1⅝"	1.41
2968	2984	180	2¾"	3.00
2969	2985	270	2¾"	3.00
2970	2986	325	2¾"	3.00
2971	2987	360	2¾"	3.00
2972	2988	180	4"	3.45
2973	2989	270	4"	3.45
2974	2990	325	4"	3.45
2975	2991	360	4"	3.45

VERNIER DIAL MARKERS



MATERIAL: Brass Chrome Silver Finish. Supplied with hardware.

Std. Pkg. 5

No.	For °Dials	Dial O.D.	Each
2944	180	1½"	$55.00
2945	270	1½"	55.00
2946	325	1⅛"	55.00
2947	360	1½"	55.00
2948	180	1¾"	55.00
2949	270	1¾"	55.00
2950	325	1¾"	55.00
2951	360	1¾"	55.00
2952	180	2¾"	55.00
2953	270	2¾"	55.00
2954	325	2¾"	55.00
2955	360	2¾"	55.00
2956	180	4"	55.00
2957	270	4"	55.00
2958	325	4"	55.00
2959	360	4"	55.00

BINDING POST KNOBS



Std. Pkg. 25

No.	Style	O.D.	Height	threaded 8-32 brass inserts Color	NET Per C
2271	A	¾"	½"	Black	$8.40
2272	A	¾"	½"	Red	9.60
2285	B	½"	7/16"	Red	9.00
2286	B	½"	7/16"	Black	9.00
2287	C	½"	½"	Red	9.00
2288	C	½"	½"	Black	9.00

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HERMAN H. SMITH, INC.

"IT'S SOUND PLANNING to SPECIFY SMITH for ELECTRONIC COMPONENTS"

CUTLER-HAMMER SWITCHES

TOGGLE SWITCHES
STANDARD DUTY

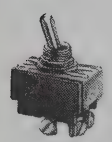
15 Amps. 125 Volts — 10 Amps. 250 Volts

AC, UL Approved 15/32" shank; slow-make and break; bakelite case. AC rated only for longer life and greater capacity. **Std. Pkg. 10**



BACK CONNECTED LUG TERMINALS

No.	C-H No.	Type	NET Each
966	7501K13	SPST	$ .69
967	7505K4	SPDT	.81
968	7561K4	DPST	1.08
969	7565K5	DPDT	1.26
970	7611K2	TPST	2.19
971	7615K2	TPDT	2.70



BACK CONNECTED SCREW TERMINALS

No.	C-H No.	Type	NET Each
972	7500K14	SPST	$ .81
973	7504K4	SPDT	.96
974	7560K5	DPDT	1.26
975	7564K6	DPDT	1.56
976	7610K2	TPST	2.55
977	7614K2	TPDT	3.24

CENTER OFF STANDARD DUTY TOGGLE SWITCHES



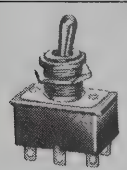
BACK CONNECTED LUG TERMINALS

No.	C-H No.	Type	NET Each
978	7503K13	SPDT	$ .81
979	7563K4	DPDT	1.26
980	7613K2	TPDT	2.70

BACK CONNECTED SCREW TERMINALS

No.	C-H No.	Type	NET Each
981	7502K13	SPDT	$ .96
982	7562K4	DPDT	1.56
983	7612K2	TPDT	3.24

TOGGLE SWITCHES
LIGHT DUTY



AC-DC, UL Approved; 15/32" shank; quick make — quick break; bakelite case. Unusually small size for electrical capacity. **Std. Pkg. 10**

BACK CONNECTED LUG TERMINALS
SMALL BAT HANDLE 15/32" LONG

No.	C-H No.	Type	Current Rating 125 V.	250 V	NET Each
950	8280K16	SPST		3 Amps.	$ .69
951	8381K8	SPST	6 Amps.	3 Amps.	.81
952	8282K14	SPDT	3 Amps.	1 Amp.	.87
953	8284K14	2 circ.	3 Amps.	1 Amp.	.93
954	8360K7	DPST		3 Amps.	1.26
955	8370K7	DPST	6 Amps.	3 Amps.	1.38
956	8363K7	DPDT		3 Amps.	1.44
957	8373K7	DPDT	6 Amps.	3 Amps.	1.56

STANDARD BAT HANDLE 11/16" LONG

					NET Each
1160	8908K446	SPST		3 Amps.	$ .69
1161	8908K447	SPST	6 Amps.	3 Amps.	.81
1162	8908K448	SPDT	3 Amps.	1 Amp.	.87
1163	8908K449	2 Circ.	3 Amps.	1 Amp.	.93
1164	8908K450	DPST		3 Amps.	1.26
1165	8908K451	DPST	6 Amps.	3 Amps.	1.38
1166	8908K452	DPDT		3 Amps.	1.44
1167	8908K453	DPDT	6 Amps.	3 Amps.	1.56



SIDE CONNECTED SCREW TERMINALS

No.	C-H No.	Type	Current Rating 125 V.	250 V.	NET Each
958	8285K8	SPST		3 Amps.	$ .84
959	8396K8	SPST	6 Amps.	3 Amps.	.96
960	8297K8	SPDT	3 Amps.	1 Amp.	1.11
961	8372K7	DPST	6 Amps.	3 Amps.	1.65
962	8365K7	DPDT		3 Amps.	1.89
963	8375K7	DPDT	6 Amps.	3 Amps.	2.01



WIRE LEADS— SIX INCHES LONG **Std. Pkg. 10**

No.	C-H No.	Type	Current Rating 125 V.
964	8290K16	SPST	
965	8391K8	SPST	6 Amps.

No.	C-H No.	250 V. NET Each
250 V. Type	Each 125 V.	3 Amps. $ .84
		3 Amps. .96

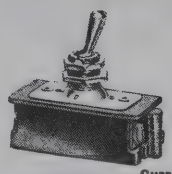


PUSH BUTTON MOMENTARY SWITCHES
Std. Pkg. 10

AC-DC, UL Approved, 15/32" shank; rated at ¾ Amp, 125 volts — ¼ Amp, 250 volts.

No.	C-H No.	Type	Term.	NET Each
992	8411K4	SP Norm. Op	Lug	$ .48
993	8411K3	SP Norm. Op	Screw	.54
994	8411K8	SP Norm. Cl	Lug	.36
995	8411K7	SP Norm. Cl	Screw	.39

TOGGLE SWITCHES
HEAVY DUTY

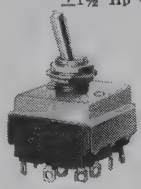


AC - DC, UL Approved; 15/32" shank; quick make-quick break; bakelite case. Screw Terminals.

Std. Pkg. 10

No.	C-H No.	Current Rating Type	125 V	250-V	NET Each
984*	7321K3	SPST	12 A	6 A	$1.41
985*	7320K3	DPST	12 A	6 A	1.41
986†	7361K5	SPST	15 A	10 A	2.46
987†	7360K8	DPST	15 A	10 A	2.46
988‡	7402K4	DPST		20 A	3.24

*1 Hp — 125/250V. †1½ Hp — 125/250V. ‡1½ Hp — 125V, 2 Hp — 250V.



FOUR POLE SWITCHES

AC-DC GOVERNMENT APPROVED PER MIL-S-6745. 15/32" shank. Rated 10 amps, 115 volt AC—20 amps, 28 volts DC (Nominal rating per pole) SEALED LEVER **Std. Pkg. 10**

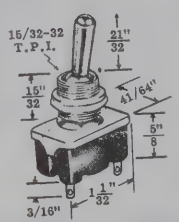
No.	C-H No.	Type	Terminals	NET Each
944	7661K6	4 PST	Solder Lugs	$5.16
945	7665K4	4 PDT	Solder Lugs	6.30
946	7660K8	4 PST	Screw Term.	6.00
947	7664K3	4 PDT	Screw Term.	7.00
		CENTER OFF		
948	7663K5	4 PDT	Solder Lugs	$6.30
949	7662K5	4 PDT	Screw Term.	7.00



PUSH BUTTON SWITCHES
Push to make—Push to break

AC-DC, UL Approved; 11/16" shank; bakelite case. Pushing the button once closes the contacts. Pushing it again opens the contacts. Rated at 6 Amps. 125 Volts; 3 Amps. 250 Volts. **Std. Pkg. 10**

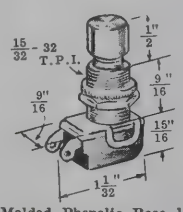
No.	C-H No.	Type	Term.	NET Each
989	7206K4	SPST	Lug	$ .96
990	7208K4	SPST	Screw	1.08
991	7207K4	SPST	Wire	1.08



MIDGET TOGGLE SWITCH

Bat lever. Molded phenolic base. 15/32-32 x 15/32" long. Slotted sleeve, nickel finish. Supplied with hex nut and knurled nut. Back connected silver plated solder contacts. Rated 1 amp.-250 volts; 3 amps.-125 volts. **Std. Pkg. 10**

No.	Circuit	NET Each
920	SPST	$ .93
921	SPDT	1.11
922	2 Circ.	1.14
923	DPST	1.35
924	DPDT	1.56



MIDGET MOMENTARY SWITCH
SLOW MAKE AND BREAK

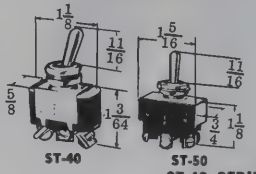
Molded Phenolic Base 15/32-32 x 5/16" slotted sleeve, Nickel Finish. Supplied with hex nut and knurled nut. Side connected silver plated solder contacts. Rated at 3 amps.-120 volts A.C. Supplied less button; order button separately. **Std. Pkg. 10**

Normally Closed (ON)

No.	Circuit	NET Each
925	SPST	$ .75
926	2 Circ.	.81

Normally Open (OFF)

No.	Circuit	NET Each
927	SPST	$ .75



"ST" SWITCHES

Nominal Rating Per. Pole:
10 Amps. 115 V. AC
20 Amps. 28V. DC
Std. Pkg. 10

ST-40 SERIES — Single Pole With Screw Terminals

HHS	C-H	JAN Type	Circuit	NET Each
1720	8801K13	ST40A	SPST	On-None-Off	$1.90
1721	8813K12	ST40B	SPST	On-None-Mom-Off	2.10
1722	8811K12	ST40C	SPST	On-None-Mom-On	2.10
1723	8810K12	ST40D	SPDT	On-None-On	2.30
1724	8800K13	ST40E	SPDT	On-Off-On	2.30
1725	8804K12	ST40F	SPDT	On-None-Mom-On	2.50
1726	8812K13	ST40G	SPDT	Mom-On-Off-Mom-On	2.50
1727	8809K13	ST40H	SPDT	Off-On-Mom-On	2.50

All ST-40 Switches have Sealed Lever.

ST-42 SERIES — Single Pole With Solder Lugs

HHS	C-H	JAN Type	Circuit	Each
1730	8803K6	ST42A	SPST	On-None-Off	$1.62
1731	8819K5	ST42B	SPST	On-None-Mom-Off	1.62
1732	8817K5	ST42C	SPST	On-None-Mom-On	1.73
1733	8816K5	ST42D	SPDT	On-None-On	1.68
1734	8802K6	ST42E	SPDT	On-Off-On	1.68
1735	8805K5	ST42F	SPDT	On-None-Mom-On	1.83
1736	8818K5	ST42G	SPDT	Mom-On-Off-Mom-On	1.83
1737	8815K6	ST42H	SPDT	On-Off-Mom-On	1.83

ST-50 SERIES — Double Pole With Screw Terminals

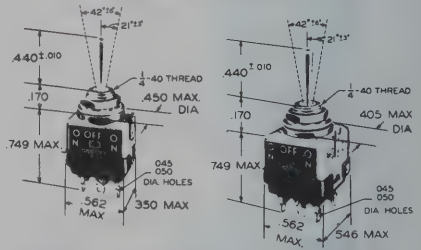
HHS	C-H	JAN Type	Circuit	Each
1740	8822K8	ST50K	DPST*	On-None-Off	$2.55
1741	8828K5	ST50L	DPST	On-None-Mom-Off	3.10
1742	8826K5	ST50M	DPST	Off-None-Mom-On	3.10
1743	8824K8	ST50N	DPDT*	On-None-On	3.10
1744	8820K10	ST50P	DPDT*	On-Off-On	3.10
1745	8830K5	ST50R	DPDT	On-None-Mom-On	3.33
1746	8834K4	ST50S	DPDT*	Mom-On-Off-Mom-On	3.33
1747	8832K4	ST50T	DPDT*	On-Off-Mom-On	3.33

* These switches are equipped with Sealed Lever.

ST-52 SERIES — Double Pole With Solder Lugs

HHS	C-H	JAN Type	Circuit	Each
1760	8823K5	ST52K	DPST	On-None-Off	$1.80
1761	8829K5	ST52L	DPST	On-None-Mom-Off	1.90
1762	8827K5	ST52M	DPST	Off-None-Mom-On	1.90
1763	8825K5	ST52N	DPDT	On-None-On	1.90
1764	8821K5	ST52P	DPDT	On-Off-On	1.90
1765	8831K5	ST52R	DPDT	On-None-Mom-On	2.20
1766	8835K3	ST52S	DPDT	Mom-On-Off-Mom-On	2.20
1767	8833K3	ST52T	DPDT	On-Off-Mom-On	2.20

C-H MINIATURE MILITARY SWITCHES



Extremely compact, highly reliable power or dry circuit switches. Usable as a pre-set switch in aircraft recognition systems; for walkie-talkies; for electronic instruments and communication systems.

RATINGS: 2 Amps. @ 28 V.D.C. 1 Amp @ 50 V.D.C. 2 Amps @ 115 V.A.C.

MINIMUM RATING: 30 Microamps. @ 50 Millivolts.

SINGLE POLE

WEIGHT: 5.0 Grams.
CUBIC CONTENT: .147 cubic inches "behind panel" volume. **Std. Pkg. 5**

HHS	C-H	Circuit	NET Each
1841	8866K1	SPDT	On-Off-On	$6.80
1842	8866K2	SPDT	Mom. On-Off-Mom. On	7.65
1843	8866K3	SPDT	On-Off-Mom. On	7.65
1844	8866K4	SPDT	On-None-On	6.80
1845	8866K5	SPST	On-Off-None	6.80
1846	8866K6	SPST	None-Off-Mom. On	7.65
1847	8866K7	SPST	On-None-Off	6.80

DOUBLE POLE

WEIGHT: 6.5 grams.
CUBIC CONTENT: .230 cubic inches "behind panel" volume. **Std. Pkg. 5**

HHS	C-H	Circuit	NET Each
1851	8867K1	DPDT	On-Off-On	$8.50
1852	8867K2	DPDT	Mom. On-Off-Mom. On	9.90
1853	8867K3	DPDT	On-Off-Mom. On	9.90
1854	8867K4	DPDT	On-None-On	8.50
1855	8867K5	DPST	On-Off-None	8.50
1856	8867K6	DPST	None-Off-Mom. On	9.90
1857	8867K7	DPST	On-None-Off	8.50

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HERMAN H. SMITH, INC.

"IT'S SOUND PLANNING to SPECIFY SMITH for ELECTRONIC COMPONENTS"

Norelco ALL TRANSISTOR Electronic Educational kits

FUN TO BUILD!





FUN TO USE!

With New Concept in Assembly

PICTORIAL LAYOUT TEMPLATES

Complete, foolproof individual template provided for each circuit

UP TO 23 DIFFERENT USEFUL OPERATING PROJECTS

FOR AGES 9 AND OVER

100% EDUCATIONAL DEVICE

Teaches the HOW and WHY of Electronics

- NO SOLDERING — NO TOOLS REQUIRED
- ABSOLUTELY SAFE
- PEGBOARD ASSEMBLY

ALL THESE WORKING UNITS CAN BE MADE FROM NORELCO ELECTRONIC EDUCATIONAL KITS

ELECTRO ACOUSTICS
EE20 Electronic Organ
EE 8 Phono Amplifier
EE20 Sound Amplifier
EE20 Push-Pull Sound Amplifier
EE20 Bi-Ampli Amplifier

TELECOMMUNICATION
EE20 Intercom
EE20 Morse Code Trainer, with loudspeaker
EE 8 Morse Code Training Set
EE20 Public Address and Telephone Amplifier

RADIO
EE20 3-Transistor Radio Receiver
EE 8 2-Transistor Sensitive Radio Receiver
EE 8 1-Transistor Radio Receiver

ELECTRONIC SIGNALING
EE20 Burglar Alarm
EE20 Acoustic Relay
EE20 Pilfering Alarm
EE20 Pilfering Alarm with power-economizing circuit
EE 8 Tell-tale Light
EE 8 Flashing Beacon

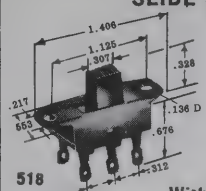
ELECTRONIC MEASURING AND CONTROL
EE 8 Rain or Moisture Indicator
EE20 Time Switch
EE20 Automatic Night Light
EE20 Universal Measuring Equipment
EE20 Light Meter

When a project loses its appeal, it can be stripped and the same parts used to rebuild other projects, over and over!

Smith No.	Kit	Description	Resale
2417	EE8	Starter Kit, makes up to 8 different circuits (Less Battery)	$16.95
2418	EE8/20	"Add-On" for EE8 Kit, to make up to 15 additional different circuits (Less Battery)	$10.95
2419	EE20	Complete Kit, makes up to 23 different circuits (Less Battery)	$24.95

Each Kit is handsomely packaged in multi-colored box, with all components individually nested in styrofoam base, complete with 96-page Instruction Manual.

CONTINENTAL-WIRT SLIDE SWITCHES



With Detent

UL APPROVED

General purpose switches, used on hi-fi equipment, test instruments, etc. Steel cadmium plated housings. Black phenolic buttons. Std. Pkg. 25

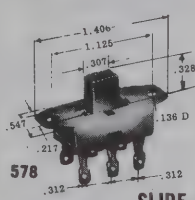
No.	Circuit	Rating @ 125 Volts AC Amps	DC Amps	NET Per C
515	SPST	.75	.75	$11.40
516	SPDT	.75	.75	12.00
517	DPST	.5	.5	15.00
518	DPDT	.5	.5	18.00
1105	SPST	6.0	1.0	14.40
1106	SPDT	6.0	1.0	15.00
1107	DPST	6.0	1.0	24.00
1108	DPDT	6.00	1.0	27.00

With Spring Return

No.	Circuit	Rating 125V ACDC	NET Per C
568	SPST	.5 Amp	$24.00
569	SPDT	.5 Amp	28.80

TRIPLE THROW With Detent

No.	Circuit	Rating 125V ACDC	NET Per C
1053	SP3T	.5 Amp	$28.80
1054	DP3T	.5 Amp	30.00



SLIDE SWITCHES With Detent

CENTER OFF

No.	Circuit	Rating 125V ACDC	NET Per C
577	SP 3-Position	.5 Amp	$28.80
578	DP 3-Position	.5 Amp	30.00

MULTI-POLE SWITCHES With Detent

Unique construction, all poles are in the same plane, more compact, easier wiring. Std. Pkg. 25

No.	Circuit	Rating @ 125 Volts AC Amps	DC Amps	NET Per C
1109	3PDT	3.0	1.0	$48.00
1110	3PDT	.5	.5	45.00
	Same as above but 1.005" wide			
1104	4PDT	.5	.5	60.00

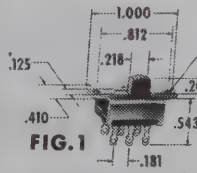


SLIDE SWITCH SHIELD

For terminal protection or electrostatic shielding. Shield is made of steel, cadmium plated, with fibre insulation. Std. Pkg. 25

No.	NET Per C
519	$7.80

SUB-MINIATURE SLIDE SWITCHES



Extremely small slide-switches for use in circuitry with critical space requirements. Approximately 1/3 the volume of standard slide switch. All switches UL approved, and rated at 0.5 amp, 125 volt, AC-DC. Available with printed-circuit terminals on special order. Std. Pkg. 25

No.	Circuit	Fig. No.	NET Per C
	With Detent		
1226	SPDT	1	$27.00
1227	DPDT	1	33.00
1238	SPST	2	38.00
1239	DP3T	2	39.00
	With Spring Return		
1236	SPDT	1	39.00

PLUG-IN MODULE HOUSING

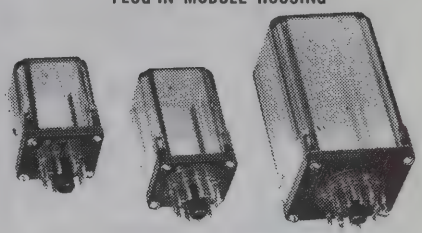


FIG.1 FIG.2 FIG.3

Molded plastic housings and pin headers fit standard tube sockets. For use in packaging relays, networks, miniature interchangeable circuits in plug-in, replaceable modules. Available in three sizes and materials for a wide range of temperature and environmental applications.

HEADERS: MOLDED THERMOSETTING plastic per MIL-M-14 CFG, Black.

HOUSINGS: MOLDED POLYSTYRENE, per Fed. Spec. L-P416, Type 1, Black.
MOLDED BUTYRATE, per Fed. Spec. L-349A, Type 3, Class MS, Clear.
MOLDED NYLON, per MIL-P-20693A, Natural.
Housings are supplied complete with header.

PINS: Brass, nickel plated.

SCREWS: Steel, Cadmium plated.

HOUSING	STYRENE Cat. No.	STYRENE NET Each	BUTYRATE Cat. No.	BUTYRATE NET Each	NYLON Cat. No.	NYLON NET Each
			Miniature (Fig. 1)			Std. Pkg. 5
8-Pin	2437-08	$.55	2421-08	$.59	2424-08	$.64
9-Pin	2437-09	.60	2421-09	.64	2424-09	.69
11-Pin	2437-11	.62	2421-11	.66	2424-11	.71
20-Pin	2437-20	.72	2421-20	.76	2424-20	.81
			Standard (Fig. 2)			
8-Pin	2438-08	.55	2422-08	.59	2432-08	.64
9-Pin	2438-09	.60	2422-09	.64	2432-09	.69
11-Pin	2438-11	.62	2422-11	.66	2432-11	.71
20-Pin	2438-20	.72	2422-20	.76	2432-20	.81
			Large (Fig. 3)			
8-Pin	2439-08	.74	2423-08	.88	—	—
11-Pin	2439-11	.82	2423-11	.96	—	—
20-Pin	2439-20	.87	2423-20	1.10	—	—

PLASTIC CABLE CLIPS — ETHYL CELLULOSE



These clips are well known for ability to withstand age, moisture, corrosion, shock and vibration. This tough, light weight, durable clip withstands temperatures from —60 to +175 degrees F. Made to MIL Std. 242A (Ships).
T .060 — W ½" X 7/32" — H .204
Std. Pkg. 100

No.	Hole (D)	E	NET Per C	NET Per M
831	1/8	.360	$2.24	$19.20
832	5/32	.423	2.40	19.80
833	1/4	.457	2.58	21.60
834	5/16	.498	2.85	24.00
835	3/8	.529	3.00	25.20
836	7/16	.560	3.30	27.60
837	1/2	.592	3.60	30.00
838	9/16	.623	4.20	34.20
839	5/8	.654	4.50	39.60
840	11/16	.752	4.80	42.60
841	3/4	.783	5.10	44.40
842	7/8	.845	5.40	48.00
843	1	.908	5.70	51.60
844	1 1/8	.970	6.00	54.60
845	1 1/4	1.032	6.30	58.20

NYLON

These strong and tough molded nylon clamps hold their shape under severest stress. Do not support combustion. Withstands temperatures from —60 to +250 degrees F. Made to MIL P17091A amend. 2. Std. Pkg. 100

	⅛" to ½" (D)	9/16" to 1¼" (D)
T	.040	.060
W	3/8"	1/4"
X	7/32"	13/64"
H	.167	.204

No.	Hole (D)	E	NET Per C	NET Per M
771	1/8	.310	$3.60	$30.00
772	5/32	.373	3.90	31.80
773	1/4	.407	4.20	34.80
774	5/16	.448	4.65	38.40
775	3/8	.479	4.80	40.20
776	7/16	.510	5.10	42.60
777	1/2	.542	5.40	45.00
778	9/16	.623	6.60	55.80
779	5/8	.654	7.20	65.40
780	11/16	.752	7.50	69.00
781	3/4	.783	8.10	75.00
782	7/8	.845	8.70	81.00
783	1	.908	10.20	96.00
784	1 1/8	1.002	12.00	108.00
785	1 1/4	1.062	13.80	120.00

SPRING GRID CLIP



Small and large type grid clip used to replace clips that have lost their tension due to heat causing poor contact. Available in bulk or 24. $.45. List envelopes on attractive display card. Std. Pkg. 100

No.	Type Type	Per C	Display	NET Per C
1288	1X2-6BQ6	$8.00	1288D	$6.48
1289	1B3-6BG6	8.00	1289D	6.48

HERMAN H. SMITH, INC.

"IT'S SOUND PLANNING to SPECIFY SMITH for ELECTRONIC COMPONENTS"

BROOKLYN N.Y. 11207

AUTO RADIO CONDENSERS



Eliminates radio interference caused by auto electrical system. Fits all cars — Proven quality — Guaranteed long life. Std. Pkg. 25

No.	Cap.	Type	NET Per C
811	.5 MFD	General, Univ.	$60.00
812	.25 MFD	Universal	54.00

ANTENNA CONNECTOR



For use as connection of auto radio antenna lead-in to auto radio receiver. Std. Pkg. 50

No. 1300 ..... $10.20 Per C

FUSE RETAINER



Recommended for use in auto radio power supply cables. Std. Pkg. 50

No. 1301 ..... NET Per C $13.20

PARTS FOR CONNECTOR & RETAINER

Std. Pkg. 100

No.	Type	NET Per C
1305	Male Cap for #1300 & #1301	$7.00
1306	Female Shell for #1300	2.31
1307	Contact for #1300 & #1301	3.30
1308	Spring for #1300 & #1301	.66
1309	Washer for #1300 & #1301	.33
1310	Insulating Tube for #1301	.60
1311	Female Shell for #1301	5.40

TV SNAP-ON FUSE HOLDER



Snap fuse clip over burned out fuse. Insert new fuse without soldering. Std. Pkg. 50

No.		NET Each
529		$ .16
529D	Display of 24 No. 529	3.89

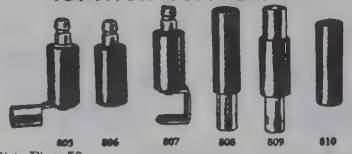
FUSE MOUNTING BASES



Black bakelite, panel mount type. Will accommodate the 3 A G Auto type cartridge fuse. Std. Pkg. 25

No.	Type	NET Per C
530	Single	$12.00
531	Double	24.00

Auto Radio IGNITION SUPPRESSORS



Std. Pkg. 50

Cat. No.	Type	NET Per C
805	Snap-On Type Suppressor	$27.00
806	Univ. Type with Double Thrd.	30.00
807	Angle Type Suppressor	33.00
808	Distributor Screw Type	45.00
809	Distributor Plug-in Type	36.00
810	Double Screw Type	27.00

MOTOROLA PLUGS & JACKS



Std. Pkg. 50

No.	Type	NET Per C
1200	Motorola Type Plug	$10.20
1207	Antenna Connector, Takes 1200 Plug	18.00
1204	Lead-in Adapter, converts Motorola pin plug to Delco	9.00
1235	Female for #1200 plug, without flange	7.20

BATTERY CONNECTORS



Std. Pkg. 25

No.	Spacing	Eveready	Burgess	RCA	NET Per C
1205	1-1/2"	455,467, 457,468	XX30, XX45 K45, V451	VS055, VS016, VS082, VS125	$18.00
1206	2-1/2"	490	N60	VS090	24.00
1210	15/16"	437,495, 477,2356, 479	XX50, N60X, P45, C6X,	VS217, VS316, VS218, VS219	18.00
1217	1-1/4"	707	D5	VS315	18.00
1218	1-3/8"	274,276	4D4, D6	VS306	18.00
1219	15/16"	243	2Z3	VS324	24.00
1234	1/2"	E126,415, 216,416 246	H126, U30, 2U6, UX45, 2N6	VS328, VS086, VS323, VS318, VS305	24.00

CONNECTOR SNAPS

Std. Pkg. 100

1296	Female	226,228	P6, PM8	VS300A, VS329	4.50
1297	Male	2709		VS326	4.50

SMITH ANNOUNCES

TERMINATION OF ITS SOLE DISTRIBUTORSHIP OF **KULKA TERMINAL BOARDS** TO ELECTRONIC PARTS DISTRIBUTORS

EFFECTIVE SEPTEMBER 1st 1965

The Kulka Line of Barrier Terminal Blocks has enjoyed a large and accelerating growth in recent years. It has finally become necessary, in the interest of greater efficiency and economy, and better service to both Distributors and Original Equipment Manufacturers, for the Kulka Company to establish its own Distributor Division.

We at Herman H. Smith Inc., are gratified to have played a vital part in the steady growth of the Kulka Line over the past twenty years... and we continue to share with Kulka Electric Corporation the basic aim of Maximum Quality and Service in the production and distribution of Components for the Electronics Industry.

FOR YOUR IMMEDIATE REQUIREMENTS of Kulka Terminal Blocks we respectfully suggest that you contact your nearest factory-authorized Kulka Distributor, or contact the Kulka Company directly.

●

THIS CATALOG SHOWS ONLY THOSE ITEMS THAT WE STOCK IN DEPTH

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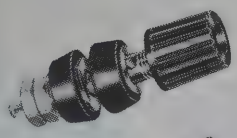
IF YOU DO NOT FIND WHAT YOU WANT, PLEASE CALL US

●

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SUPERIOR 5-WAY® *Binding Posts*

5 WAYS TO CONNECT • GOLD-PLATED BRASS PARTS • RANGE OF COLORS



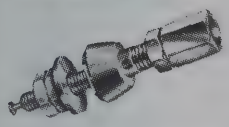
FLUTED NUT TYPES

Plastic parts of standard (not miniature) size types molded of Lexan polycarbonate resin; brass parts are gold-plated. Rated for 30 amperes, 1000 volts working. Nickel-plated brass types available on special order.



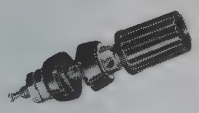
HEX NUT TYPES

Rated for 30 amperes, 1000 volts working. Brass parts are gold-plated; plastic parts are of nylon compounded to meet military specifications MIL-M-20693A, Type IV. Nickel-plated brass types available on order.



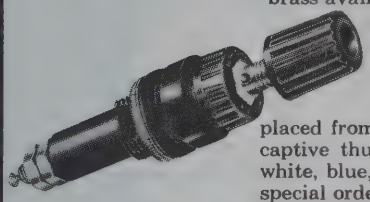
GROUNDING TYPE

For making rapid connections to ground. Made of finely machined brass nickel-plated and polished. Panel grounding collar frozen to shaft has "D" type shoulder for locking in keyed panel hole.



MINIATURE TYPES

Fluted nut design only. Rated for 15 amperes, 1000 volts working. Gold-plated brass parts; nylon plastic parts compounded to meet military specification MIL-M-20693A, Type IV. Types with nickel-plated brass available also.



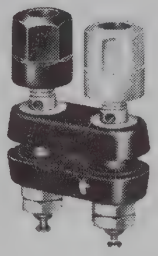
FUSED TYPE

Rated for 250 volts, 15 amperes maximum. Built-in fuseholder accepts standard type 3AG fuse (not supplied). Fuse can be replaced from front of panel. Type FP15BGC has black captive thumbnut; types with noncaptive black, red, white, blue, yellow and green thumbnuts available on special order.



DUAL ADAPTER TYPE

Designed to facilitate line voltage connections from output receptacles to binding posts. Has integral parallel-blade plug. Rating is 15 amperes, 125 volts. Body is black; captive black and white thumbnuts are mounted on ¾" centers. Brass parts are gold-plated. Ideal for safe, rigid connections to equipment lacking a parallel-blade plug and cord assembly.



DOUBLE ASSEMBLY TYPES

For instrument and equipment panels requiring binding posts mounted on ¾" centers. Rated for a current capacity of 30 amperes and a working voltage of 1000 volts. Brass parts are gold-plated; panel insulators in black only. Rugged, self-contained assembly makes mounting more accurate, faster and easier than two individual binding posts and gives maximum strength where connections are frequently made.

STYLE	TYPE
SUPERIOR 5-WAY® BINDING POSTS	
FLUTED NUT — STANDARD	DF31*
HEX NUT — STANDARD	DF30*
GROUNDING — ALL METAL	GP30NC
FLUTED NUT — MINIATURE	DF21*
FUSED TYPE	
BLACK FLUTED NUT	FP15BGC

STYLE	TYPE
DUAL ADAPTER TYPE	
BLACK & WHITE FLUTED NUTS	DAP15BWC
DOUBLE ASSEMBLY TYPES	
BLACK & WHITE HEX NUTS	DF30-2-BWTC
TWO BLACK HEX NUTS	DF30-2-BBC
BLACK & RED HEX NUTS	DF30-2-BRC

*Add desired color suffix to series designation number: BC (black), BLC (blue), RC (red), WTC (white), YC (yellow), GNC (green). For example: DF21BLC.

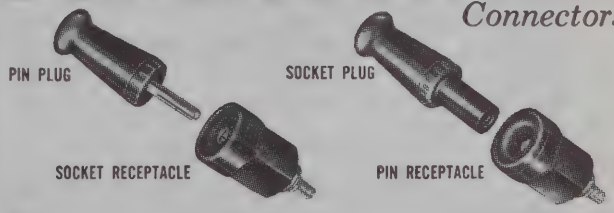
DUB-L-PLUG *Dual Electrical Connectors*



For safe, rapid connections to binding posts mounted on ¾" centers. Gold-plated current carrying parts, completely recessed integral banana plugs, captive black and white thumbnuts. Shielded/insulated type has die-cast, chrome-plated case; removable grounding banana plug; black nylon body. Insulated types have wire slots to permit stacking; nylon bodies in six colors.

NYLON BODY	INSULATED TYPE	SHIELDED/INSULATED
BLACK	IPG2BC	SPGK2BC
RED	IPG2RC	—
WHITE	IPG2WTC	—
BLUE	IPG2BLC	—
YELLOW	IPG2YC	—
GREEN	IPG2GNC	—

SUPERCON® *Electrical Connectors*



Nylon plastic parts; gold-plated brass current-carrying parts. Wiring connections to the same plug can be either soldered or solderless. Plug cable-fastening screws permit a wide range of cable sizes. Plug grips are of a simple, two-piece threaded construction for quick assembly. All receptacle plastic parts are molded of the same color to permit more rapid and accurate circuit identification front and back of panel when installed. The 25, 50 and 100 ampere types are listed by Underwriters' Laboratories, Inc.

AMPERES	PIN PLUGS TYPE†	SOCKET RECEPTACLES TYPE†	SOCKET PLUGS TYPE†	PIN RECEPTACLES TYPE†
25	PP25G	RS25G	PS25G	RP25G
50	PP50G	RS50G	PS50G	RP50G
100	PP100G	RS100G	PS100G	RP100G
250	PP250G	RS250G	PS250G	RP250G

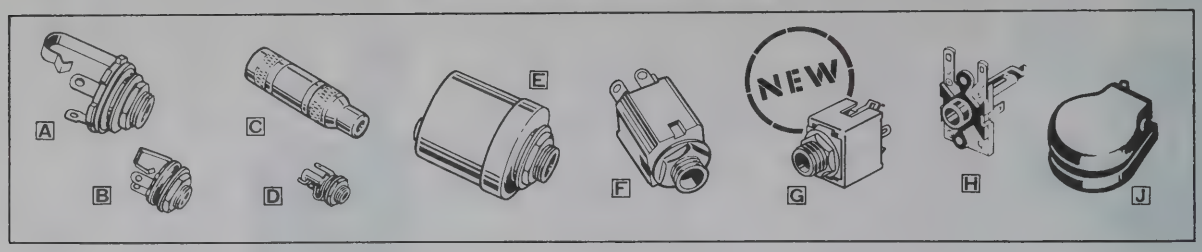
†Add desired color suffix to series designation number: B (black), BL (blue), R (red), WT (white), Y (yellow), GN (green). For example: PS25GWT.

THE SUPERIOR ELECTRIC COMPANY

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1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625

SWITCHCRAFT INC. Phone Jacks



"LITTEL-JAX" PHONE JACKS

A Quality phone jacks that mate with standard ¼" phone plugs. Notched insulating washers mechanically interlock springs and solder lugs. "V" bend in tip spring firmly "holds" mating plug. Minimum space requirements. Economical. Mount in single ⅜" hole, panels up to $^{5}/_{32}$" thick, except L-11 and L-12A in panels up to ¼" thick.

Nos. C-11 and C-12A mate with No. 440 (PJ-055B) Plug; C-12B, S-12B and S-13B mate with No. 480 (JAN-PJ-068) or No. 484 (W.E. No. 309) Plug. Nos. C-11 and C-12B have locating pins (non-turn devices). No. S-11 similar to No. 11 except .210" I.D. sleeve. C-11, C-12B and C-12A per JAN-J-641. All others mate with standard ¼" dia. plugs.

No. 14B Stereo Littel-Jax, switches-out speakers when connecting stereo headphones. Dual, N.O. switch contacts, open both stereo circuits independently when a 3-conductor plug is inserted.

TWO-CONDUCTOR TYPES

Part No.	Schematic No.	Typical Mating Plug	Mil-Type	U.S.A. List Price
11	I	250	—	$0.40
C-11	I	440	JJ-034	.60
L-11	I	250	—	.50
S-11	I	S-250	—	.45
12A	III	250	—	.45
C-12A	III	440	JJ-089	.75
L-12A	III	250	—	.55
13	V	250	—	.90
13A	VI	250	—	.85
13E	IX	250	—	.90

THREE-CONDUCTOR TYPES

12B	IV	267	—	$0.55
C-12B	IV	480	JJ-033	.70
L-12B	IV	267	—	.65
S-12B	IV	480	—	.65
13B	VIII	267	—	.75
S-13B	VIII	480	—	.95
14B	X	267	—	.95

"TINI-JAX" MINIATURE PHONE JACKS

B Miniature 2-conductor Jacks, approximately ⅓ the size of the "Littel-Jax"; otherwise similar in construction. Mount in ¼" dia. hole; panel up to ⅛" thick. No. 43A has a unique spring design that requires a pear shaped tip, such as Switchcraft "Tini-Plug" No. 750.

Part No.	Schematic No.	Typical Mating Plug	Conductors	U.S.A. List Price
41	I	750	2	$0.40
42A	III	750	2	.45
43A	VI	750	2	.70

"TINI-EXTENSION JAX"

C An extension or cable jack to mate with "Tini-Plugs". Two-conductor. Metal housing for ruggedness and electrical shielding. Solder lug terminals.

Switchcraft Part No. 125.....U.S.A. List Price **$1.25**

"MICRO-JAX" SUB-MINIATURE PHONE JACKS

D Precision manufactured jack for miniaturized applications. Two-conductor, single closed circuit. See Schematic Circuit III. Silver plating on special tempered nickel silver springs. Internally keyed nylon insulation interlocks springs and solder lugs to eliminate shorts. Fits .190" dia. hole in panels to $^{3}/_{32}$" thick. Only 1/25th the size of standard phone jacks. Mates with "Micro-Plug", Series 850, 880.

Switchcraft Part No. TR-2A.....U.S.A. List Price **$0.45**

"SHIELDED JAX"

E A unique modification of the "Littel-Jax". The shield is assembled into and made part of the jack. Ideal for high impedance circuits.

Part No.	Schematic No.	Typical Mating Plug	Conductors	U.S.A. List Price
CN-11	I	250	2	$0.80
CN-12A	III	250	2	.85
CN-12B	IV	267	3	.95
CN-13B	VIII	267	3	1.15

"HI-D JAX" PHONE JACKS

F New smaller, more compact phone jacks, mate with std. ¼" phone plugs. Molded box body protects integral silver-plated, nickel silver springs. Low contact resistance and electrical leakage with little capacity between the springs. Mount on ⅝" centers in single ⅜" hole in panels up to $^{5}/_{32}$" thick, depth behind panel $1^{3}/_{32}$". All part Nos. with **"L"** prefix mount in panels up to ¼" thick; part Nos. with **"N"** prefix feature a threaded nylon bushing to provide complete insulation of jack sleeve from mtg. panel. **Stereo "HI-D Jax",** Nos. **114B, L-114B, N-114B,** switches out speakers when connecting stereo headphones. Dual N.O. switch contacts open both stereo circuits independently when a 3 cond. plug is inserted.

TWO CONDUCTOR TYPES

Part No.	Schematic	Typical Mating Plug	U.S.A. List Price
111	I	250	$0.40
L-111	I	250	.50
N-111	I	250	.50
112A	III	250	.45
L-112A	III	250	.55
N-112A	III	250	.55
113	V	250	.90
113E	IX	250	.90
113D	VI	250	.90

THREE CONDUCTOR TYPES

112B	IV	267	.50
L-112B	IV	267	.60
N-112B	IV	267	.60
113B	VIII	267	.65
L-113B	VIII	267	.75
N-113B	VIII	267	.75
113F	VII	267	.65
114B	X	267	.75
L-114B	X	267	.85
N-114B	X	267	.85

"TINI-D JAX" SUBMINIATURE PHONE JACKS

G New, small completely enclosed, molded phone jack. Mate with Switchcraft "Tini-Plugs", No. 750 etc. Phenolic housing protects the **bifurcated** beryllium copper springs from being bent during mounting. **No. 142A** has threaded bushing for conventional mtg.; **No. PC-142A,** with plain bushing. Both have tip spring terminals that "snap-in" P.C. boards. Mount on ⅜" centers, in ¼" dia. hole in panels up to ⅛" thick. Depth behind panel $^{7}/_{16}$".

Part No.	Conductors	Schematic	Typical Mating Plug	U.S.A. List Price
142A	2	III	750	$0.45
PC-142A	2	III	750	.50

"R-JAX" ECONOMY PHONE JACKS

H Radically new jack design. Simple mounting needs only two (2) $^{3}/_{32}$" dia. rivets to fasten securely to mounting panel. Accept standard ¼" dia. phone plugs.

Part No.	Schematic No.	Typical Mating Plug	Conductors	U.S.A. List Price
1	I	250	2	$0.35
2A	II	250	2	.40
2B	IV	267	3	.45
3A	VI	250	2	.65
3B	VIII	267	3	.55
3E	IX	250	2	.75
3F	VII	267	3	.55
4B	X	267	3	.65

"JACK COVERS"

J Handy, rugged, spring-load phone jack covers. Covers jack openings when phone plug is removed. Protects against dust and moisture.

Series 500—Use with standard ⅜"-32 threaded bushing type phone jacks.

Series 600—Use with certain type tip jacks with ¼" mounting; height of tip jack head ⅛" to $^{3}/_{16}$". Also used as covers for "Tini-Jax."

Part No.	Color	U.S.A. List Price	Part No.	Color	U.S.A. List Price
510	Olive Drab	$1.05	610	Olive Drab	$ .75
512	Bright Nickel	1.05	612	Bright Nickel	.75
515	Black	1.05	615	Black	.75
520	Navy Gray	1.05	620	Navy Gray	.75

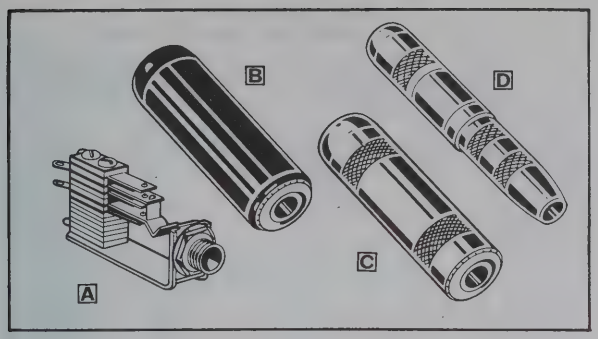




The above are strictly electrical schematics and do not necessarily indicate relative solder lug positions.

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SWITCHCRAFT INC. Jacks



"LF-JAX" LONG FRAME JACKS

A Quality long frame phone jacks with a ground lug that is an integral part of the frame. Fine silver contacts rated at 3 amp., 300 watts, A.C., non-inductive load. Frame also available with a non-turn device, prefix **Part No.** with letter **"R"**. Standard types mount in single ⅜" dia. hole in panels up to 5/16" thick. Depth behind panel, only 2 25/32".

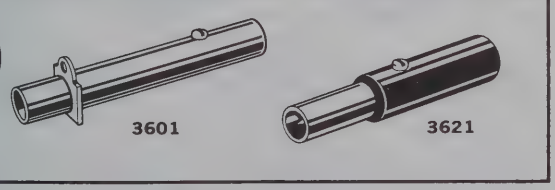
Part No.	Schematic No.	Typical Mating Plug	Conductors	U.S.A. List Price
31	I	250	2	$0.75
32	II	250	2	.95
32A	III	250	2	.95
32B	IV	267	3	.95
33	V	250	2	1.05
33A	VI	250	2	1.05
33B	VII	267	3	1.05
33C	VIII	267	3	1.05
33E	IX	250	2	1.05
34	X	267	3	1.20
34A	XI	250	2	1.20
34B	XII	267	3	1.20
35	XIII	250	2	1.45
36	XIV	267	3	1.70

"EXTENSION JAX" CABLE EXTENSION JACKS

Standard ¼", 2 and 3-conductor extension phone jacks with solder lugs or screw type terminals. Size 11/16" O.D., 2 5/32" long: 121 and 131 ½" O.D., 2½" long. Black handles are durable plastic. Shielded handles are brass, bright nickel plated.

Part No.	Fig.	Cond.	Typical Mating Plug	Term.	Handle	U.S.A. List Price
80	B	2	250	Screw	Black	$1.15
88	B	2	250	Solder	Black	1.00
120	C	2	270	Screw	Shielded	1.55
121	D	2	270	Solder	Shielded	1.60
126	C	2	R-280	Solder	Shielded	1.80
128	C	2	270	Solder	Shielded	1.40
S-128	C	2	S-250	Solder	Shielded	1.50
131	D	3	290	Solder	Shielded	2.00
830	B	3	267	Screw	Black	1.55
S-830	B	3	480	Screw	Black	2.00
838	B	3	267	Solder	Black	1.40
1230	C	3	290	Screw	Shielded	1.95
S-1230	C	3	480	Screw	Shielded	2.50
1238	C	3	290	Solder	Shielded	1.80

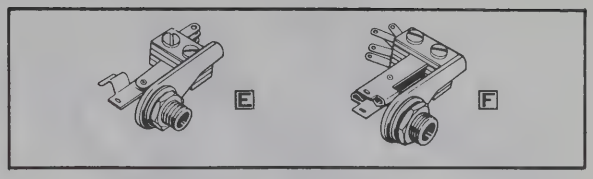
NEW



CV JAX AND PLUGS

High quality **coaxial-video jacks** and **plugs** designed for use in patching high frequency signals, microwave, telemetry and data transmitting applications. Jacks are made for **50** and **70 ohm** circuits and use standard RG cables. No. **3601** accepts RG59/U; No. **3602** accepts RG62/U. Mate with Switchcraft CV Plugs. Mount in single 7/16" hole. Depth behind panel is 2 29/64". No **3621,** terminating plug with 75 ohm ± 1% ½ watt resistor; No. **3622,** feed through plug; No. **3623** same as **3621** but with tip jack for incircuit testing.

JACKS		PLUGS	
Part No.	U.S.A. List Price	Part No.	U.S.A. List Price
3601	$10.00	3621	$ 4.75
3602	10.00	3622	4.25
		3623	5.75



"SF-JAX" SHORT FRAME PHONE JACKS

E **Series 20**—High quality commercial jacks, solder lugs parallel to mounting surface. Mount in ⅜" dia. holes, panels up to 1/16" thick.

F **Series 50**—Similar to Series 20, except solder lug location necessitates more depth but requires less panel space. Mount in panels up to ¼" thick.

Series C-20 and C-50—MIL Types with Military insulation and finishes, otherwise similar to commercial Series 20 and 50; both will mount in panels up to ¼" thick.

SERIES 20 and C-20

Part No.	Schematic No.	Typical Mating Plug	Mil-Type	U.S.A. List Price
21	I	250	—	$0.65
22	II	250	—	.80
22A	III	250	—	.80
22B	IV	267	—	.80
23	V	250	—	.95
C-23	V	440	JJ-099	1.35
23A	VI	250	—	.95
C-23A	VI	440	JJ-098	1.35
23B	VII	267	—	.95
23C	VIII	267	—	.95
23E	IX	250	—	.95
C-23E	IX	440	JJ-102	1.35
24	X	267	—	1.10
24A	XI	250	—	1.10
24B	XII	267	—	1.10
25	XIII	250	—	1.30
26	XIV	267	—	1.40

SERIES 50 and C-50

51	I	250	—	$0.65
C-51	I	440	JJ-096	1.20
52	II	250	—	.80
52A	III	250	—	.80
C-52A	III	440	JJ-097	1.30
52B	IV	267	—	.80
C-52B	IV	482	JJ-103	1.30
53	V	250	—	.95
53A	VI	250	—	.95
C-53A	VI	440	JJ-092	1.55
53B	VII	267	—	.95
53C	VIII	267	—	.95
53E	IX	250	—	.95
54	X	267	—	1.10
54A	XI	250	—	1.10
C-54A	XI	440	JJ-093	1.60
54B	XII	267	—	1.10
C-54B	XII	482	JJ-101	1.60
55	XIII	250	—	1.30
C-55B	XV	482	JJ-095	1.85
56	XIV	267	—	1.40



"LAMP JAX" SWITCHBOARD PANEL TYPES

G Quality long frame panel type lamp jacks. No. **LT-47,** black nylon lamp housing completely insulates lamp from frame. Interchangeable with W.E. Nos. 47A, 47B. Accepts std. lamps and lamp caps, W.E. Nos. 2, 72, etc. No. **LT-48,** new Ballast Lamp-Jax for use in circuits subjected to increasing temperature and wattage. Steel frame and bushing, Teflon sleeve. Accepts std. telephone lamps or ballast lamp No. 60XA. Both lamp jacks mount in std. Switchcraft jack panels.

Switchcraft Part No. LT-47 ..... U.S.A. List Price **$1.40**

Switchcraft Part No. LT-48 ..... U.S.A. List Price **$1.75**

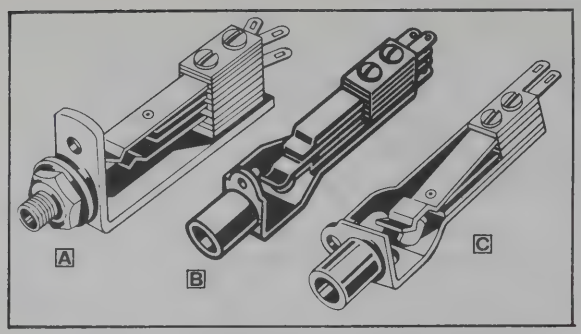
"THICK PANEL JAX"

H Phone jacks with long bushing. Mount in single 15/32" dia. hole in panels up to 1¼" thick. Solder lug terminals. Ideal for use with microphones; extra shielding virtually eliminates audio hum. No. 151, 2-conductor mates with 240, 245, 250, 255, 270 and 280 Plugs. No. 152B, 3-conductor mates with 260, 267, 269 and 297 Plugs.

Part No.	Description	U.S.A. List Price
151	2-cond. Brass Nickel Plated	$1.35
152B	3-cond. Brass Nickel Plated	1.50

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SWITCHCRAFT INC. Jacks and Plugs

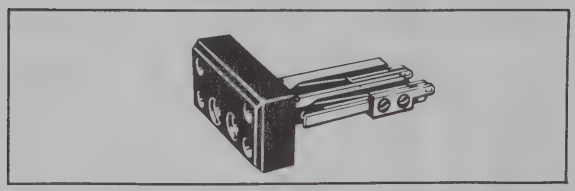


"T-JAX" TELEPHONE TYPE PHONE JACKS

C Long frame, switchboard type, phone jacks. For high quality communication equipment. Springs of nickel silver alloy for maximum life and corrosion resistance. Fine silver contacts are standard. Available in two frame designs. Part numbers in chart cover "A" frame design as shown in **Fig. C.** For frame design "C" as shown in **Fig. B,** add prefix letter "C" to part numbers. All jacks listed mate with standard ¼" dia. phone plugs.

Part No.	Schematic No.	Typical Mating Plug	Conductors	U.S.A. List Price
T-331	I	250	2	$1.05
T-332A	III	250	2	1.20
T-332B	IV	267	3	1.20
T-332C	XVIII	250	2	1.45
T-333	V	250	2	1.35
T-334A	XI	250	2	1.50
T-334B	XII	267	3	1.60
T-334C	XVII	250	2	1.50
T-334F	XIX	250	2	1.50
T-335	XIII	250	2	1.60
T-336	XXVI	250	2	1.75

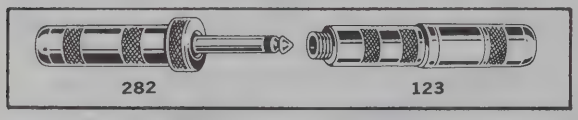
"DUAL-JACK BLOCKS"



Molded black phenolic jack blocks for mounting "MT-JAX" and "T-JAX" long frame phone jacks, on ⅝" centers. Can be rack panel mounted individually or in multiples. Blocks are 2¾" W. x 1¼" H. x ⅝" D. Mount with four No. 8-32 flat head screws.

Part No.	Description	U.S.A. List Price
2300	Jack Block, less jacks	$1.50
2331	Two MT-331 jacks	4.50
2332A	Two MT-332A jacks	4.90
2332B	Two MT-332B jacks	4.90
2333	Two MT-333 jacks	5.40

"LOCK PLUG AND EXTENSION JAX"



Standard size ¼", 2 and 3 conductor phone plugs and mating cable extension jacks with built-in device. Plug has coupling ring that can be threaded to the bushing of a "Littel-Jax" or to the mating end of the "Lock Extension Jax". Lock Plug handle, 1 51/64" long; ½" dia. Lock Extension Jax, ½" O.D.; 2½" long. All have solder lug terminals.

Part No.	Description	U.S.A. List Price
282	2-Conductor Lock Plug	$1.40
298	3-Conductor Lock Plug	1.75
123	2-Conductor Extension Jax	1.75
133	3-Conductor Extension Jax	2.25

"M-JAX" MILITARY TYPE PHONE JACKS

A Very heavy long frame jacks often referred to as the **Navy Jack.** Ideal for industrial and Military equipment. Long heavy duty springs with fine silver contacts. Mounts on single ⅝" hole, in panels up to ¼" thick.

Part No.	Schematic No.	Adjusted for Plug	Mil-Type No.	U.S.A. List Price
M-441	I	250	—	$1.50
M-442A	III	440	JJ-107	1.70
M-443A	VI	440	JJ-105	1.95
M-443B	VII	482	JJ-106	2.10
M-444*	XII	484 & 480	JJ-083	2.30
M-444B	XII	482	JJ-082	2.20
M-445	XIII	440	JJ-104	2.75
M-446	XIV	482	JJ-079	3.50
M-446A	XVI	482	JJ-081	3.90

*Bushing, .2085".

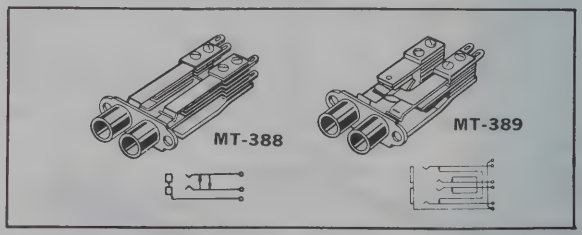
"MT-JAX" MILITARY TELEPHONE JACKS

C Long frame, telephone switchboard jacks designed for high quality communication and military equipment. Springs are of a special nickel silver alloy with welded cross bar palladium contacts. MT-Jax are available in two frame designs, namely "A" & "C". Part numbers in chart cover "A" frame design as shown in **Fig. C.** For frame design "C" as shown in **Fig. B,** add prefix letter "C" to part numbers.

Part No.	Schematic No.	Adjusted for Plug	Mil-Type No.	U.S.A. List Price
MT-331	I	440*	JJ-086	$1.50
MT-332	II	440	—	1.70
MT-332A	III	440	JJ-024	1.70
MT-332B	IV	482†	JJ-022	1.70
MT-332C	XVIII	440	JJ-016	1.95
MT-333	V	440	JJ-084	1.95
MT-333B	VII	482	—	1.95
MT-333E	IX	440	—	1.95
MT-334A	XI	440	—	2.00
MT-334B	XII	482	JJ-042	2.00
MT-334C	XVII	440	JJ-072	2.00
MT-334E	XXV	440	JJ-085	2.00
MT-334F	XIX	440	JJ-035	2.00
MT-335	XIII	440	—	2.25
MT-335A	XXVI	440	JJ-017	2.25
MT-336	XX	482	JJ-074	2.25
MT-336A	XIV	482	JJ-075	2.75
MT-336B	XXI	482	JJ-077	2.75
MT-336C	XXII	482	JJ-073	2.75
MT-336E	XXIII	440	—	2.75
CMT-336E	XXIII	440	JJ-019	2.75
MT-337	XXIV	440	JJ-087	2.75
CMT-337	XXIV	440	JJ-015	2.75
MT-339	XXVII	482	JJ-078	4.00
MT-342B§	IV	480‡	—	1.95
MT-344B§	XII	480	—	2.25

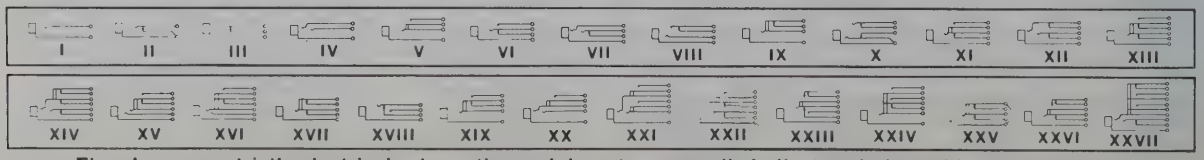
*MIL Type PJ-055.
†MIL Type PJ-051B.
‡MIL Type PJ-068.
§Bushing, .2085".

"TWIN JAX" DUAL MILITARY JACKS



Similar in design to "MT-Jax" except frame is double width, with two mounting ears on 1⅜" centers; bushings are on ⅝" centers. MT-388, MIL-Type No. **JJ-088,** mates with Nos. 411, 412, 413, 420 and 425 plugs. MT-389 has two 3-conductor jacks interconnected; mates with No. 482 Plug.

Switchcraft Part No. MT-388.....U.S.A. List Price **$5.15**
Switchcraft Part No. MT-389.....U.S.A. List Price **5.65**

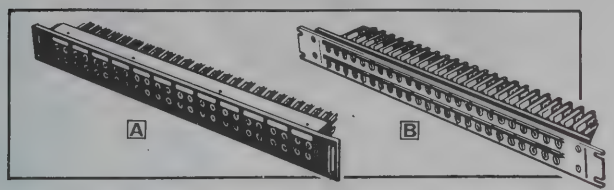


The above are strictly electrical schematics and do not necessarily indicate relative solder lug positions.

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SWITCHCRAFT INC. Jack Panels, Plugs, Patch Cords

"JACK PANELS"

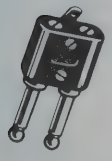


Rugged, heavy-duty jack panels for switching, distribution and control of audio signals in broadcasting stations, theaters, P. A. systems installations, etc. **Series 1200,** Fig. A, black phenolic panels reinforced with steel for the utmost rigidity. Mounting brackets slotted to fit all standard 19″ relay racks. Panel includes plastic covered designation strips. **Series 2800,** Fig. B, clear anodized aluminum panel. Extremely rugged, yet lightweight. Includes new narrow designation strip for each row. Add Prefix "X" to part numbers to indicate offset ground lugs on jacks. Aluminum panels available only with offset lugs.

Part No.	Fig.	Rows	Number of Jacks	Size, In. W x D x H	U.S.A. List Price
1200	A	Single	24 *	19x1¼x1¾	$ 18.00
1232A	A	Single	24 T-332A	19x1¼x1¾	45.00
1332A	A	Single	24 MT-332A	19x1¼x1¾	55.00
1400	A	Single	26 *	19x ⅝x1¾	20.00
1432A	A	Single	26 T-332A	19x ⅝x1¾	50.00
1532A	A	Single	26 MT-332A	19x ⅝x1¾	62.00
2400	A	Double	48 *	19x1¼x2⅛	20.00
2432A	A	Double	48 T-332A	19x1¼x2⅛	75.00
2532A	A	Double	48 MT-332A	19x1¼x2⅛	95.00
2600	A	Double	52 *	19x ⅝x1¾	25.00
2632A	A	Double	52 T-332A	19x ⅝x1¾	85.00
2732A	A	Double	52 MT-332A	19x ⅝x1¾	110.00
2800	B	Double	48 *	19x ⅝x1¾	40.00
X2832A	B	Double	48 T-332A	19x ⅝x1¾	99.00
X2932A	B	Double	48 MT-332A	19x ⅝x1¾	115.00

*Supplied less jacks.

MILITARY TYPE "TWIN-PLUGS"



412

Meet exact industrial and military requirements. **No. 411,** both design and materials, is manufactured in accordance with MIL-P-642(A) specs. **Nos. 412 and 413,** use identical materials. "Twin-Plug" sleeves spaced ⅝″ center to center with self-aligning feature.

Part No. 411—Two electrically independent 2-conductor plugs in black plastic handle. Has provision for Cord Clamp No. S-2674. Military Type **PJ-327** (Old Navy No. 491242). Interchangeable with W.E. 327.....U.S.A. List Price **$4.75**

Part No. 412—Two electrically independent 2-conductor plugs in black plastic handle. Has external cord clamp. Old Military Type PJ-289. Similar to W.E. 289B.....U.S.A. List Price **$4.50**

Part No. 413—Three circuit plug with two electrically independent tip circuits in heavy duty die cast frame. Molded black phenolic handle notched to indicate polarity. Interchangeable with MIL-Type PJ-421 and W.E. 241.....U.S.A. List Price **$4.50**

NEW

Part No. 414—Six circuit plug. Two electrically independent 3 conductor ¼″ dia. fingers. Black polarized handle. Interchangeable with WE-338A.....U.S.A. List Price **$9.00**

Part No. 415—Six circuit plug. Two electrically independent 3 conductor fingers. One ¼″ dia. finger, one .206″ dia. For automatic polarization. Black handle.....U.S.A. List Price **$10.00**

Part No. S-2674—Strain relief clamp, natural brass. For use with Nos. 411, 414, 415 "Twin-Plugs". Pkg. of 10...U.S.A. List Price **$0.50**

"DUMMY PLUGS"

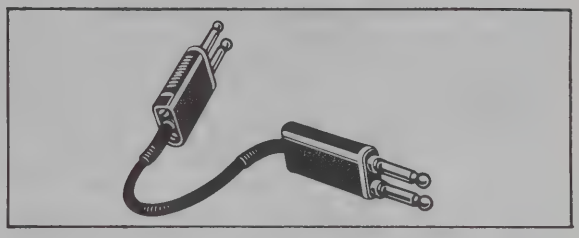


C D E

Low cost, 2- and 3-conductor molded plastic, dummy plugs for use in switchboards, jack panels. Inserts in jack as does a phone plug to switch circuits, but can not couple incoming signals. Can also be used to plug up unused phone jacks to prevent accidental insertion of a phone plug. Series 491, 3-conductor, .207″ dia. finger. Series 492, 3-conductor, .250″ dia. finger. Series 493, 2-conductor, .250″ dia.

Part No.	Fig.	Handle	Typical Mating Jack	U.S.A. List Price
491-01	C	Red	MT-342B	$0.50
491-02	C	Black	MT-342B	.50
491-05	C	White	MT-342B	.50
492-01	D	Red	MT-332B	.50
492-02	D	Black	MT-332B	.50
492-05	D	White	MT-332B	.50
493-01	E	Red	MT-331	.50
493-02	E	Black	MT-331	.50
493-05	E	White	MT-331	.50

PATCH CORD SETS



All patch cords are constructed of bronze tinsel conductors, insulated and shielded, with a heavy black nylon braid overall.

Series 17Q—2-conductor patch cords have No. 413 "Twin-Plug" at each end with shields grounded both ends.

Series 17P—Same as 17Q, except shield grounded one plug only.

Series 18Q—2-conductor patch cords use Military Plug **PJ-051** (Switchcraft Part No. 482) at each end with shields grounded both ends.

Series 19Q—Single conductor patch cords utilize Military Plug **PJ-047B** (Switchcraft Part No. 420) connected to each end with shield grounded both ends.

Part No.	Length	Plugs Used	U.S.A. List Price
17QA17	6 inch	413	$11.00
17QB17	1 foot	413	11.25
17QD17	2 feet	413	11.50
17QF17	3 feet	413	11.75
17QH17	4 feet	413	12.15
17QK17	6 feet	413	13.00
17QN17	10 feet	413	13.75
17PA17	6 inch	413	11.00
17PB17	1 foot	413	11.25
17PD17	2 feet	413	11.50
17PF17	3 feet	413	11.75
17PH17	4 feet	413	12.15
17PK17	6 feet	413	13.00
17PN17	10 feet	413	13.75
18QA18	6 inch	482	11.50
18QB18	1 foot	482	12.00
18QD18	2 feet	482	12.50
18QF18	3 feet	482	13.00
18QH18	4 feet	482	13.50
18QK18	6 feet	482	14.50
18QN18	10 feet	482	16.50
19QA19	6 inch	420	6.00
19QB19	1 foot	420	6.25
19QD19	2 feet	420	6.75
19QF19	3 feet	420	7.25
19QH19	4 feet	420	7.75
19QK19	6 feet	420	9.10
19QN19	10 feet	420	10.50

REPLACEMENT PATCH CORDS

Patch cords are made of bronze tinsel conductors, insulated and shielded, with a heavy black nylon braid overall. Cords designed for use with Switchcraft plugs 413, 420 and 482 or equivalents. When used with No. 420, clip off unnecessary lead.

Series 89Q—2-conductor shielded cord with shield termination at both ends.

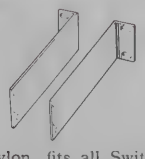
Series 89P—2-conductor shielded cord with shield termination at one end only.

Part No. Both Ends Shielded	Part No. One End Shielded	Length	U.S.A. List Price
89QA89	89PA89	6 inch	$2.25
89QB89	89PB89	1 foot	2.75
89QD89	89PD89	2 feet	3.00
89QF89	89PF89	3 feet	3.25
89QH89	89PH89	4 feet	3.50
89QK89	89PK89	6 feet	4.50
89QN89	89PN89	10 feet	6.50

JACK PANEL ACCESSORIES



HOLE PLUG



BRACKET KIT

Hole Plug, P-1801, molded nylon, fits all Switchcraft jack panels, Series 1200, 1400, 2400, 2600, 2800. Designed to plug unused holes in jack panels. Bracket Kit, K-107, consists of 2 long L-shaped steel, stand-off brackets and eight No. 6-32 self-tapping screws. To hold jack panels, Series 1400, 2600, 7″ in front of mounting rack.

Part No.	Description	U.S.A. List Price
P-1801	Hole Plug	$0.30
K-107	Bracket Kit	4.50

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SWITCHCRAFT INC. Phone Plugs

"LITTEL PLUG" PHONE PLUGS

Small size phone plugs fit standard ¼" phone jacks except *Nos. S-250, S-260, S-280 and S-290 which have a .206" dia. sleeve. **Nos. C-240, C-245 and C-270 feature an integral cable clamp with screw terminals. †No. R-280 has short sleeve for Revere Recorders. ‡No. 288 has a wide insulator between tip and sleeve for use in a 3-conductor jack to perform a 2-conductor function without shorting. Plugs with solder terminals have built-in cable clamp. Shielded metal handles are nickel plated brass; others are molded of durable plastic; ⅝" long x ½" dia.

TWO-CONDUCTOR TYPE

Part No.	Fig.	Typical Mating "Littel-Jax"	Handle	Terminals	U.S.A. List Price
240	A	11	Black	Screw	$0.75
C-240**	A	11	Black	Screw	.90
245	A	11	Red	Screw	.75
C-245**	A	11	Red	Screw	.90
250	A	11	Black	Solder	.70
255	A	11	Red	Solder	.70
270	B	11	Shielded	Screw	1.05
C-270**	B	11	Shielded	Screw	1.20
280	B	11	Shielded	Solder	1.00
288‡	C	11	Shielded	Solder	1.05
S-250	A	S-11	Black	Solder	.75
S-280	B	S-11	Shielded	Solder	1.00
R-280†	B	—	Shielded	Solder	1.25

THREE-CONDUCTOR TYPE

260	A	12B	Black	Screw	$1.20
S-260*	A	S-12B	Black	Screw	1.65
267	A	12B	Black	Solder	1.05
269	A	12B	Red	Solder	1.05
290	B	12B	Shielded	Screw	1.40
S-290*	B	S-12B	Shielded	Screw	1.85
297	B	12B	Shielded	Solder	1.30

STANDARD ¼" PHONE PLUGS

Available with phenolic or shielded, nickel plated over brass handle.

TWO-CONDUCTOR TYPE—SCREW TERMINALS

Typical mating jack "Littel-Jax" No. 11. Nos. 49 and 169 feature circuit closing device. Nos. 170 and 475 (MIL PJ-636) have two-piece handle with built-in clamp for ¼" cable. No. 180 has wide insulator between tip and sleeve for use in a 3-conductor jack to perform a 2-conductor function without shorting.

Part No.	Fig.	Handle	Length & Dia.	U.S.A. List Price
40	A	Black	2 1/16 x ¾	$0.75
45	A	Red	2 1/16 x ¾	.75
49	A	Black	2 1/16 x ¾	1.50
70	B	Shielded	2 1/16 x 1 1/16	1.20
160	C	Shielded	1 x 1 1/16	.90
169	C	Shielded	1 x ¾	1.75
170	D	Shielded	2 1/16 x 1 1/16	1.65
180	—	Shielded	1 x ¾	1.05
475	D	Shielded	1 ¾ x ¾	1.95

THREE-CONDUCTOR TYPE—SOLDER TERMINALS

Typical mating jack "Littel-Jax" No. 12B. No. 190A has two-piece handle with built-in cable clamp for ¼" cable.

60	A	Black	2 1/16 x 1 1/16	$1.05
90	C	Shielded	1 x 1 1/16	1.30
190	B	Shielded	2 1/16 x 1 1/16	1.50
190A	D	Shielded	2 1/16 x 1 1/16	1.95

"LUG-PLUG" PHONE PLUGS

Low cost, two-conductor phone plugs. Fit all ¼" phone jacks.

No. 385 Plug has a .206" dia. sleeve and mates with S-11 "Littel-Jax". All have solder lug terminals. Handle: Shielded metal or phenolic.

Part No.	Fig.	Typical Mating "Littel-Jax"	Handle	Length & Dia.	U.S.A. List Price
350	A	11	Black	1 ⅝ x ½	$0.55
355	A	11	Red	1 ⅝ x ½	.55
380	—	11	Shielded	1 x ½	.70
385	—	S-11	Shielded	1 x ½	1.00

"TINI-PLUGS" SUB-MINIATURE PHONE PLUGS

Miniature 2-conductor phone plugs for use with "TINI-JAX" only 1/3 the size of standard phone plugs. Handle 1⅝" overall length, are plastic or brass, nickel plated.

Part No.	Fig.	Terminal	Handle	U.S.A. List Price
740	E	Screw	Black	$0.75
745	E	Screw	Red	.75
750	E	Solder	Black	.70
755	E	Solder	Red	.70
770	E	Screw	Shielded	1.05
780	E	Solder	Shielded	1.05

"MICRO-PLUGS" ULTRA-MINIATURE PHONE PLUGS

Ultra-miniature 2-conductor phone plugs, only $1\frac{1}{61}$" long; ¼" O.D., .097" dia. sleeve. Mate with No. TR-2A. Have screw on handles in black, red or natural anodized aluminum; accommodates cables up to $\frac{7}{61}$" dia. All plugs have integral cable clamps.

Part No.	Fig.	Description	U.S.A. List Price
850	F	Black Handle	$0.75
855	F	Red Handle	.75
880	F	Natural Handle	.75



MILITARY TYPE "LITTEL-PLUGS" AND EXTENSION JAX

Designed to meet exact industrial and military requirements. Plugs are made in accordance with MIL-P-642(A) specifications. One-piece tip rod and one-piece sleeve and plug body provide internal interlock to prevent parts shifting in position. Type 820 Extension Jack meets MIL-J-641A specifications and mates with "Littel-Plug" No. 430. No. 470 has shielded handle; all others plastic: †Red; ‡Black. All plugs have screw terminals.

Part No.	Fig.	Mil-Type No.	Typical Mating Jack	Cond.	U.S.A. List Price
420‡	G	PJ-047B	MT-388	2	$1.50
425†	G	PJ-047R	MT-388	2	1.50
430‡	H	PJ-054B	820	2	1.40
435†	H	PJ-054R	820	2	1.40
440‡	—	PJ-055B	MT-331	2	1.40
445†	—	PJ-055R	MT-331	2	1.40
450‡	H	PJ-540B	820	2	1.40
455†	H	PJ-540R	820	2	1.40
470	—	PJ-055M	MT-331	2	2.00
480‡	I	PJ-068	MT-342B	3	3.60
482†	J	PJ-051R	MT-332B	3	4.00
483‡	J	PJ-051B	MT-332B	3	4.00
484†	J	PJ-309	M-444	3	3.60
820‡	—	JJ-026	430 Plug	2	2.00

Switchcraft Part No. P-1074-1—Strain Relief Clamp. Nickel Plate Brass. Package of 25.....U.S.A. List Price **$0.85**

TYPE 410 PLUG AND TYPE 810 JACK

Miniature 2-conductor extension jack and mating plug; often referred to as "Throat Microphone Plug and Jack". Plug is Military Type PJ-291; jack is Type JJ-048. Each is of two-piece molded construction. Plug has solder-cup terminals; jack has solder lugs. After wiring, shells must be cemented and clamped till dry. Overall size (engaged), 2⅝" x $1\frac{7}{32}$" x ⅜".

Switchcraft Part No. 410 Plug.....U.S.A. List Price **$0.60**
Switchcraft Part No. 810 Jack.....U.S.A. List Price **.80**

"FLAT PLUGS" FLAT PHONE PLUGS



¼" phone plugs featuring flat, space-saving handles. Ideal for applications where conventional plugs would protrude too far. Nos. 220, 225 have adapter clips which make them convenient to clamp standard phone tips to terminals. Shielded flat plugs, Nos. 228 and 238 have nickel plated steel handles; all others have red or black plastic handles. Nos. S-230 and S-235 have .206" dia. sleeve.

TWO-CONDUCTOR TYPE

Part No.	Fig.	Typical Mating Jack	Handle	Terminals	U.S.A. List Price
220	K	11	Black	Screw	$0.90
225	K	11	Red	Screw	.90
227	K	11	Black	Solder	.85
228	L	11	Shielded	Solder	.95
229	K	11	Red	Solder	.85

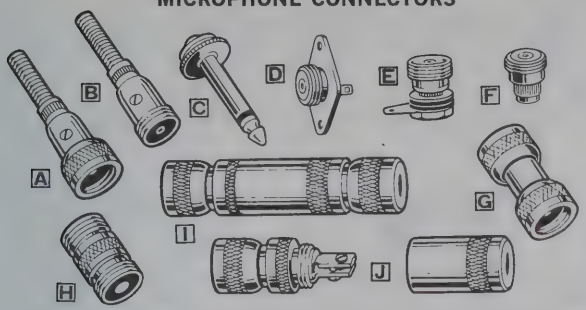
THREE-CONDUCTOR TYPE

230	K	12B	Black	Screw	$1.30
S-230	K	S-12B	Black	Screw	1.75
235	K	12B	Red	Screw	1.30
S-235	K	S-12B	Red	Screw	1.75
237	K	12B	Black	Solder	1.25
238	L	12B	Shielded	Solder	1.40
239	K	12B	Red	Solder	1.25

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SWITCHCRAFT INC. Connectors and Adapters

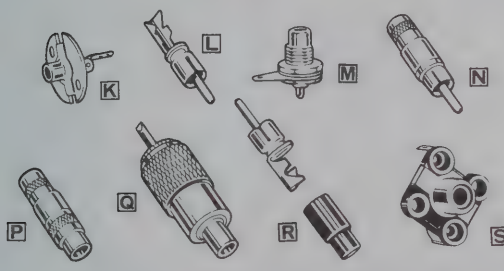
MICROPHONE CONNECTORS



Standard connectors with 5/8"-27 threads. Designed for use with single conductor microphone cable with 9/32" max. O.D. **Coupling ring** on 2501F removable for fast change of female to male type. Spring assembled into body, cable braid and spring clamped by hollow set screw. **No. 44** adapts 2501F to fit standard 2-cond. phone jack. No. 2501MP mounts in .385" dia. hole. ***No. 2501MPC** same as 2501MP except closed circuit type. **No. 2501FT,** coupler, two female connectors at each end. **No. 2501MT,** coupler, two male connectors at each end. **Nos. 2501FL, 2501FS,** for attaching cable to female connector without soldering; screw terminals. **No. 2501MBL,** insulated male panel receptacle. **No. 2501MPF,** male panel receptacle for PRESS-FIT mounting. **Cable clamp.

Part No.	Fig.	Description	U.S.A. List Price
2501F	A	Female Connector	$0.60
2501M	B	Male Connector	.45
44	C	Phone Plug Adapter	.50
2501MBL	D	Panel Receptacle	.50
2501MP	E	Panel Receptacle	.35
*2501MPC	E	Panel Receptacle	.45
2501MPF	F	Panel Receptacle	.35
2501FT	G	Double Female Connector	.80
2501MT	H	Double Male Connector	.70
**2501FL	I	Screw Term. Female Connector	2.25
2501FS	J	Screw Term. Female Connector	1.65

PHONO JACKS AND PLUGS



Low cost 2-cond. jacks and plugs for record players, FM-AM tuners, tape recorders, test equipment, etc. **3501MC** has 3/8" O.D. shell and cable clamp. **3501FP** for front panel mount in 1/4" hole, in panels up to 1/8" thick. **3501FR** for rear panel mount in 3/8" hole, in panels up to 13/64" thick. **3502** has unique cable clamp with 13/32" O.D. shielded removable handle. 3503 ext. jack has shielded removable handle, 13/32" O.D. with cable clamp. **3508 Series,** new color coded phono plugs with cable clamp and **"snap-on"** plastic handles in Red, Black, and White. **Series 3511 "4-Leaf Clover" Jax.** Molded phono Jack with dual contact surfaces for minimum shunt resistance, greater reliability. Open and closed circuit types. Mate with all Switchcraft phono plugs.

Part No.	Fig.	Description	U.S.A. List Price
3501F	K	Chassis jack	$0.15
3501M	—	Plug, less cable clamp	.10
3501MC	L	Plug with cable clamp	.15
3501FP	M	Chassis jack	.35
3501FR	—	As above, chassis jack	.40
3502	N	Plug	.50
3503	P	Extension jack	.60
3508-1	R	Plug, Red handle	.25
3508-2	R	Plug, Black handle	.25
3508-5	R	Plug, White handle	.25
3511	S	Chassis jack, open circuit	.25
3511A	S	Chassis jack, open circuit, grounded	.25
3512	S	Chassis jack, closed circuit	.30
3512A	S	Chassis jack, closed circuit, grounded	.30

RF-JACKS and RF-PLUGS

Standard phono jacks and plugs with **nylon insulation.** For use in radio frequency applications—low cost, max. insulation resistance. **No. 3504M,** 3/8" O.D. **No. 3505F** mounts front of panel in 3/8" hole—fits panel up to 11/64" thick. **No. 3506** adapter has coaxial connector (Amphenol 83-1SP) one end; 3505F at other end. **No. 3507** has 13/32" O.D. shielded, screw-on handle with cable clamp.

Part No.	Fig.	Description	U.S.A. List Price
3504M	L	Plug	$0.20
3505F	M	Chassis jack	.60
3506	Q	Adapter	2.00
3507	N	Plug	.80

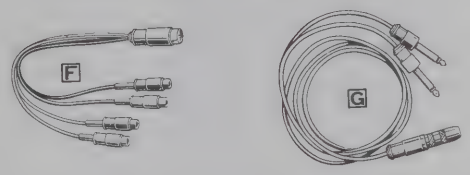
ADAPTERS



New, versatile adapters for interconnecting components and cables that do not have mating jacks and/or plugs. Positive mating contacts prevent resistive line-losses. **No. 353,** stereo headphone adapter, permits use of 2 stereo headphones in a single 3-circuit jack, instead of only one. **Nos. 374, 375, 376, 377** have shielded, nickel plated brass handles.

Part No.	Fig.	Description	U.S.A. List Price
353	A	Stereo Headphone Adapter. 3-circuit plug wired to two 3-circuit jacks. Housed in shielded, metal case, tan finish.	$4.25
374	B	Phone jack input to a 2-cond. "Tini-Plug" (9/64" dia. finger) output.	1.70
375	C	Phono jack input to a 2-cond. "Micro-Plug" (.097" dia. finger) output.	1.50
376	D	"Tini-Jax" input to a 2-cond. "Micro-Plug" (.097" dia. finger) output.	1.50
377	E	"Micro-Jax" input to a 2-cond. "Tini-Plug" (9/64" dia. finger) output.	1.50

STEREO ADAPTER CABLES



Part No. 330G, Fig. F, flexible stereo cable adapter. Adapts European-type 5-contact sockets to standard Switchcraft phono plugs. Color coded. Fits Norelco, Korting, Grundig, Sony, Elber tape recorders; Grundig radios. **Part No. 05FH81, Fig. G,** adapts 3-circuit phone plugs to two separate 2-cond. phone jacks as used on stereo tape recorders.

Part No.	Fig.	Description	U.S.A. List Price
330G	F	Stereo Adapter Cable. 5-pin European-type plug to four phono jacks. Shielded stereo cables, each 1 ft.	$5.50
05FH81	G	Stereo Headphone Adapter Cable. Two std. 2-cond. phone plugs wired to a 3-cond. phone jack. Shielded, 4 ft. stereo cable.	4.35

"MINI-CON" MINIATURE CONNECTORS

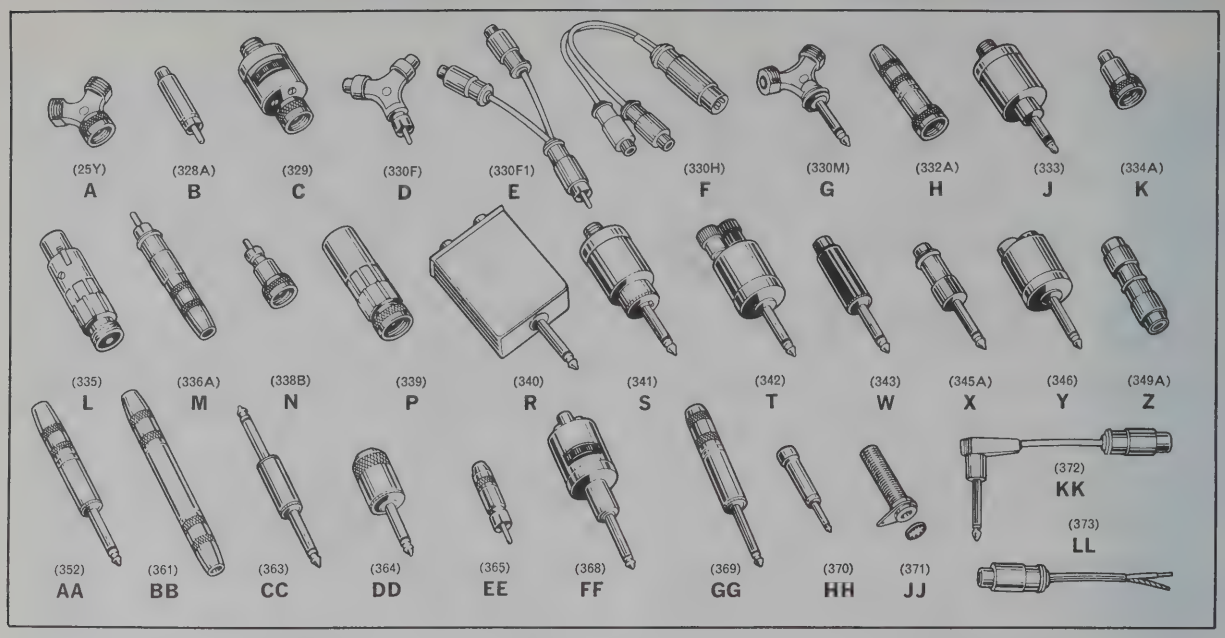
Popular "Mini-Con" microphone-type connectors used with miniaturized audio equipment, lapel microphones, musical instruments, etc. About 1/2 the size of standard microphone connectors. Accepts single conductor shielded cables up to 3/16" O.D. Nickel plated brass bodies.



Coupling ring on 5501F removable for quick change of female to male type. Cable-braid spring clamped to body by hollow point set screw. 5501MF mounts by lock-nut front side of panel, in 3/8" dia. hole. 5501MP mounts back side of panel in 3/16" dia. hole. 5501MPC same as 5501MP except shorting type

Part Number	Fig.	Description	U.S.A. List Price
5501F	A	Female Cord Connector	$0.60
5501M	B	Male Cord Connector	.45
5501MF	C	Panel Connector, Male	.45
5501MP	D	Panel Connector, Male	.35
5501MPC	D	Panel Connector, Male	.60

SWITCHCRAFT INC. Adapters



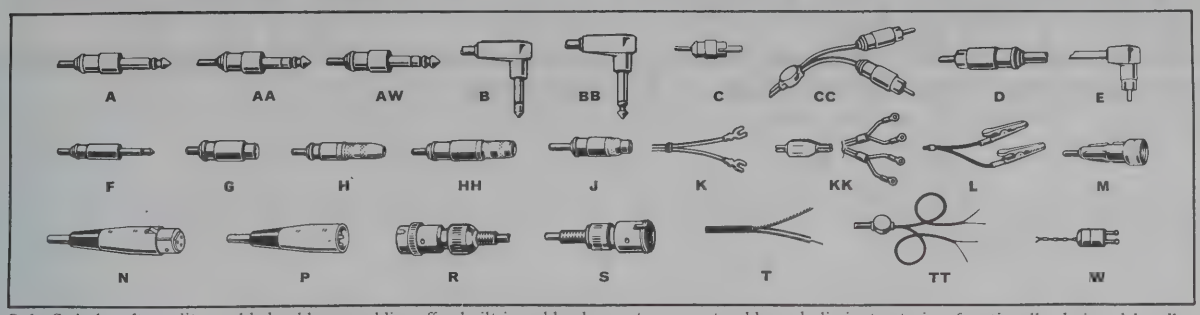
A versatile and complete line of adapters for interconnecting components that do not have mating jacks and/or plugs. For hi-fi, stereo, phonographs, tuners, tape recorders, amplifiers, P.A. systems, etc. Positive mating contacts of high quality material prevent resistive line-losses. **Nickel plated finish** for long life. **No. 328A, audio equalizer,** converts ceramic phono cartridge to magnetic input. **No. 329 Volume Control Adapter** for use in high impedance circuits. **No. 330H,** adapts 3-pin European type plug to standard Switchcraft phono plugs. **No. 335** has unsoldered internal wire at one end to permit user to convert terminal needed. **No. 341, silent plug** adapter, includes a circuit closing device to eliminate amplifier "squeals" when disconnecting. **No. 352,** converts stereo headphones and/or microphones to a monaural input. **Nos. 332A, 334A, 338B** can be used as male or female connector; coupling ring screws back converting to male mike connector.

Part No.	Fig.	Description	U.S.A. List Price
25Y	A	Y-Adapter, two male mike connectors in parallel to one female mike connector.	$1.65
328A	B	Audio Equalizer. Phono jack input to phono plug output.	2.95
329	C	Volume Control, female mike connector to male mike connector.	6.95
330F	D	Y-Adapter. Two phono jacks in parallel to a phono plug. Shielded.	1.75
330F1	E	Flexible Y-Adapter, phono plug in parallel to 2 phono jacks. Shielded 4″ cable.	2.00
330F2	—	Same as above, but phono plug and phono jack to a phono plug.	2.00
330F3	—	Same as above, but 2 phono plugs to 1 phono plug.	2.00
330H	F	Flexible Y-Adapter. 3-pin European type plug to 2 phono jacks. Shielded 5″ cable.	3.00
330M	G	Y-Adapter, two male mike connectors in parallel to a 2-conductor phone plug.	1.90
330PJ	—	Y-Adapter, as above, except two phono jacks in parallel to a 2-cond. phone plug. Shielded.	1.90
333	J	Phone jack input to special 2-cond. plug for American Geloso recorders.	2.35
332A	H	Phone jack input to female mike connector output.	1.75
334A	K	Phono jack input to female mike connector output. Shielded.	1.25
334B	—	Same as above, but phono jack input to male mike connector output. Shielded.	1.25
335	L	2-cond. input has Switchcraft 2501MP (Amphenol 75PCIM) to output connector Cannon XL-3-11.	2.95
336A	M	2-Cond. phone jack input to phono plug output. Shielded.	1.45
336B	—	Same as above, but 2-cond. phone jack input to phono jack output.	1.45
338A	—	Phono plug input to male mike connector output. Shielded. Similar to 338B.	1.00
338B	N	Phono plug input to female mike connector output. Shielded.	1.00
339	P	Same as 335, but output connector Switchcraft 2501F (Amphenol 75MCIF) to input connector Cannon XL-3-12.	2.95

Part No.	Fig.	Description	U.S.A. List Price
340	R	Two 2-cond. phone jack inputs in parallel to a 2-cond. phone plug output. Shielded.	$3.75
341	S	Silent-Plug Adapter. 2-cond. phone jack input to 2-cond. phone plug output.	2.95
342	T	Dual purpose binding post/ banana jack input to 2-cond. phone plug output.	2.60
343	W	Phono jack input to phone plug output. Built-in limiting resistor for Webcor tape recorders.	1.95
345A	X	Phone plug output to phono jack input.	1.25
346	Y	Tip jack input to 2-cond. phone plug output.	2.15
349A	Z	Phono plug coupler, mates with phono plug at each end. Shielded.	1.00
352	AA	Stereo to monaural adapter. 3-cond. phone jack to 2-cond. phone plug output. Shielded.	2.00
361	BB	Coupler. 2-cond. phone jack at each end. Shielded.	2.25
362	—	Same as above, but 3-cond. phone jack at each end.	2.75
363	CC	Coupler. 2-Cond. phone plug at each end. Shielded.	2.00
364	DD	2-Cond. "Tini-Jax" 9/64″ dia. sleeve, to 2-cond. ¼″ O.D. phone plug. Shielded.	1.45
365	EE	2-Cond. "Tini-Jax" (as above) input to phono jack output. Shielded.	1.45
368	FF	Input volume control, phono jack input to a 2-cond. phone plug output. Shielded.	4.50
369	GG	2-Cond. Revere/Wollensak phone jack input to a standard 2-cond. phone plug output. Shielded.	2.00
370	HH	Phono jack input to a 2-cond. "Tini-Plug" (9/64″ dia. finger) output. Shielded.	1.40
371	JJ	Thick panel adapter for 3501P phono jack. Permits mounting of jack in panels up to 1¼″ thick.	.95
372	KK	2-Cond. molded right angle phone plug to a molded phono jack. 2″ shielded cable.	1.75
373	LL	2-Cond. molded phono jack to 3″ shielded cable, stripped and tinned leads.	.75

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SWITCHCRAFT INC. HI-FI MOLDED CABLES



Only Switchcraft quality molded cable assemblies offer built-in cable clamps to support cable and eliminate strain—functionally designed handles to provide an easy grip. Cables 05LH84, 15LH84 and 87LH84 use coiled cord. Cable is chrome grey (unless otherwise specified) with matching plastic handles. **Fig. AW** Phone Plug with Resistor. 3-Conductor. **Fig. M** Microphone Connector—Female. **Fig. N** Switchcraft 3-Pin Connector—Female. **Fig. P** Switchcraft 3-Pin Connector—Male. **Fig. R** Amphenol 3-Pin Connector—Female. **Fig. S** Amphenol 3-Pin Connector—Male. **Fig. W** Ear-Receiver Plug.

Part Number	Terminations End No. 1 Fig.	End No. 2 Fig.	Length	U.S.A. List Price
STRAIGHT 2-CONDUCTOR PHONE PLUG TO VARIOUS CONNECTIONS				
05AC05	A	A	18″	$1.60
05AD05	A	A	24″	1.75
05AK05	A	A	6′	2.60
05AN05	A	A	10′	3.50
05AU05	A	A	25′	4.75
05AK15	A	BB	6′	2.60
05AN15	A	BB	10′	3.50
05AK25	A	C	6′	2.00
05AN25	A	C	10′	2.75
05AR25	A	C	15′	3.00
05AK30	A	E	6′	2.00
05AN30	A	E	10′	2.75
05AK80	A	H	6′	2.60
05AN80	A	H	10′	3.50
05AR80	A	H	15′	4.00
05AU80	A	H	25′	4.75
05AK82	A	G	6′	2.20
05AN82	A	G	10′	3.00
05AR82	A	G	15′	3.25
05AK87	A	M	6′	2.60
05AN87	A	M	10′	3.50
05AU87	A	M	25′	4.75
05AK84	A	T	6′	1.75
05AN84	A	T	10′	2.25
05AR84	A	T	15′	2.75
05CK84*	A	T	6′	1.40
05CN84*	A	T	10′	1.90
05CK85*	A	K	6′	1.50
05CN85*	A	K	10′	2.00
05CK86*	A	L	6′	1.90
05CN86*	A	L	10′	2.40
05CR86*	A	L	15′	2.60
05CT86*	A	L	20′	3.00
05LH84†	A	T	4′	3.25

Monaural Replacement Headphone Cords for Brush BA-200, BA-205, BA-206 headphones and RCA M1-38107B headphone. Molded "Y" junction.

05KF88*	A	KK	3′	$3.00
05KJ88*	A	KK	5′	3.20

STRAIGHT 3-CONDUCTOR PHONE PLUG TO VARIOUS CONNECTIONS

10BD10	AA	AA	24″	$3.25
10BF10	AA	AA	36″	3.65
10BK10	AA	AA	6′	4.80
10BN10	AA	AA	10′	6.00
10BU10	AA	AA	25′	8.75
10BK81	AA	H	6′	4.80
10BN81	AA	H	10′	6.00
10BU81	AA	H	25′	8.75

Stereo replacement headphone cords for direct replacement on Jensen HS-10 and Knight KN-840 stereo headphones. Quality tandem shielded stereo cable.

10FJ84	AA	TT	5′	$2.95

Stereo Cable Assembly for use with stereo tape recorders using 3-conductor dual microphone inputs—Norelco, Webcor, Revere, Wollensak.

10FK25	AA	CC	6′	$4.00

Webcor cable assemblies. 3-Cond. phone plug with internal resistor to various connections.

11AK26	AW	D	6′	$3.25
11AN26	AW	D	10′	4.00
11CN86	AW	L	10′	3.25

2-Conductor Revere and Wollensak cables with R.A. Phone Plug to various connections.

12HK25	B	B	6′	$2.50
12HB79	B	HH	12′	3.25
12HR79	B	HH	15′	5.00
12HU79	B	HH	25′	5.95
12HD80	B	H	24′	3.95

RIGHT ANGLE 2-CONDUCTOR PHONE PLUG TO VARIOUS CONNECTIONS

15AK15	BB	BB	6′	$2.60
15AN15	BB	BB	10′	3.50
15AU15	BB	BB	25′	$4.75
15AK25	BB	C	6′	2.00
15AN25	BB	C	10′	2.75
15AR25	BB	C	15′	3.00
15AK30	BB	E	6′	2.00
15AN30	BB	E	10′	2.75
15AK80	BB	H	6′	2.60
15AN80	BB	H	10′	3.50
15AU80	BB	H	25′	4.75
15AK82	BB	G	6′	2.20
15AN82	BB	G	10′	3.00
15AK87	BB	R	6′	2.60
15AN87	BB	R	10′	3.50
15AN84	BB	T	10′	2.25
15AR84	BB	T	15′	2.75
15CN84*	BB	T	10′	1.90
15CK85*	BB	K	6′	1.50
15CN85*	BB	K	10′	2.00
15CK86*	BB	L	6′	1.90
15CN86*	BB	L	10′	2.40
15LH84†	BB	T	4′	3.25

STRAIGHT PHONO PLUG TO VARIOUS CONNECTIONS

25AC25	C	C	18″	$1.05
25AF25	C	C	36″	1.20
25AH25	C	C	4′	1.35
25AK25	C	C	6′	1.50
25AN25	C	C	10′	2.00
25AR25	C	C	15′	2.50
25AT25	C	C	20′	3.00
25AU25	C	C	25′	3.50
25AC30	C	E	18″	1.05
25AF30	C	E	36″	1.20
25AK30	C	E	6′	1.50
25AN30	C	E	10′	2.00
25AU30	C	E	25′	3.50
25AK80	C	H	6′	2.00
25AN80	C	H	10′	2.75
25AR80	C	H	15′	3.25
25AC82	C	G	18″	1.25
25AF82	C	G	36″	1.35
25AH82	C	G	4′	1.60
25AK82	C	G	6′	1.75
25AN82	C	G	10′	2.00
25AR82	C	G	15′	2.50
25AT82	C	G	20′	3.00
25AU82	C	G	25′	3.50
25AC84	C	T	18″	.80
25AF84	C	T	36″	.95
25AH84	C	T	4′	1.00
25AK84	C	T	6′	1.15
25AN84	C	T	10′	1.65
25AR84	C	T	15′	2.25
25AT84	C	T	20′	2.75
25AU84	C	T	25′	3.25
25CF84*	C	T	36″	.75
25CK84*	C	T	6′	.90
25CN84*	C	T	10′	1.40
25CK85*	C	K	6′	1.00
25CN85*	C	K	10′	1.50
25CK86*	C	L	6′	1.75
25CN86*	C	L	10′	2.25
25CR86*	C	L	15′	2.35
25CT86*	C	L	25′	2.60
25AK87	C	M	6′	2.45
25AN87	C	M	10′	3.35
25AU87	C	M	25′	4.60

Special Stereo Cables. Two shielded insulated cables inside a common grey plastic jacket. Provides two isolated channels for all stereo applications. Phono plugs color coded.

25FF25	CC	CC	36″	$3.25
25FK25	CC	CC	6′	3.75
25FN25	CC	CC	10′	4.50
25FF84	CC	TT	36″	2.90
25FK84	CC	TT	6′	3.25
25FN84	CC	TT	10′	3.75

STRAIGHT PHONO PLUG (LONG HANDLE) TO VARIOUS CONNECTIONS

26AF26	D	D	36″	$1.30
26AK26	D	D	6′	1.60
26AN26	D	D	10′	$2.10
26AR26	D	D	15′	2.60
26AK05	D	A	6′	2.20
26AN05	D	A	10′	2.75
26AF82	D	G	36″	1.50
26AK82	D	G	6′	1.95
26AN82	D	G	10′	2.25
26AR82	D	G	15′	2.75
26AF84	D	T	36″	1.10
26AK84	D	T	6′	1.30
26AN84	D	T	10′	1.80

RIGHT ANGLE PHONO PLUG TO VARIOUS CONNECTIONS

30AC30	E	E	18″	$1.05
30AF30	E	E	36″	1.20
30AH30	E	E	4′	1.35
30AK30	E	E	6′	1.50
30AN30	E	E	10′	2.00
30AR30	E	E	15′	2.50
30AT30	E	E	20′	3.00
30AU30	E	E	25′	3.50
30AK80	E	H	6′	2.00
30AN80	E	H	10′	2.75
30AC82	E	G	18″	1.25
30AF82	E	G	36″	1.35
30AK82	E	G	6′	1.75
30AN82	E	G	10′	2.00
30AR82	E	G	15′	2.50
30AT82	E	G	20′	3.00
30AU82	E	G	25′	3.50
30AF84	E	T	36″	.95
30AK84	E	T	6′	1.15
30AN84	E	T	10′	1.65
30CF84*	E	T	36″	.75
30CK84*	E	T	6′	.90
30CN85*	E	K	10′	1.50
30CF86*	E	L	6′	1.75
30CK86*	E	L	10′	2.25

STRAIGHT TINI-PLUG TO VARIOUS CON.

40DK05	F	A	6′	$2.75
40DF25	F	C	36″	2.10
40DK25	F	C	6′	2.50
40DK80	F	H	6′	2.75
40DK82	F	G	6′	2.50
40DK83	F	J	6′	2.75
40DN83	F	J	10′	3.25
40DF84	F	T	36″	1.75
40DK84	F	T	6′	2.00
40DN84	F	T	10′	2.50
40DN86	F	W	10′	2.50
41EF75‡	F	W	36″	2.00
41EH75‡	F	W	4′	2.25
45AN25	F	C	10′	2.75
45AR25	F	C	15′	3.25
45AU25	F	C	25′	4.25

EXTENSION JACK CORDS

82AC82	G	G	18″	$1.50
82AF82	G	G	36″	1.65
82AK82	G	G	6′	1.95
83DK05	J	A	6′	2.75

CORDS w/ SPADE LUGS, ALLIGATOR CLIPS

85CN85*	K	K	10′	$0.90
85CT85*	K	K	20′	1.50
85CU85*	K	K	25′	1.75
86CN86*	L	L	10′	1.70
86CU86*	L	L	25′	2.55

MICROPHONE CONNECTOR TO VARIOUS CONNECTIONS

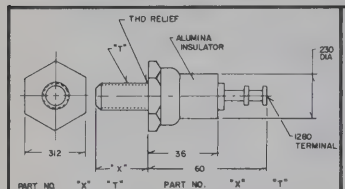
87AF84	M	T	36″	$1.50
87AK84	M	T	6′	1.75
87AN84	M	T	10′	2.25
87AU84	M	T	25′	4.25
87LH84†	M	T	4′	3.35
87AF87	M	M	36″	2.00
87AK87	M	M	6′	2.50
87AP87	M	M	12′	3.50
87AU87	M	M	25′	5.00
91BU92	N	P	25′	12.50
93BU94	R	S	25′	9.75

*Parallel unshielded cable. †Shielded, tinsel coiled cord, Black plastic jacket, extends to 4′. ‡Hearing Aid Tinsel Cord. All other cables shielded.

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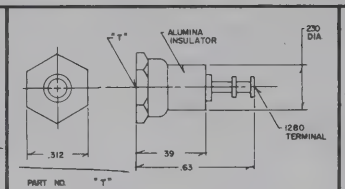
INSULATED TERMINALS • Hi-Alumina



PART NO.	"X"	"T"	PART NO.	"X"	"T"
1460 A	3/16	6-32	1460 E	3/16	4-40
1460 B	1/4	6-32	1460 F	1/4	4-40
1460 C	5/16	6-32	1460 G	5/16	4-40
1460 D	3/8	6-32	1460 H	3/8	4-40

VOLTAGE BREAKDOWN; 5000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

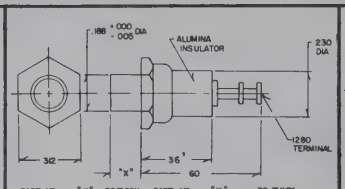
Part No. 1460



PART NO.	"T"
1461	6-32
1461 A	4-40

THREAD DEPTH, 3 THREADS MIN.
VOLTAGE BREAKDOWN; 5000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

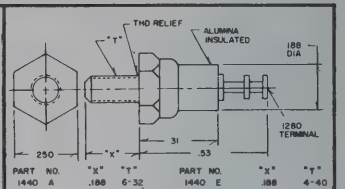
Part No. 1461



PART NO	"X"	BD.THICK	PART NO	"X"	BD.THICK
1462 A	.054	.031	1462 C	.125	.094
1462 B	.094	.062	1462 D	.156	.125

VOLTAGE BREAKDOWN; 5000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

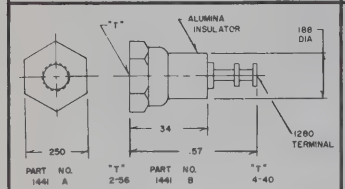
Part No. 1462



PART NO.	"X"	"T"	PART NO.	"X"	"T"
1440 A	.188	6-32	1440 E	.188	4-40
1440 B	.250	6-32	1440 F	.250	4-40
1440 C	.312	6-32	1440 G	.312	4-40
1440 D	.375	6-32	1440 H	.375	4-40

VOLTAGE BREAKDOWN; 4000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

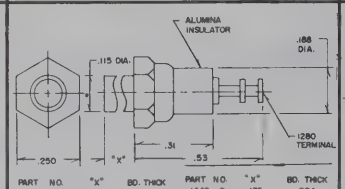
Part No. 1440



PART NO.	"T"	PART NO.	"T"
1441 A	2-56	1441 B	4-40

THREAD DEPTH, 3 THREADS MIN.
VOLTAGE BREAKDOWN; 4000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

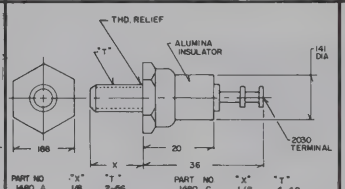
Part No. 1441



PART NO.	"X"	BD. THICK	PART NO.	"X"	BD. THICK
1442 A	.075	.031	1442 C	.135	.094
1442 B	.105	.062	1442 D	.165	.125

VOLTAGE BREAKDOWN; 4000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

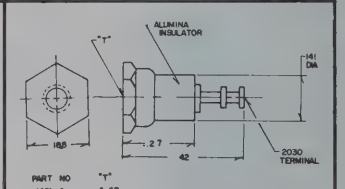
Part No. 1442



PART NO	"X"	"T"	PART NO	"X"	"T"
1480 A	1/8	2-56	1480 C	1/8	4-40
1480 B	7/32	2-56	1480 D	7/32	4-40

VOLTAGE BREAKDOWN; 1500 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

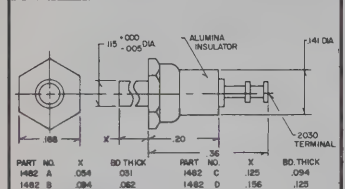
Part No. 1480



PART NO	"T"
1481 A	4-40
1481 B	2-56

THREAD DEPTH, 3 THREADS MIN.
VOLTAGE BREAKDOWN; 1500 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

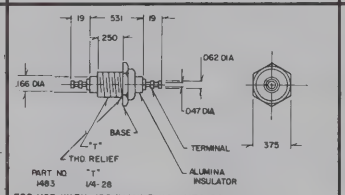
Part No. 1481



PART NO.	X	BD THICK	PART NO.	X	BD. THICK
1482 A	.054	.031	1482 C	.125	.094
1482 B	.094	.062	1482 D	.156	.125

VOLTAGE BREAKDOWN; 1500 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

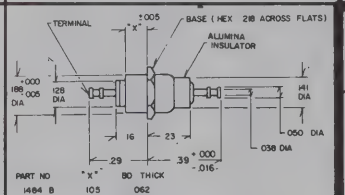
Part No. 1482



PART NO	"T"
1483	1/4-28

FOR USE WITH .188 (MAX) THICK MTG. BOARD
MOUNTING HARDWARE FURNISHED WITH UNIT
VOLTAGE BREAKDOWN; 2500 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

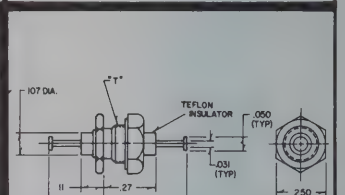
Part No. 1483



PART NO	"X"	BD THICK
1484 B	105	062

MTG. HOLE DIA. .191 -.001
VOLTAGE BREAKDOWN; 1500 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

Part No. 1484

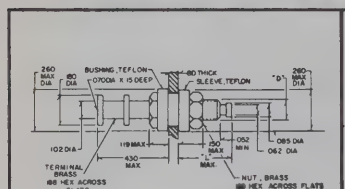


PART NO.	"T"	"INSUL."
1431	10-32	TEFLON

VOLTAGE BREAKDOWN; 2500 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS
FOR USE WITH .094 (MAX) THICK MTG BOARD

Part No. 1431

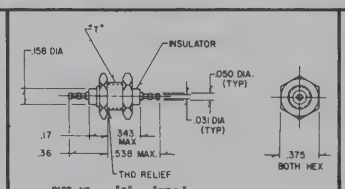
INSULATED TERMINALS • Teflon



PART NO.	"D"	"L"	BD. THICK	MTG. DIA.
1432	5-40 THD	.348	.062	.195 +.000 -.004

VOLTAGE BREAKDOWN; 1500 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

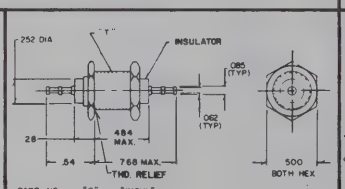
Part No. 1432



PART NO.	"T"	"INSUL"
1434	1/4-28	TEFLON

FOR USE WITH .188 (MAX) THICK MTG BOARD
VOLTAGE BREAKDOWN; 4000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

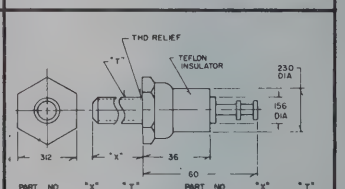
Part No. 1434



PART NO	"T"	"INSUL"
1436	3/8-32	TEFLON

FOR USE WITH .250 (MAX) THICK MTG. BOARD
VOLTAGE BREAKDOWN; 6000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

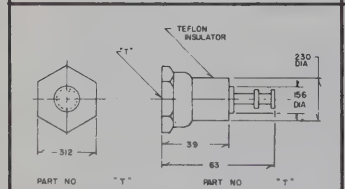
Part No. 1436



PART NO.	"X"	"T"	PART NO	"X"	"T"
1450 A	3/16	6-32	1450 E	3/16	4-40
1450 B	1/4	6-32	1450 F	1/4	4-40
1450 C	5/16	6-32	1450 G	5/16	4-40
1450 D	3/8	6-32	1450 H	3/8	4-40

VOLTAGE BREAKDOWN; 6000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

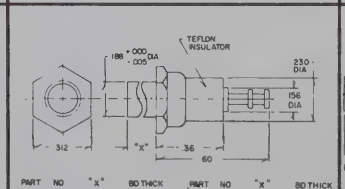
Part No. 1450



PART NO	"T"	PART NO	"T"
1451	6-32	1451 A	4-40

THREAD DEPTH, 3 THREADS MIN
VOLTAGE BREAKDOWN; 6000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

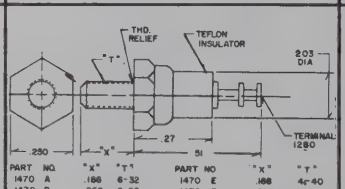
Part No. 1451



PART NO	"X"	BD THICK	PART NO	"X"	BD THICK
1452 A	.054	.031	1452 C	.125	.094
1452 B	.094	.062	1452 D	.156	.125

VOLTAGE BREAKDOWN; 6000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

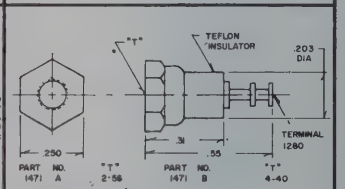
Part No. 1452



PART NO.	"X"	"T"	PART NO	"X"	"T"
1470 A	.188	6-32	1470 E	.188	4-40
1470 B	.250	6-32	1470 F	.250	4-40
1470 C	.312	6-32	1470 G	.312	4-40
1470 D	.375	6-32	1470 H	.375	4-40

VOLTAGE BREAKDOWN; 4000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

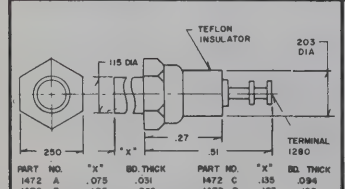
Part No. 1470



PART NO.	"T"	PART NO.	"T"
1471 A	2-56	1471 B	4-40

THREAD DEPTH, 3 THREADS MIN.
VOLTAGE BREAKDOWN; 4000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

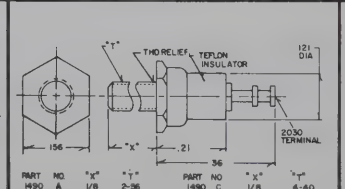
Part No. 1471



PART NO.	"X"	BD. THICK	PART NO.	"X"	BD. THICK
1472 A	.075	.031	1472 C	.135	.094
1472 B	.105	.062	1472 D	.165	.125

VOLTAGE BREAKDOWN; 4000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

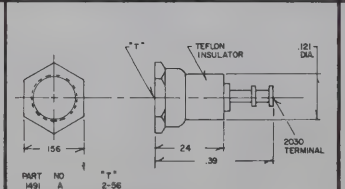
Part No. 1472



PART NO	"X"	"T"	PART NO	"X"	"T"
1490 A	1/8	2-56	1490 C	1/8	4-40
1490 B	7/32	2-56	1490 D	7/32	4-40

VOLTAGE BREAKDOWN; 3000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

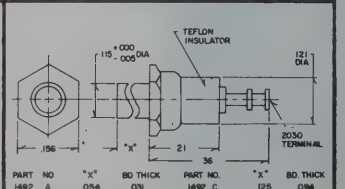
Part No. 1490



PART NO	"T"
1491 A	2-56

THREAD DEPTH, 3 THREADS MIN.
VOLTAGE BREAKDOWN; 3000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

Part No. 1491



PART NO.	"X"	BD THICK	PART NO.	"X"	BD. THICK
1492 A	.054	.031	1492 C	.125	.094
1492 B	.094	.062	1492 D	.156	.125

VOLTAGE BREAKDOWN; 3000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

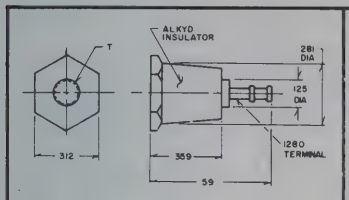
Part No. 1492

Plating: Terminal, 0.000010/0.000020 gold over 0.00030/0.00050 silver; Base, 0.00030/0.00050 cadmium
Tolerance: .XXX ± .010; .XX ± .016 before plating

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LITTON INDUSTRIES/USECO DIVISION

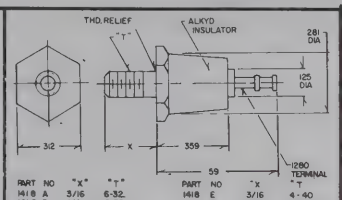
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PART NO.	T	PART NO	T
1417	6-32	1417A	4-40

VOLTAGE BREAKDOWN, 6000 VOLTS AC
THREAD DEPTH, 3 THREADS MIN.

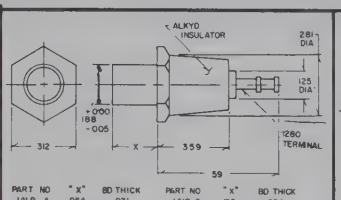
Part No. 1417



PART NO	"X"	"T"	PART NO	"X"	"T"
1418 A	3/16	6-32	1418 E	3/16	4-40
1418 B	1/4	6-32	1418 F	1/4	4-40
1418 C	5/16	6-32	1418 G	5/16	4-40
1418 D	3/8	6-32	1418 H	3/8	4-40

VOLTAGE BREAKDOWN; 6000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

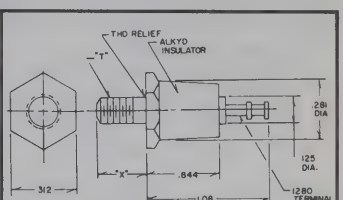
Part No. 1418



PART NO	"X"	BD THICK	PART NO	"X"	BD THICK
1419 A	.054	.031	1419 C	.125	.094
1419 B	.094	.062	1419 D	.156	.125

VOLTAGE BREAKDOWN; 6000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

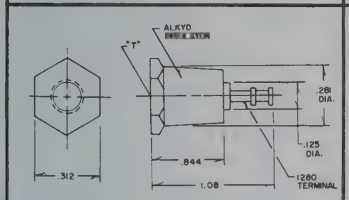
Part No. 1419



PART NO	"X"	"T"
1421	250	6-32

VOLTAGE BREAKDOWN; 10000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

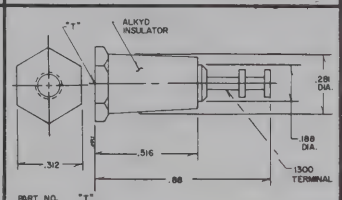
Part No. 1421



PART NO	"T"
1422	6-32

VOLTAGE BREAKDOWN 11,000 VOLTS A.C.
THREAD DEPTH, 3 THREADS MIN.

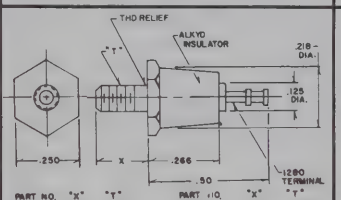
Part No. 1422



PART NO.	"T"
1423	6-32

VOLTAGE BREAKDOWN; 9000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

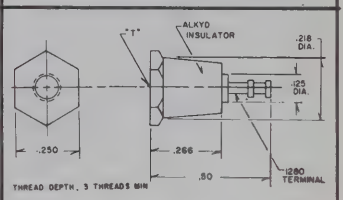
Part No. 1423



PART NO.	"X"	"T"	PART NO.	"X"	"T"
1409 A	3/16	6-32	1409 E	3/16	4-40
1409 B	1/4	6-32	1409 F	1/4	4-40
1409 C	5/16	6-32	1409 G	5/16	4-40
1409 D	3/8	6-32	1409 H	3/8	4-40

VOLTAGE BREAKDOWN; 6000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

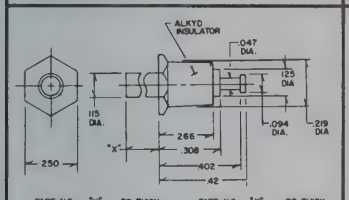
Part No. 1409



PART NO.	"T"	PART NO	"T"
1411 A	6-32	1411 B	4-40

VOLTAGE BREAKDOWN; 6000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

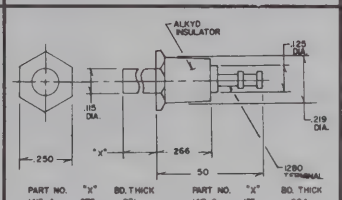
Part No. 1411



PART NO.	"X"	BD. THICK	PART NO.	"X"	BD THICK
1412 A	.075	.031	1412 C	.135	.094
1412 B	.105	.062	1412 D	.165	.125

VOLTAGE BREAKDOWN; 5000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

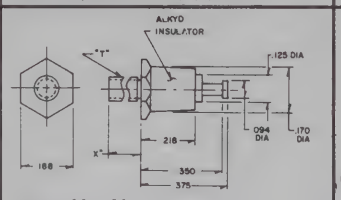
Part No. 1412



PART NO.	"X"	BD. THICK	PART NO.	"X"	BD. THICK
1413 A	.075	.031	1413 C	.135	.094
1413 B	.105	.062	1413 D	.165	.125

VOLTAGE BREAKDOWN; 5000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

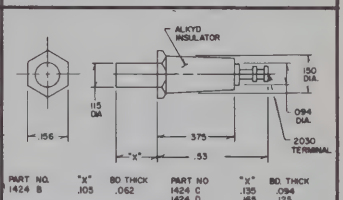
Part No. 1413



PART NO	"X"	"T"
1414 A	.080	3-48

VOLTAGE BREAKDOWN; 4000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

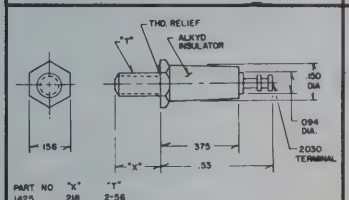
Part No. 1414



PART NO.	"X"	BD THICK	PART NO	"X"	BD THICK
1424 B	.105	.062	1424 C	.135	.094
			1424 D	.165	.125

VOLTAGE BREAKDOWN; 6000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

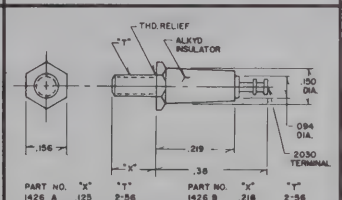
Part No. 1424



PART NO	"X"	"T"
1425	.218	2-56

VOLTAGE BREAKDOWN; 6000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

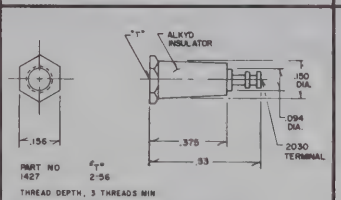
Part No. 1425



PART NO.	"X"	"T"	PART NO.	"X"	"T"
1426 A	.125	2-56	1426 B	.218	2-56

VOLTAGE BREAKDOWN; 6000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

Part No. 1426

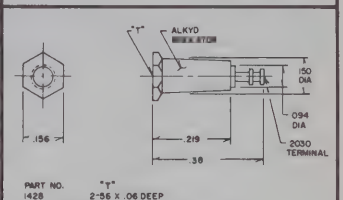


PART NO	"T"
1427	2-56

THREAD DEPTH, 3 THREADS MIN

VOLTAGE BREAKDOWN; 6000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

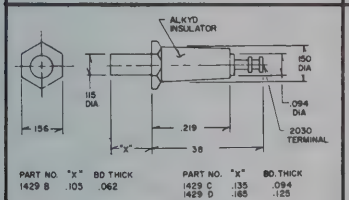
Part No. 1427



PART NO.	"T"
1428	2-56 X .06 DEEP

VOLTAGE BREAKDOWN; 6000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS
THREAD DEPTH, 3 THREADS MIN.

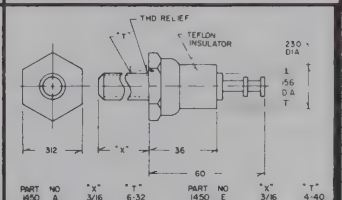
Part No. 1428



PART NO.	"X"	BD THICK	PART NO.	"X"	BD. THICK
1429 B	.105	.062	1429 C	.135	.094
			1429 D	.165	.125

VOLTAGE BREAKDOWN; 6000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

Part No. 1429

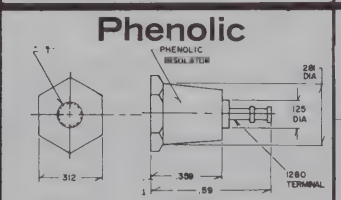


PART NO	"X"	"T"	PART NO	"X"	"T"
#450 A	3/16	6-32	1450 E	3/16	4-40
1450 B	1/4	6-32	1450 F	1/4	4-40
1450 C	5/16	6-32	1450 G	5/16	4-40
1450 D	3/8	6-32	1450 H	3/8	4-40

VOLTAGE BREAKDOWN; 6000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

Part No. 1450

Phenolic

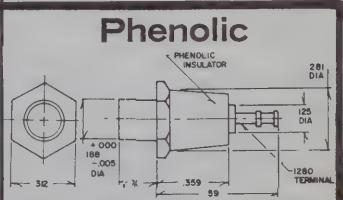


PART NO.	"T"	PART NO.	"T"
1401	6-32	1401 A	4-40

VOLTAGE BREAKDOWN; 6000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS
THREAD DEPTH, 3 THREADS MIN.

Part No. 1401

Phenolic

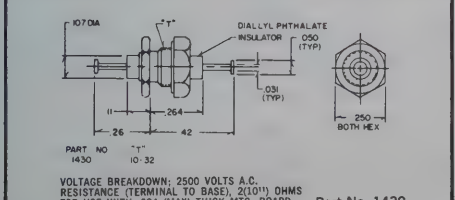


PART NO	X	BD THICK	PART NO	X	BD THICK
1410 A	.054	.031	1410 C	.125	.094
1410 B	.094	.062	1410 D	.156	.125

VOLTAGE BREAKDOWN; 6000 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE) $(10)^{12}$ OHMS

Part No. 1410

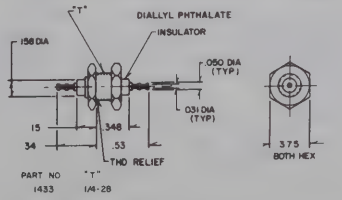
INSULATED TERMINALS • Diallyl Phthalate



PART NO	"T"
1430	10-32

VOLTAGE BREAKDOWN; 2500 VOLTS A.C.
RESISTANCE (TERMINAL TO BASE), $2(10^{11})$ OHMS
FOR USE WITH .094 (MAX) THICK MTG. BOARD

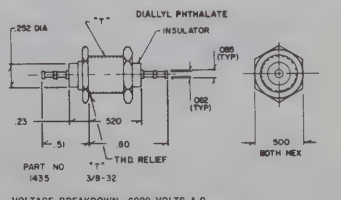
Part No. 1430



PART NO	"T"
1433	1/4-28

VOLTAGE BREAKDOWN; 4000 VOLTS A.C.
FOR USE WITH .188 (MAX) THICK MTG. BOARD
RESISTANCE (TERMINAL TO BASE), 10^{12} OHMS

Part No. 1433



PART NO	"T"
1435	3/8-32

VOLTAGE BREAKDOWN; 6000 VOLTS A.C.
FOR USE WITH .250 (MAX) THICK MTG. BOARD
RESISTANCE (TERMINAL TO BASE), 10^{12} OHMS

Part No. 1435

Plating: Terminal, 0.000010/0.000020 gold over 0.00030/0.00050 silver; Base, 0.00030/0.00050 cadmium
Tolerance: .XXX ± .010; .XX ± .016 before plating

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STANDARDIZED ELECTRONIC HARDWARE
LITTON INDUSTRIES/USECO DIVISION

INSULATED TERMINALS • MIL-T-55155

MIL-T-55155

Configurations, materials, platings and specifications conform to requirements of MIL-T-55155.

SPECIFICATIONS

Terminals

Material: Brass, ½ hard, composition 22, per QQ-B-626

Finish: Standard —4 (0.0005 Solder Plate) Optional at additional cost —10 (0.00003 gold)

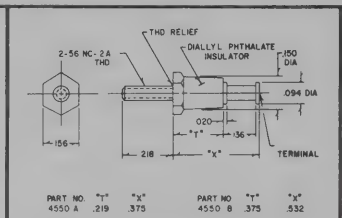
Bases

Material: Brass ½ hard, composition 22, per QQ-B-626

Finish: Standard —11.2 (0.0003 Cadmium with iridescent yellow coating)

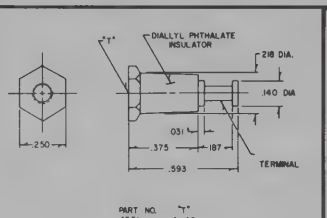
Insulating Materials

TEFLON per MIL-M-14077
HI-ALUMINA per MIL-I-10
DIALLYL PHTHALATE per MIL-M-14F Type SDG-F



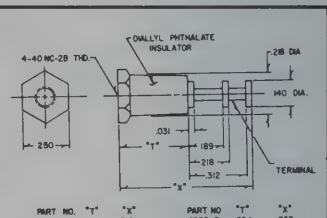
PART NO.	"T"	"X"	PART NO	"T"	"X"
4550 A	.219	.375	4550 B	.375	.532

MIL-T-55155/18-1 & -2 USECO Part No. 4550



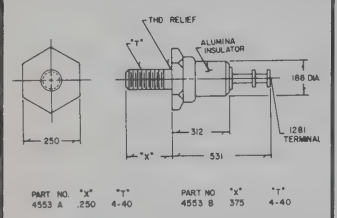
PART NO.	"T"
4551	4-40

MIL-T-55155/19-1 USECO Part No. 4551



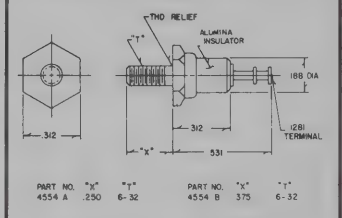
PART NO.	"T"	"X"	PART NO	"T"	"X"
4552 A	.375	.718	4552 B	.594	.937

MIL-T-55155/20-1 & -2 USECO Part No. 4552



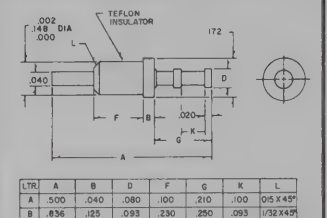
PART NO.	"X"	"T"	PART NO	"X"	"T"
4553 A	.250	4-40	4553 B	.375	4-40

MIL-T-55155/21-1 & -2 USECO Part No. 4553



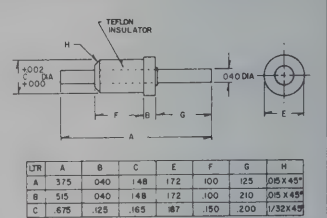
PART NO.	"X"	"T"	PART NO.	"X"	"T"
4554 A	.250	6-32	4554 B	.375	6-32

MIL-T-55155/21-3 & -4 USECO Part No. 4554



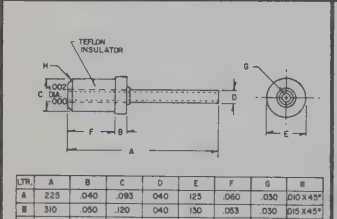
LTR.	A	B	D	F	G	K	L
A	.500	.040	.080	.100	.210	.100	.015 X 45°
B	.636	.125	.093	.230	.250	.093	1/32 X 45°

MIL-T-55155/4-1 & -2 USECO Part No. 4500



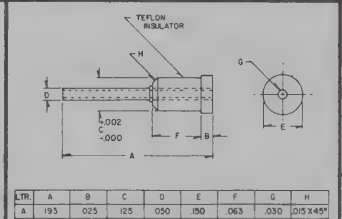
LTR.	A	B	C	E	F	G	H
A	.375	.040	.148	.172	.100	.125	.015 X 45°
B	.515	.040	.148	.172	.100	.210	.015 X 45°
C	.675	.125	.165	.187	.150	.200	1/32 X 45°

MIL-T-55155/3-1-2 & -3 USECO Part No. 4501



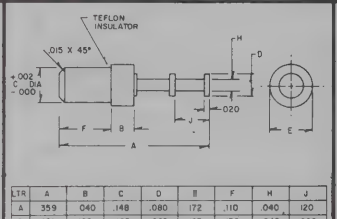
LTR.	A	B	C	D	E	F	G	H
A	.225	.040	.093	.040	.125	.060	.030	.010 X 45°
B	.310	.050	.120	.040	.130	.053	.030	.015 X 45°
C	.367	.050	.148	.085	.172	.110	.063	.015 X 45°

MIL-T-55155/21-1 & -2 -3 USECO Part No. 4502



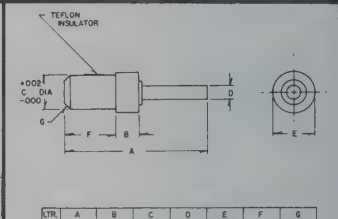
LTR.	A	B	C	D	E	F	G	H
A	.193	.025	.125	.050	.150	.063	.030	.015 X 45°
B	.367	.050	.148	.085	.172	.110	.063	1/64 X 45°

MIL-T-55155/6-1 & -2 USECO Part No. 4503



LTR	A	B	C	D	H	F	H	J
A	.359	.040	.148	.080	.172	.110	.040	.120
B	.421	.125	.165	.093	.187	.150	.045	.068

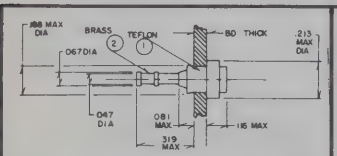
MIL-T-55155/7-1 & -2 USECO Part No. 4504



LTR.	A	B	C	D	E	F	G
A	.350	.040	.148	.040	.172	.100	.015 X 45°

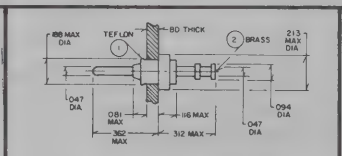
MIL-T-55155/8-1 USECO Part No. 4505

LOC-FIT® TERMINALS



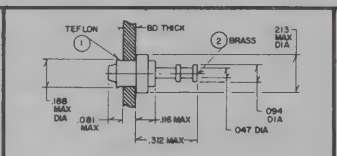
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS
4430 A			.031	+.003	4430	
4430 B			.062	.142 -.001		
4430 C			.094	DIA		
4430 D			.125			

Part No. 4430



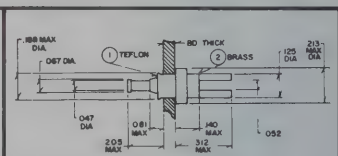
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS
4437 A			.031	+.003	4437	
4437 B			.062	.142 -.001		
4437 C			.094	DIA		

Part No. 4437



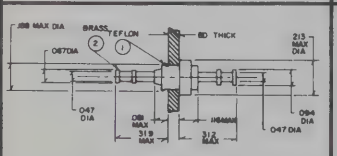
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS
4440 A			.031	+.003	4440	
4440 B			.062	.142 -.001		
4440 C			.094	DIA		

Part No. 4440



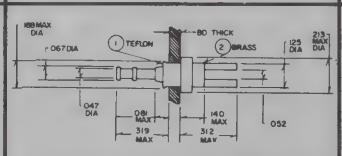
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS
4444 A			.031	+.003	4444	
4444 B			.062	.142 -.001		
4444 C			.094	DIA		

Part No. 4444



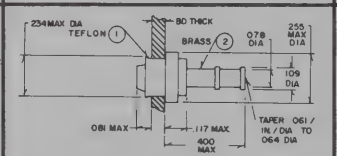
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS
4442 A			.031	+.003	4442	
4442 B			.062	.142 -.001		
4442 C			.094	DIA		

Part No. 4442



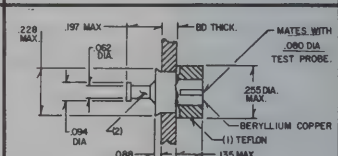
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS
4445 A			.031	+.003	4445	
4445 B			.062	.142 -.001		
4445 C			.094	DIA		

Part No. 4445



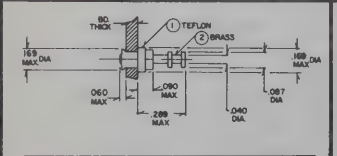
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS
4447 A			.031	+.003	4447	
4447 B			.062	.188 -.001		
4447 C			.094	DIA		

Part No. 4447



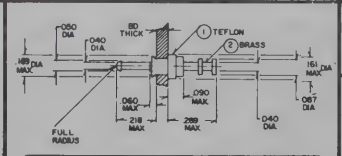
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS
4451 A			.031	+.003	4451	
4451 B			.062	.189 -.001		
4451 C			.094			
4451 D			.125			

Part No. 4451



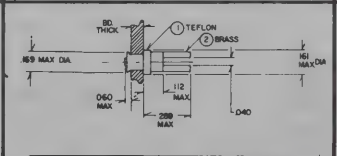
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS
4482 A			.031	+.003	4482	
4482 B			.062	.126 -.001		

Part No. 4482



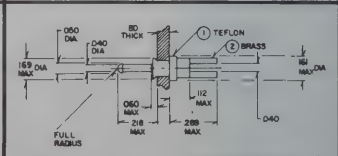
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS
4487 A			.031	+.003	4487	
4487 B			.062	.126 -.001		

Part No. 4487



ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS
4484 A			.031	+.003	4484	
4484 B			.062	.126 -.001		

Part No. 4484



ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS
4489 A			.031	+.003	4489	
4489 B			.062	.126 -.001		

Part No. 4489

Loc Fit Specifications — Plating: 0.000010/0.000020 gold over 0.00030/0.00050 silver
Tolerance: .XXX ± .010· .XX ± .016 before plating

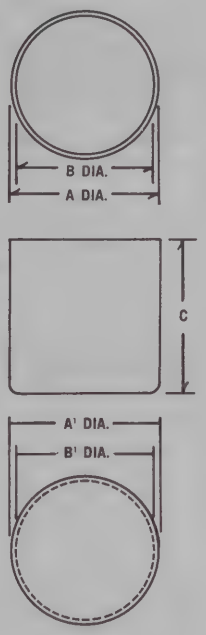
© U.C.P., Inc.

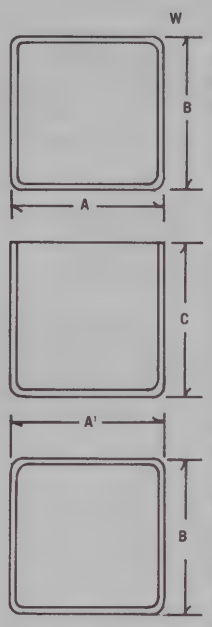
STANDARDIZED ELECTRONIC HARDWARE
LITTON INDUSTRIES/USECO DIVISION

ENCAPSULATION CUPS

Series 100 Round
For special requirements please send your specifications for prompt quotation.
Tolerance; xxx ±.010, "C" DIM ±.020

PART No.	A	A¹	B	B¹	C
102	.625	.611	.565	.551	.750
103	.745	.731	.685	.671	.620
104	.750	.744	.690	.684	.375
105	.750	.742	.690	.682	.500
106	.750	.740	.690	.680	.625
108	.875	.861	.815	.807	.750
133	1.000	.986	.940	.926	.750
134	1.062	1.054	.992	.984	.500
137	1.062	1.044	.992	.974	1.000
141	1.115	1.099	1.055	1.039	.875
143	1.125	1.105	1.065	1.045	1.125
144	1.250	1.240	1.190	1.180	.531
145	1.250	1.240	1.190	1.180	.625
148	1.250	1.232	1.190	1.172	1.062
150	1.312	1.300	1.252	1.240	.719
152	1.375	1.361	1.315	1.301	.750
156	1.428	1.410	1.368	1.350	1.125
182	1.500	1.474	1.440	1.414	1.500
184	1.750	1.738	1.690	1.678	.687
186	1.750	1.732	1.700	1.672	1.000
187	1.750	1.720	1.690	1.660	1.750
188	2.000	1.982	1.940	1.922	1.000
191	2.000	1.964	1.940	1.904	2.000
193	2.500	2.474	2.420	2.394	1.500
195	2.500	2.456	2.420	2.376	2.500
197	2.750	2.720	2.670	2.640	1.750
198	2.750	2.716	2.670	2.636	2.000

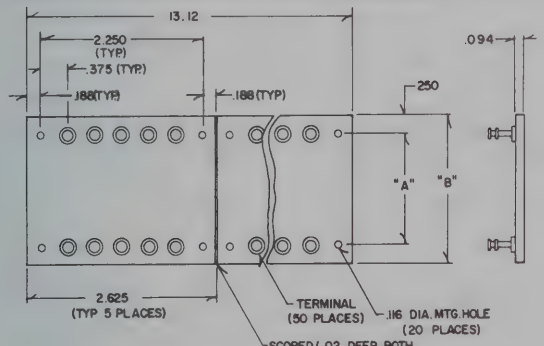




Series 200 Rectangular
For special requirements please send your specifications for prompt quotation.
Tolerance; xxx ±.010, "C" DIM ±.020

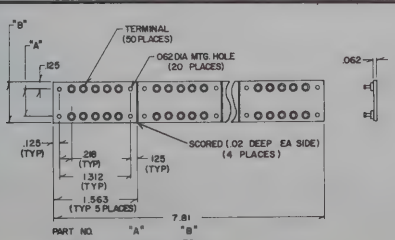
PART No.	W	A	A¹	B	B¹	C
201	.020	3.75	3.65	.188	.178	.625
202	.020	.375	.365	.375	.365	.625
204	.031	.437	.431	.437	.431	.437
205	.020	.500	.492	.250	.242	.500
206	.020	.500	.486	.250	.238	.750
209	.020	.500	.484	.500	.484	1.000
210	.020	1.500	1.492	.500	.492	.500
211	.020	2.000	1.992	.500	.492	.500
212	.020	3.000	2.992	.500	.492	.500
213	.020	.550	.544	.402	.396	.380
214	.031	.630	.619	.510	.499	.680
216	.031	.632	.618	.632	.618	.850
217	.031	.763	.755	.763	.755	.500
219	.031	.763	.745	.763	.745	1.000
220	.031	.870	.854	.740	.724	1.000
221	.031	.870	.852	.740	.722	1.125
222	.031	.870	.850	.740	.720	1.250
224	.031	1.062	1.036	.940	.914	1.630
226	.031	1.125	1.095	1.000	.970	1.750
227	.031	1.250	1.226	1.000	.976	1.500
229	.031	1.250	1.210	1.000	.960	2.500
232	.031	1.428	1.390	1.146	1.108	2.380
233	.062	1.250	1.218	1.250	1.218	2.016
234	.062	1.188	1.160	1.062	1.034	1.625
235	.047	1.438	1.396	1.156	1.114	2.375
236	.047	1.844	1.796	1.375	1.327	2.750
237	.047	1.844	1.796	1.625	1.577	2.750
238	.047	1.637	1.593	1.263	1.219	2.500
239	.047	1.500	1.456	1.500	1.456	2.500
240	.062	2.406	2.342	1.938	1.874	3.625

TERMINAL BOARDS



PART NO.	"A"	"B"	PART NO.	"A"	"B"
1100 A	1.000	1.50	1100 B	1.500	2.00
1100 C	2.000	2.50	1100 D	2.500	3.00

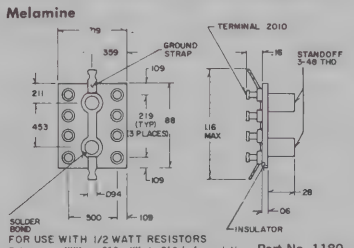
MATERIAL: BOARD—PHENOLIC SHEET, XXX, TY. MIL-P-3115. TERMINAL—BRASS, ½ HARD, COMP. 22, QQ-B-626.
TOLERANCE: .XXX ± .010, .XX ± .016.
TERMINAL (STANDARD): 1300.
SEE PART NO. 8001 FOR TABULATED VARIATIONS. Part No. 1100



PART NO.	"A"	"B"
2200 B	.500	.75
2200 C	.750	1.00

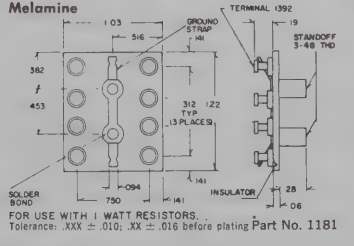
MATERIAL: BOARD—PHENOLIC SHEET, XXX, TY. MIL-P-3115. TERMINAL—BRASS, ½ HARD, COMP. 22, QQ-B-626.
TOLERANCE: .XXX ± .010, .XX ± .016.
TERMINAL (Standard): 2010.
SEE PART NO. 8003 FOR TABULATED VARIATIONS. Part No. 2200

Melamine



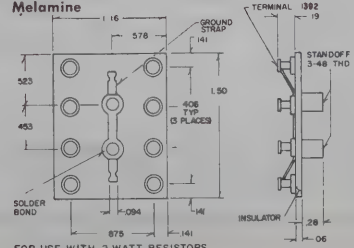
FOR USE WITH 1/2 WATT RESISTORS.
Tolerance: .XXX ± .010; .XX ± .016 before plating Part No. 1180

Melamine



FOR USE WITH 1 WATT RESISTORS.
Tolerance: .XXX ± .010; .XX ± .016 before plating Part No. 1181

Melamine

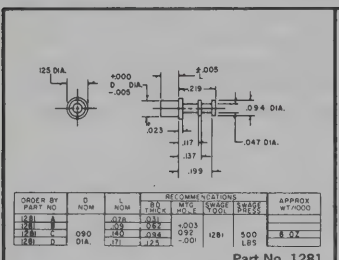


FOR USE WITH 2 WATT RESISTORS.
Tolerance: .XXX ± .010; .XX ± .016 before plating Part No. 1182

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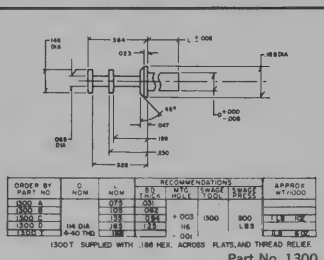
STANDARDIZED ELECTRONIC HARDWARE
LITTON INDUSTRIES/USECO DIVISION

TERMINALS



ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
1281 A	090 DIA.	.078	.031	+.003 -.001	1281	500 LBS	6 OZ
1281 B		.098	.062				
1281 C		.140	.094				
1281 D		.171	1.125				

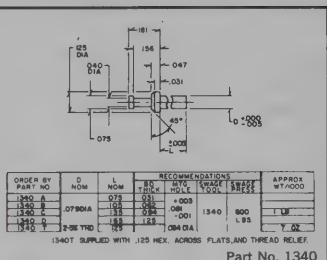
Part No. 1281



ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
1300 A	114 DIA 4-40 THD	.073	.031	+.003 -.001	1300	800 LBS	1 LB 10Z
1300 B		.105	.062				
1300 C		.135	.094				
1300 D		.165	.125				1 LB 8 OZ

1300T SUPPLIED WITH .188 HEX. ACROSS FLATS, AND THREAD RELIEF.

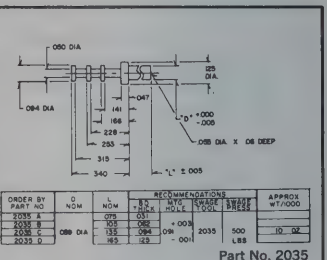
Part No. 1300



ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
1340 A	.078 DIA	.073	.031	+.003 -.001	1340	800 LBS	1 LB
1340 B		.103	.062				
1340 C		.135	.094				
1340 D		.165	.125				7 OZ
1340 G	2-56 TPD	.188	.125		.094 DIA		

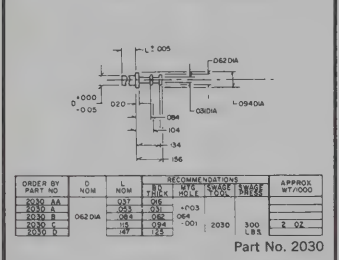
1340T SUPPLIED WITH .125 HEX. ACROSS FLATS, AND THREAD RELIEF.

Part No. 1340



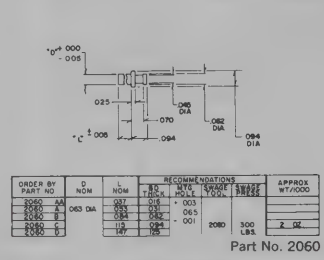
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
2035 A	.089 DIA	.075	.031	+.003 -.001	2035	500 LBS	10 OZ
2035 B		.105	.062				
2035 C		.135	.094				
2035 D		.165	.125				

Part No. 2035



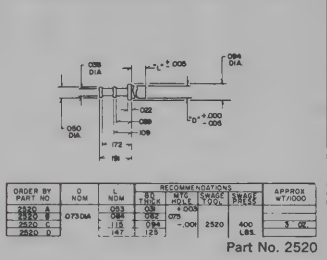
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
2030 AA	.062 DIA	.037	.016	+.003 -.001	2030	300 LBS.	2 OZ
2030 A		.053	.031				
2030 B		.084	.062				
2030 C		.115	.094				
2030 D		.147	.125				

Part No. 2030



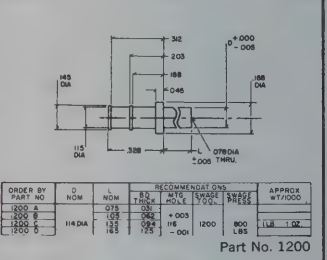
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
2060 AA	.063 DIA	.037	.016	+.003 -.001	2060	300 LBS.	2 OZ
2060 A		.053	.031				
2060 B		.084	.062				
2060 C		.115	.094				
2060 D		.147	.125				

Part No. 2060



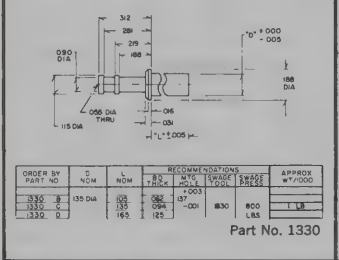
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
2520 A	.073 DIA	.053	.031	+.003 -.001	2520	400 LBS.	5 OZ
2520 B		.084	.062				
2520 C		.115	.094				
2520 D		.147	.125				

Part No. 2520



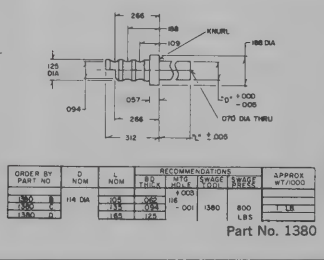
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
1200 A	114 DIA	.075	.031	+.003 -.001	1200	800 LBS	1 LB 1 OZ
1200 B		.105	.062				
1200 C		.135	.094				
1200 D		.165	.125				

Part No. 1200



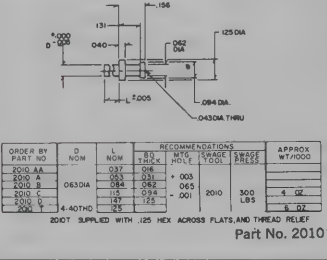
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
1330 A	.135 DIA	.105	.062	+.003 -.001	1330	800 LBS	1 LB
1330 C		.135	.094				
1330 D		.165	.125				

Part No. 1330



ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
1380 B	114 DIA	.105	.062	+.003 -.001	1380	800 LBS	1 LB
1380 C		.135	.094				
1380 D		.165	.125				

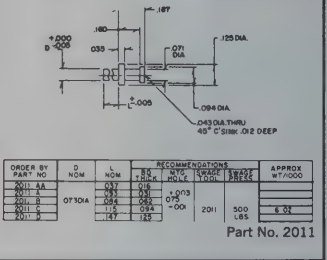
Part No. 1380



ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
2010 AA	.063 DIA	.037	.016	+.003 -.001	2010	300 LBS	4 OZ
2010 A		.053	.031				
2010 B		.084	.062				
2010 C		.115	.094				6 OZ
2010 D		.147	.125				
2010 T	4-40 THD	.125					

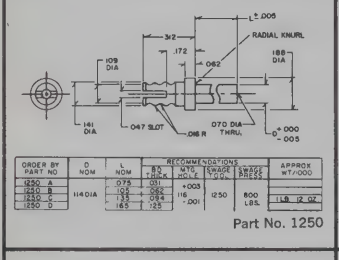
2010T SUPPLIED WITH .125 HEX ACROSS FLATS AND THREAD RELIEF

Part No. 2010



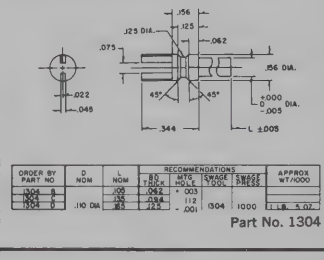
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
2011 AA	.073 DIA	.037	.016	+.003 -.001	2011	500 LBS	6 OZ
2011 A		.053	.031				
2011 B		.084	.062				
2011 C		.115	.094				
2011 D		.147	.125				

Part No. 2011



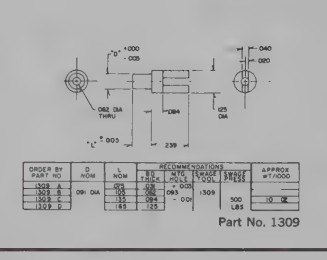
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
1250 A	114 DIA	.075	.031	+.003 -.001	1250	800 LBS.	1 LB 12 OZ
1250 B		.105	.062				
1250 C		.135	.094				
1250 D		.165	.125				

Part No. 1250



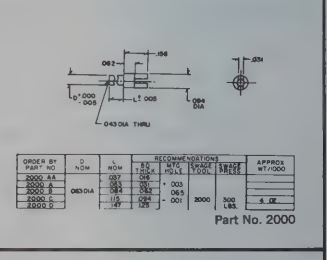
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
1304 A	.110 DIA	.105	.062	+.003 -.001	1304	1000 LBS	1 LB 4 OZ
1304 C		.135	.094				
1304 D		.165	.125				

Part No. 1304



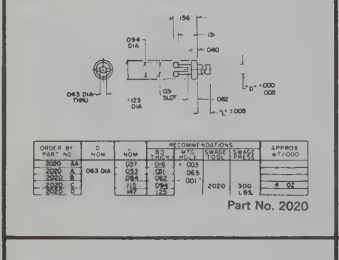
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
1309 A	.091 DIA	.105	.062	+.003 -.001	1309	500 LBS	.10 OZ
1309 C		.135	.094				
1309 D		.165	.125				

Part No. 1309



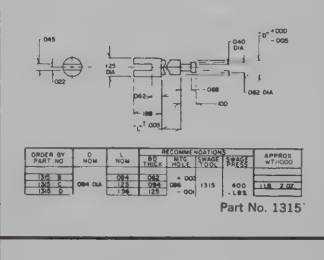
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
2000 AA	.063 DIA	.037	.016	+.003 -.001	2000	300 LBS	6 OZ
2000 A		.053	.031				
2000 B		.084	.062				
2000 C		.115	.094				
2000 D		.147	.125				

Part No. 2000



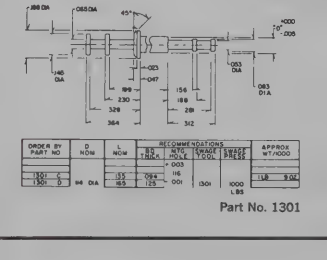
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
2020 AA	.063 DIA	.037	.016	+.003 -.001	2020	300 LBS.	4 OZ
2020 A		.053	.031				
2020 B		.084	.062				
2020 C		.115	.094				
2020 D		.147	.125				

Part No. 2020



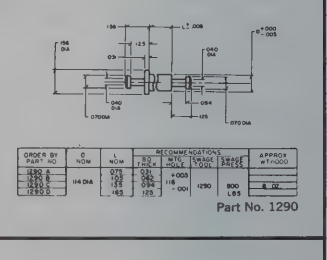
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
1315 B	.084 DIA	.084	.062	+.003 -.001	1315	400 LBS.	1 LB 2 OZ
1315 C		.115	.094				
1315 D		.146	.125				

Part No. 1315



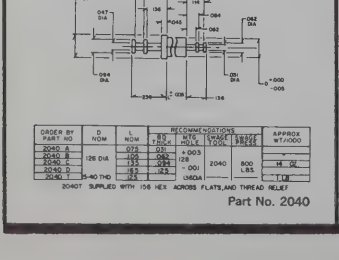
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
1301 C	.146 DIA	.135	.094	+.003 -.001	1301	1000 LBS	1 LB 9 OZ
1301 D		.165	.125				

Part No. 1301



ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
1290 A	.114 DIA	.075	.031	+.003 -.001	1290	800 LBS	8 OZ
1290 B		.105	.062				
1290 C		.135	.094				
1290 D		.165	.125				

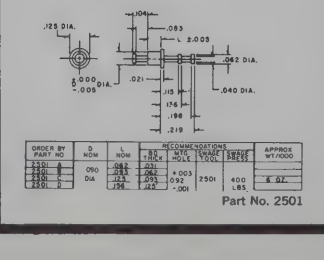
Part No. 1290



ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
2040 A	.126 DIA	.075	.031	+.003 -.001	2040	800 LBS	14 OZ
2040 B		.105	.062				
2040 C		.135	.094				
2040 D		.165	.125				1 LB
2040 T	6-40 THD	.125			.136 DIA		

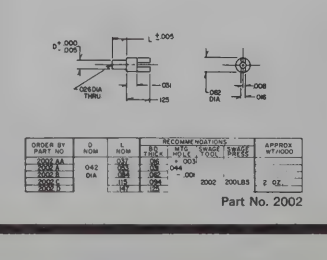
2040T SUPPLIED WITH .156 HEX ACROSS FLATS, AND THREAD RELIEF

Part No. 2040



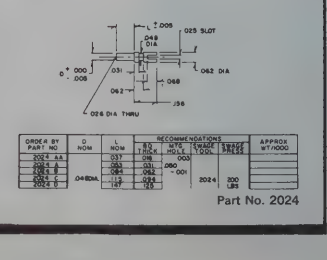
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
2501 A	.090 DIA	.078	.031	+.003 -.001	2501	400 LBS.	6 OZ.
2501 B		.098	.062				
2501 C		.123	.093				
2501 D		.154	.125				

Part No. 2501



ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
2002 AA	.042 DIA	.037	.016	+.003 -.001	2002	200LBS	2 OZ.
2002 A		.053	.031				
2002 B		.084	.062				
2002 C		.115	.094				
2002 D		.147	.125				

Part No. 2002



ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
2024 AA	.048 DIA	.037	.016	+.003 -.001	2024	300 LBS	
2024 A		.053	.031				
2024 B		.084	.062				
2024 C		.115	.094				
2024 D		.147	.125				

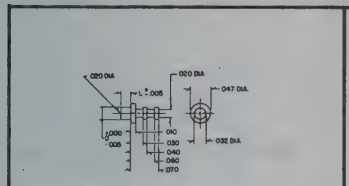
Part No. 2024

Plating: 0.00030/0.00050 silver. Tolerance: .XXX ± .010 before plating.

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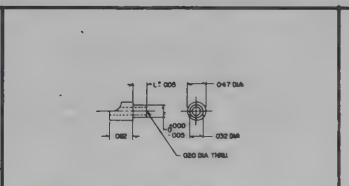
STANDARDIZED ELECTRONIC HARDWARE
LITTON INDUSTRIES/USECO DIVISION

TERMINALS



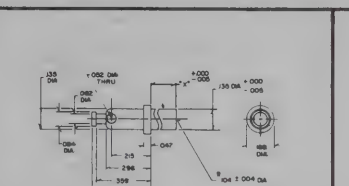
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
2064 AA	032 DIA	037	040	+.003 - .001	2064	200 LBS	1 OZ
2064 A		065	063				
2064 B		090	094				
2064 C		115	094				
2064 D		197	156				

Part No. 2064



ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
2063 AA	032 DIA	037	040	+.003 - .001	2063	200 LBS	1 OZ
2063 A		065	063				
2063 B		090	094				
2063 C		115	094				
2063 D		197	156				

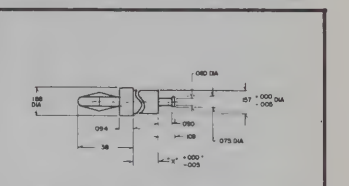
Part No. 2063



PART NO "S" BD THICK — PART NO "S" BD THICK
1700 C .135 .094 — 1700 D .165 .125

DEPTH OF .104 DIA. IS .234 +.XXX -.000 DIA.

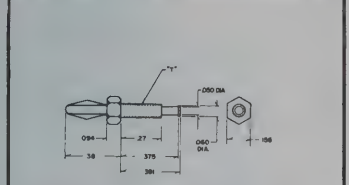
Part No. 1700



PART NO "S" BD THICK REC NOM RECEPTACLE DIA
1705 B .105 .062 .104
1705 C .135 .094 .104
1705 D .165 .125 .109

MATES WITH USECO PARTS NO 1700 & 1710

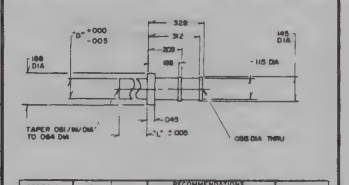
Part No. 1705



PART NO "S" REC NOM RECEPTACLE DIA
1715 2-56 .104

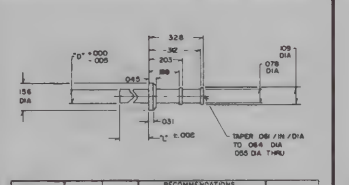
MATES WITH USECO PARTS NO. 1700 & 1710

Part No. 1715



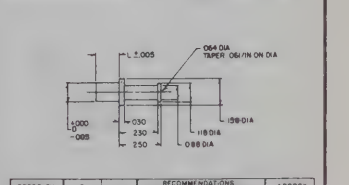
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
2720 A		075	031	+.003 - .001	2720	800 LBS	1 LB 7 OZ
2720 B	114 DIA	105	062				
2720 C		135	094				
2720 D		187	125				

Part No. 2720



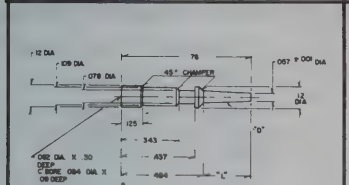
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
2740 A		075	031	+.003 - .001	2740	600 LBS	8 OZ
2740 B	.109 DIA	105	062				
2740 C		135	094				
2740 D		165	125				

Part No. 2740



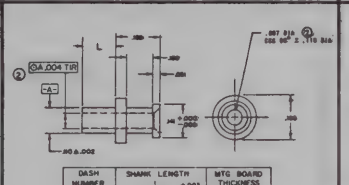
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
2764 A		075	031	+.003 - .001	2764		
2764 B	112	105	062				
2764 C		135	094				
2764 D		172	125				

Part No. 2764



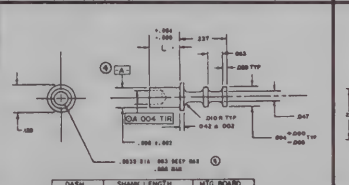
ORDER BY PART NO	D NOM	L NOM	RECOMMENDATIONS BD THICK	MTG HOLE	SWAGE TOOL	SWAGE PRESS	APPROX WT/1000
2775	TAPER .081 IN PER IN ON DIA	.281					

Part No. 2775



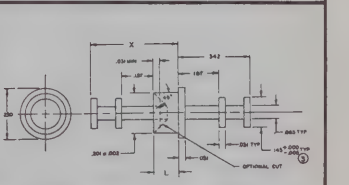
DASH NUMBER	SHANK LENGTH L ±.003	MTG BOARD THICKNESS
-1	.078	1/32
-2	.109	1/16
-3	.141	3/32
-4	.172	1/8

Part No. NAS 704



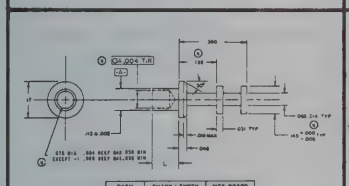
DASH NUMBER	SHANK LENGTH L	MTG BOARD THICKNESS
-1	.075	1/32
-2	.105	1/16
-3	.135	3/32
-4	.165	1/8

Part No. NAS 705



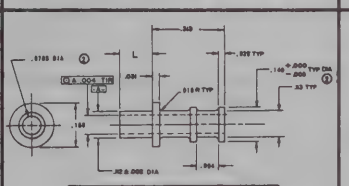
DASH NUMBER	SHANK LENGTH L ±.005	MTG BOARD THICKNESS	X
-1	.084	1/16	.405
-2	.125	1/8	.446
-4	.156	1/8	.671

Part No. NAS 706



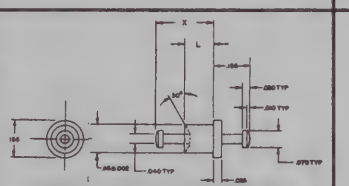
DASH NUMBER	SHANK LENGTH L ±.003	MTG BOARD THICKNESS
-1	.078	1/32
-2	.109	1/16
-3	.141	3/32
-4	.172	1/8
-6	.235	3/16
-8	.297	1/4

Part No. NAS 707



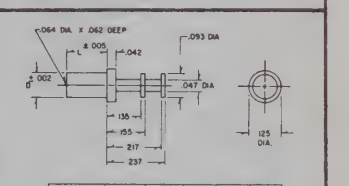
DASH NUMBER	SHANK LENGTH L ±.003	MTG BOARD THICKNESS
-1	.078	1/32
-2	.109	1/16
-3	.141	3/32
-4	.172	1/8

Part No. NAS 708



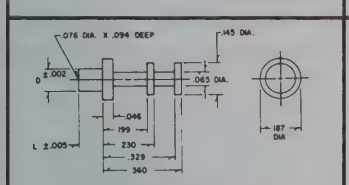
DASH NUMBER	SHANK LENGTH L ±.005	MTG BOARD THICKNESS	X
-1	.062	1/32	.187
-2	.094	1/16	.219
-3	.125	3/32	.250
-4	.156	1/8	.281

Part No. NAS 709



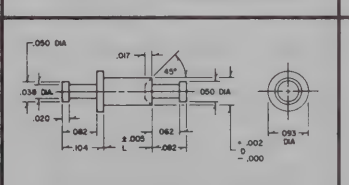
ORDER BY PART NO	D NOM.	L NOM.	BD. THICK	MTG. HOLE	SWAGE TOOL
4522 B	090 DIA	.109	.062	+.003 - .001	4522
4522 C		.172	.094		
4522 D		.265	.125		

MIL-T-55155/12-4, -5, -6 - USECO Part No. 4522



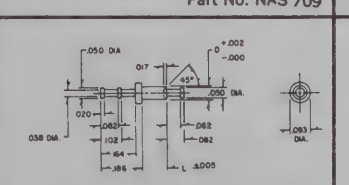
ORDER BY PART NO	D NOM.	L NOM	BD. THICK	MTG. HOLE	SWAGE TOOL
4523 B	112 DIA	.109	.062	+.003 - .001	4523
4523 C		.141	.094		
4523 D		.172	.125		

MIL-T-55155/12-7, -8, -9 USECO Part No. 4523



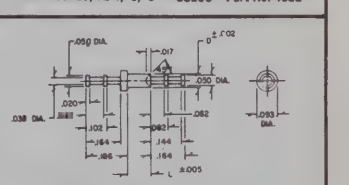
ORDER BY PART NO.	D NOM.	L NOM.	BD. THICK	MTG. HOLE	SWAGE TOOL
4524 B	072 DIA	.082	.062	+.003 - .001	4524
4524 C		.113	.094		
4524 D		.145	.125		

MIL-T-55155/13-1, -2, -3 USECO Part No. 4524



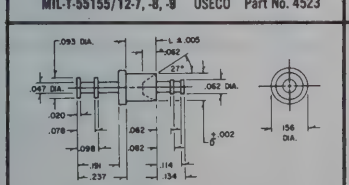
ORDER BY PART NO.	D NOM.	L NOM.	BD. THICK	MTG. HOLE	SWAGE TOOL
4526 B	.072 DIA	.082	.062	+.003 - .001	4526
4526 C		.113	.094		
4526 D		.145	.125		

MIL-T-55155/14-1, -2, -3 USECO Part No. 4526



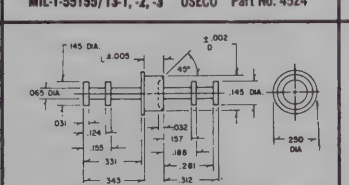
ORDER BY PART NO.	D NOM.	L NOM.	BD. THICK	MTG. HOLE	SWAGE TOOL
4528 B	.072 DIA.	.082	.062	+.003 - .001	4528
4528 C		.113	.094		
4528 D		.145	.125		

MIL-T-55155/15-1, -2, -3 USECO Part No. 4528



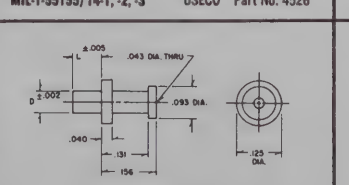
ORDER BY PART NO	D NOM.	L NOM.	BD. THICK	MTG. HOLE	SWAGE TOOL
4529 B	.125 DIA.	.109	.062	+.003 - .001	4529
4529 C		.135	.094		
4529 D		.165	.125		

MIL-T-55155/15-4, -5, -6 USECO Part No. 4529



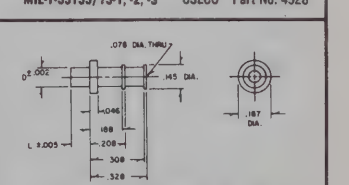
ORDER BY PART NO.	D NOM.	L NOM.	BD. THICK	MTG. HOLE	SWAGE TOOL
4530 B	.202 DIA.	.093	.062	+.003 - .001	4530
4530 C		.125	.094		
4530 D		.156	.125		

MIL-T-55155/15-7, -8, -9 USECO Part No. 4530



ORDER BY PART NO.	D NOM.	L NOM.	BD. THICK	MTG. HOLE	SWAGE TOOL
4531 B	.062 DIA	.084	.062	+.003 - .001	4531
4531 C		.110	.094		
4531 D		.147	.125		

MIL-T-55155/16-1, -2, -3 USECO Part No. 4531



ORDER BY PART NO.	D NOM.	L NOM.	BD. THICK	MTG. HOLE	SWAGE TOOL
4532 B	.112 DIA	.109	.062	+.003 - .001	4532
4532 C		.141	.094		
4532 D		.172	.125		

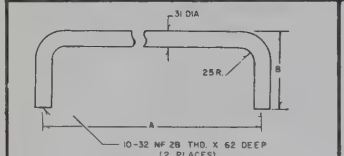
MIL-T-55155/17-1, -2, -3 USECO Part No. 4532

Plating: 0.00030/0.00050 silver. Tolerance: .XXX ± .010 before plating.

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STANDARDIZED ELECTRONIC HARDWARE
LITTON INDUSTRIES/USECO DIVISION

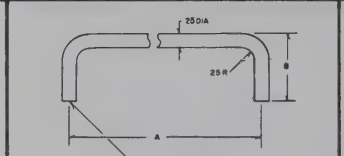
INSTRUMENT PANEL HARDWARE • Handles — Brass



PART NO	"A"	"B"	PART NO	"A"	"B"	PART NO	"A"	"B"
1004	6.44	1.50	1010	4.25	1.50	1015	3.00	1.50
1005	6.44	1.75	1011	6.75	1.75	* 1016	3.00	1.31
* 1006	3.00	1.31	1012	4.00	1.50	1017	2.00	1.50
1007	6.00	1.50	1013	4.56	1.50	1018	8.00	1.50
			1019	10.00	1.50			

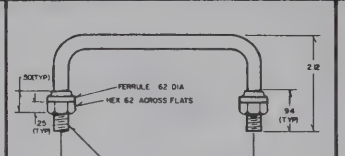
* SUPPLIED WITH 8-32 THREAD

FINISH: (STANDARD) NICKEL; BLACK OXIDE;
CHROME OPTIONAL AT ADDITIONAL COST — Part No. 1004 thru 1019

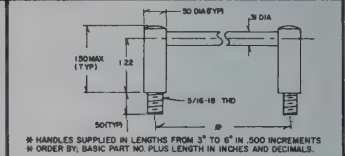


PART NO	"A"	"B"	PART NO	"A"	"B"	PART NO	"A"	"B"
1070	1.25	1.00	1071	1.75	1.00	1072	2.25	1.00

FINISH: (STANDARD) NICKEL; BLACK OXIDE;
CHROME OPTIONAL AT ADDITIONAL COST — Part No. 1070 thru 1072

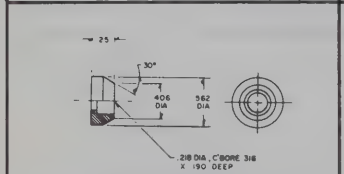


FINISH: (STANDARD) NICKEL; BLACK OXIDE;
CHROME OPTIONAL AT ADDITIONAL COST — Part No. 1020



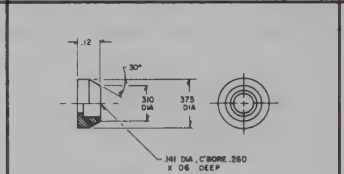
* HANDLES SUPPLIED IN LENGTHS FROM 3" TO 6" IN .500 INCREMENTS
* ORDER BY: BASIC PART NO. PLUS LENGTH IN INCHES AND DECIMALS.
(EXAMPLE A 3.500 LONG HANDLE WOULD BE
1030 — 3 .50
BASIC NO. — INCHES — FRACTION DESCRIBED IN DECIMALS
SUPPLIED WITH 5/16-18 HEX NUT.

FINISH: (STANDARD) NICKEL; BLACK OXIDE;
CHROME OPTIONAL AT ADDITIONAL COST — Part No. 1030



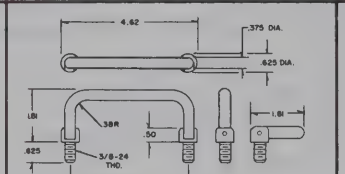
MAY BE USED WITH HANDLES 1004 through 1019

FINISH: (STANDARD) NICKEL; BLACK OXIDE;
CHROME OPTIONAL AT ADDITIONAL COST — Part No. 900



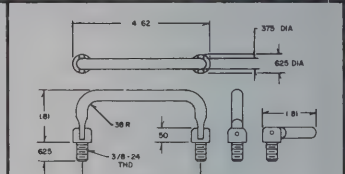
MAY BE USED WITH HANDELS 1070/1072

FINISH: (STANDARD) NICKEL; BLACK OXIDE;
CHROME OPTIONAL AT ADDITIONAL COST — Part No. 903



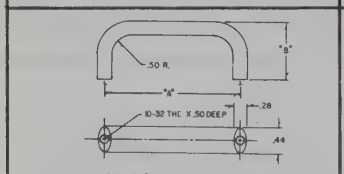
SUPPLIED WITH 3/8-24 HEX NUT

FINISH: (STANDARD) NICKEL; BLACK OXIDE;
CHROME OPTIONAL AT ADDITIONAL COST — Part No. 1031



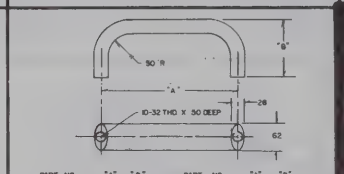
SUPPLIED WITH 3/8-24 HEX NUT

FINISH: (STANDARD) NICKEL; BLACK OXIDE;
CHROME OPTIONAL AT ADDITIONAL COST — Part No. 1032



PART NO.	"A"	"B"	PART NO.	"A"	"B"
1026	2.50	1.50	1028	4.25	1.50
1027	3.50	1.50	1029	4.50	1.50

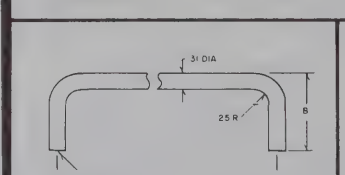
FINISH: (STANDARD) NICKEL; BLACK OXIDE;
CHROME OPTIONAL AT ADDITIONAL COST — Part No. 1026 thru 1029



PART NO	"A"	"B"	PART NO	"A"	"B"
1033	3.00	1.28	1035	6.44	1.75
1034	4.56	1.50	1036	9.00	1.75

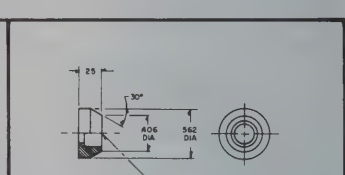
FINISH: (STANDARD) NICKEL; BLACK OXIDE;
CHROME OPTIONAL AT ADDITIONAL COST — Part No. 1033 thru 1036

Handles — Aluminum



PART NO	"A"	"B"	PART NO	"A"	"B"	PART NO	"A"	"B"
1060	6.44	1.50						
1061	6.44	1.75	1064	4.00	1.50	1067	2.00	1.50
1062	6.00	1.50	1065	4.56	1.50	1068	8.00	1.50
1063	4.25	1.50	1066	3.00	1.50	1069	10.00	1.50

STANDARD FINISH BUFFED —
ANODIZED FINISH AVAILABLE — Part No. 1060 thru 1069

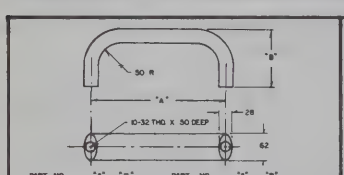


MAY BE USED WITH HANDLES 1060 THROUGH 1069

STANDARD FINISH BUFFED — ANODIZED FINISH AVAILABLE

Part No. 901

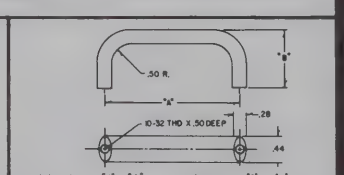
Handles — Stainless Steel



PART NO	"A"	"B"	PART NO	"A"	"B"
1075	3.00	1.28	1077	6.44	1.75
1076	4.56	1.50	1078	9.00	1.75

FINISH: BRIGHT - BRIGHT PASSIVATE PER MIL-F-14072 (E 300)(STD.-17)
NON-REFLECTIVE BLACK:
BLACK PASSIVATE PER MIL-C-13924 CL. III (-17.2)

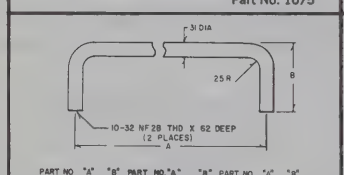
Part No. 1075



PART NO.	"A"	"B"	PART NO.	"A"	"B"
1080	2.50	1.50	1082	4.25	1.50
1081	3.50	1.50	1083	4.50	1.50

FINISH: BRIGHT: BRIGHT PASSIVATE PER MIL-F-14072 (E 300)(STD -17)
NON-REFLECTIVE BLACK -
BLACK PASSIVATE PER MIL-C-13924 CL. III(-17.2)

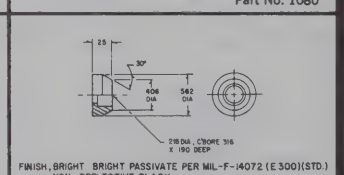
Part No. 1080



PART NO	"A"	"B"	PART NO.	"A"	"B"	PART NO	"A"	"B"
1090	2.00	1.50	1093	4.00	1.50	1096	6.00	1.50
* 1091	3.00	1.31	1094	4.25	1.50	1097	8.00	1.50
1092	3.00	1.50	1095	4.56	1.50	1098	10.00	1.50

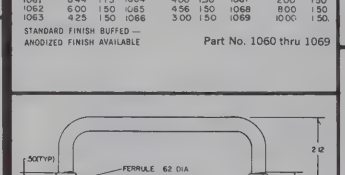
* FINISH: BRIGHT - BRIGHT PASSIVATE PER MIL-F-14072 (E300) (STD.-17)
NON-REFLECTIVE BLACK:
BLACK PASSIVATE PER MIL-C-13924 CL. III (-14.1)

SUPPLIED WITH 8-32 THD FOR MTG — Part No. 1090



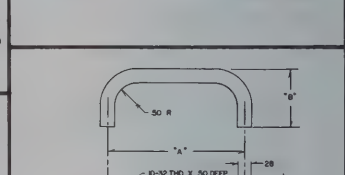
FINISH, BRIGHT: BRIGHT PASSIVATE PER MIL-F-14072 (E 300)(STD.)
NON-REFLECTIVE BLACK:
BLACK PASSIVATE PER MIL-C-13924 CL. III (-14.1)
TOL.(STD.), .XXX ± .010, .XX ± .016 BEFORE FINISH.
PART MAY BE USED WITH HANDLES NO. 1090, 1091, 1092, 1093, 1094, 1095, 1096, 1097, 1098

Part No. 904



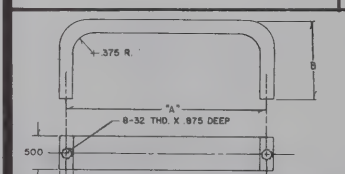
STANDARD FINISH BUFFED — ANODIZED FINISH AVAILABLE

Part No. 1021



PART NO	"A"	"B"	PART NO	"A"	"B"
1050	3.00	1.28	1052	6.44	1.75
1051	4.56	1.50	1053	9.00	1.75

STANDARD FINISH BUFFED —
ANODIZED FINISH AVAILABLE — Part No. 1050

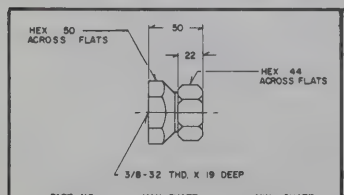


PART NO.	"A"	"B"
1054	4.25	1.50
1055	6.00	1.50

FINISH, BRIGHT: CHROMATE CONVERSION COATING PER MIL-C-5541
NON-REFLECTIVE BLACK ANODIZE PER
MIL-A-8625 TYPE II

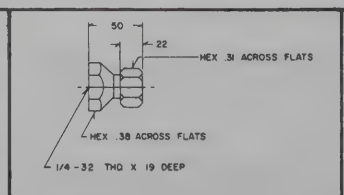
Part No. 1054 & 1055

Shaft Locks — Brass



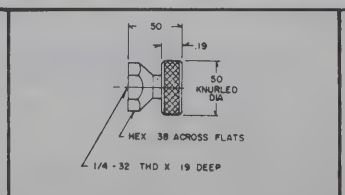
PART NO	MAX SHAFT DIA.	MIN. SHAFT EXT.
1510	.250	.32

STANDARD PLATING —12 — Part No. 1510



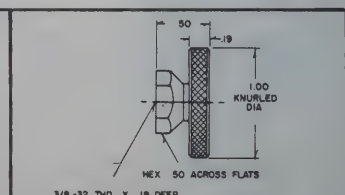
PART NO.	MAX SHAFT DIA.	MIN. SHAFT EXT.
1512	.125	.32

STANDARD PLATING —12 — Part No. 1512



PART NO	MAX SHAFT DIA	MIN. SHAFT EXT
1513	.125	.32

STANDARD PLATING —12 — Part No. 1513



3/8-32 THD. X .19 DEEP.

PART NO.	MAX SHAFT DIA	MIN SHAFT EXT
1520	.250	.32

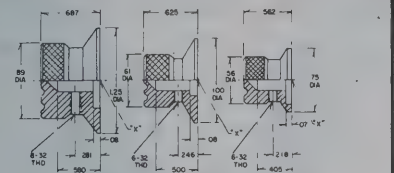
STANDARD PLATING —12 — Part No. 1520

Tolerance: .XXX ± .010; .XX ± .016 before plating

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STANDARDIZED ELECTRONIC HARDWARE
LITTON INDUSTRIES/USECO DIVISION

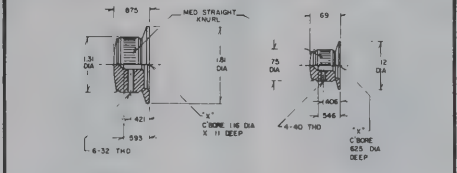
INSTRUMENT PANEL HARDWARE • Knobs



PART NO	"X"	MAX SH DIA	PART NO	"X"	MAX SH DIA	PART NO	"X"	MAX SH DIA
310	1/4	250	305	1/4	250	300	1/4	250
311	3/16	188	306	3/16	188	301	3/16	188
312	1/8	125	307	1/8	125	302	1/8	125

STANDARD FINISH BUFFED — ANODIZED FINISH AVAILABLE

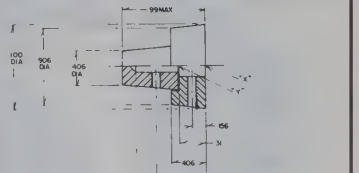
Part No. 300



PART NO	"X"	MAX SH DIA	PART NO	"X"	MAX SH DIA
410	1/4	250	400	1/4	250
411	3/16	188	401	3/16	188
412	1/8	125	402	1/8	125

STANDARD FINISH BUFFED — ANODIZED FINISH AVAILABLE

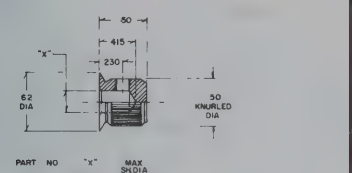
Part No. 400



PART NO	"X" DIA	"Y" DIA	MAX SH DIA'S
450	1/4	1/8	250 & 125

STANDARD FINISH BUFFED — ANODIZED FINISH AVAILABLE

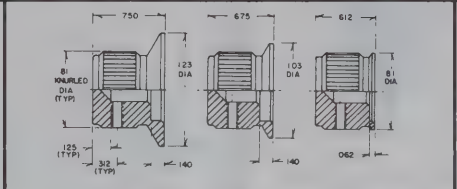
Part No. 450



PART NO	"X"	MAX SH DIA
500	1/4	250
501	3/16	188
502	1/8	125

STANDARD FINISH BUFFED — ANODIZED FINISH AVAILABLE

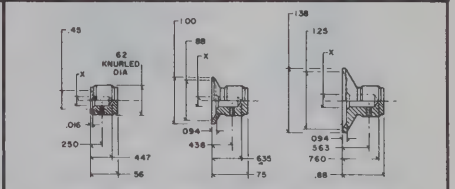
Part No. 500



PART NO	"X"	MAX SH DIA	PART NO	"X"	MAX SH DIA	PART NO	"X"	MAX SH DIA
548	1/4	250	555	1/4	250	550	1/4	250
549	3/16	188	556	3/16	188	551	3/16	188
550	1/8	125	557	1/8	125	552	1/8	125

STANDARD FINISH BUFFED — ANODIZED FINISH AVAILABLE

Part No. 550

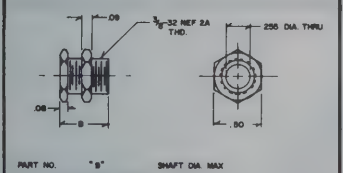


PART NO.	X	MAX SH DIA	PART NO.	X	MAX SH DIA	PART NO.	X	MAX SH DIA
627	1/8	125	1002	1/8	125	1040	1/8	125
626	3/16	188	1001	3/16	188	1039	3/16	188
625	1/4	250	1000	1/4	250	1038	1/4	250

STANDARD FINISH BUFFED — ANODIZED FINISH AVAILABLE

Part No. 625

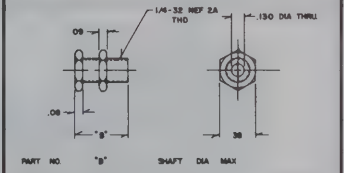
Accessory Hardware



PART NO.	"B"	SHAFT DIA MAX
1560	.562	250
1560-1	438	250
1560-2	375	250
1560-3	620	250

STANDARD PLATING — 12

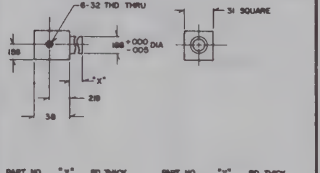
Part No. 1560



PART NO.	"B"	SHAFT DIA MAX
1561	.562	125
1561-1	438	125
1561-2	.375	125

STANDARD PLATING — 12

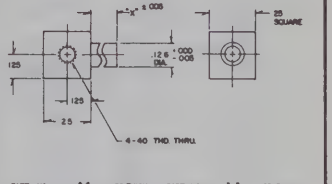
Part No. 1561



PART NO.	"X"	BD THICK	PART NO.	"X"	BD THICK
1590 C	133	.094	1590 B	106	062
			1590 D	188	125

STANDARD PLATING — 11

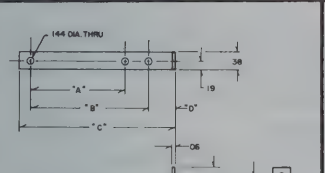
Part No. 1590



PART NO	"X"	BD THICK	PART NO.	"X"	BD THICK
1591 A	.073	.031	1591 B	106	062
1591 C	135	.094	1591 D	188	125

STANDARD PLATING — 11

Part No. 1591

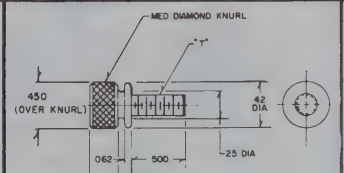


PART NO	"A"	"B"	"C"	"D"	REC USE
11-2	1.500		2.12	35	1100 B
11-3	1.500	2.000	2.62	35	1100 B & C
11-4	2.000	2.500	3.31	56	1100 C & D
11-5	500	2.000	2.81	56	1100 B & C

STANDARD PLATING — 11

Part No. 11

MATL.; 1020 COLD ROLLED STEEL PER QQ-S-633

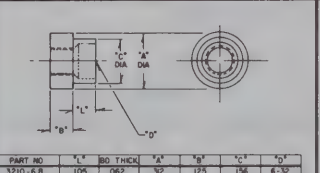


PART NO	"T"
3100-6	6-32
3100-8	8-32
3100-10	10-32

STANDARD PLATING — 12

Part No. 3100

MATL.; BRASS, 1/2 HARD, COMP 22, PER QQ-B-626

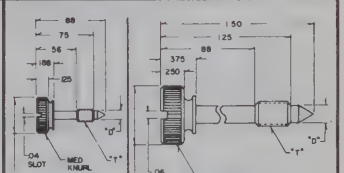


PART NO.	"L"	BD THICK	"A"	"B"	"C"	"D"
3210-6 B	105	062	312	125	156	6-32
C	135	094				
D	165	125				
3210-8 B	105	062			188	8-32
C	135	094				
D	165	125				
3210-10 B	105	062			250	10-32
C	135	094				
D	165	125				
3210-250	156	125	562	312	406	1/4-20
E	218	188				
F	281	250				

STANDARD PLATING — 12

Part No. 3210

MATL.; BRASS, 1/2 HARD, COMP 22, PER QQ-B-626

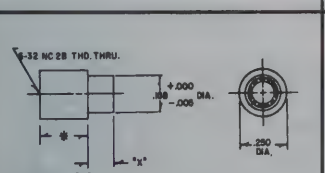


PART NO	"D"	"T"
3200-6	094	6-32
3200-8	120	8-32
3200-10	140	10-32
3200-25	171	1/4-20

STANDARD PLATING — 12

Part No. 3200

MATL.; BRASS, 1/2 HARD, COMP 22, PER QQ-B-626



PART NO.	"X"	*
1530	( )	( )

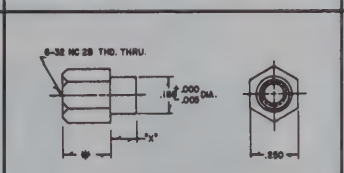
(X) A=.075 B=.105 C=.138 D=.166
.031 .062 .094 .125 BD. THICKNESS.

* (1/8), (5/16), (1/4), (3/8), (1/2), (5/8), (3/4), (100).

ORDER BY; BASIC PART NO, LETTER & LENGTH IN FRACTION.
EXAMPLE; 1530 A 1/2
MODEL NO. "X" DIM. * DIM.

STANDARD PLATING — 12

Part No. 1530



PART NO.	"X"	*
1531	( )	( )

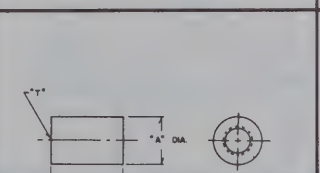
(X) A=.075 B=.105 C=.138 D=.166
.031 .062 .094 .125 BD. THICKNESS.

* (1/8), (5/16), (1/4), (3/8), (1/2), (5/8), (3/4), (100).

ORDER BY; BASIC PART NO, LETTER & LENGTH IN FRACTION.
EXAMPLE; 1531 A 1/2
MODEL NO. "X" DIM. * DIM.

STANDARD PLATING — 12

Part No. 1531



PART NO.	"A"	"B"	"T"	PART NO.	"A"	"B"	"T"
1550 A	18	250	4-40	1550 B	18	375	4-40
1550 C	25	250	6-32	1550 D	25	375	6-32
1550 E	25	500	6-32	1550 F	25	625	6-32
1550 G	25	750	6-32	1550 H	38	250	6-32
1550 I	38	375	8-32	1550 J	38	500	8-32
1550 K	38	625	8-32	1550 M	38	750	8-32

STANDARD PLATING — 12

Part No. 1550



PART NO.	"A"	"B"	"T"	PART NO.	"A"	"B"	"T"
1551 A	18	250	4-40	1551 B	18	375	4-40
1551 C	25	250	6-32	1551 D	25	375	6-32
1551 E	25	500	6-32	1551 F	25	625	6-32
1551 G	25	750	6-32	1551 H	38	250	8-32
1551 I	38	375	8-32	1551 J	38	500	8-32
1551 K	38	625	8-32	1551 M	38	750	8-32

STANDARD PLATING — 12

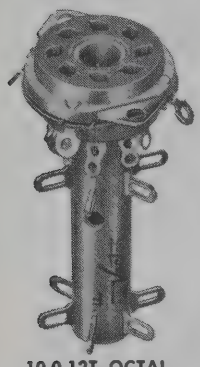
Part No. 1551

Tolerance: .XXX ± .010; .XX ± .016 before plating

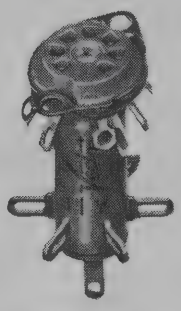
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Vector Electronic Company

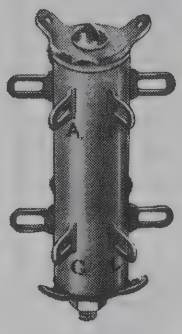
POST SOCKET TURRETS



10-0-12T OCTAL



6-M-6T 7-PIN



6-12 TERMINAL

VECTOR SOCKET TURRETS AND TERMINAL TURRETS simplify electronic construction. Faster wiring, greater component density and higher reliability are assured by their use. Military types (premium grade- have MIL sockets with beryllium copper silver plated socket contacts, brass nickel plated hot tin dipped saddles and glass silicone turret post with fused tin brass terminals. Commercial types have mica filled sockets, hot tin dipped steel saddle, XXXP Phenolic turret post with brass fused tin terminals.

CATALOG NUMBERS Commercial Types	Military Types	TURRET DETAILS Height	No. of Term	No. of Rings	Space Between Rings	NET PRICE Comm. Type 1-49
OCTAL SOCKET-TURRETS						
* 6-0- 6T	680	1½"	6	1	—	$.59
* 8-0- 9T	681	2"	9	2	1"	.65
8-0-12T	682	2"	12	2	1"	.69
* 10-0- 9T	683	2½"	9	2	1⅜"	.69
10-0-12T	684	2½"	12	2	1⅜"	.73
7-PIN SOCKET TURRETS						
* 6-M - 6T	687	1½"	6	1	—	.63
* 8-M - 9T	688	2"	9	2	1"	.69
8-M -12T	689	2"	12	2	1"	.72
10-MB-12T	690	2½"	12	2	1⅜"	.81
9-PIN SOCKET TURRETS						
* 6-N - 6T	693	1½"	6	1	—	.63
* 8-N - 9T	694	2"	9	2	1"	.69
8-N -12T	695	2"	12	2	1"	.72
10-NB-12T	696	2½"	12	2	1⅜"	.81
TERMINAL-TURRETS						
6-12	676	1 11/32"	12	2	⅝"	.50
8-12	677	1 27/32"	12	2	1"	.53
10-12	678	2 11/32"	12	2	1⅜"	.56

NOTE: Tolerance on dimensions ±1/16"

* Indicates preferred types.

Longer or shorter types and other terminal configurations to order.

SOCKET SADDLE NUTS

U-Nuts for easy socket mounting slip over saddle ears. Packed in bags of 50. 4Z thread is No. 4 Sheet Metal.

Cat. No.	Thread	Net Price 1-19 Bags
4-40 U Nut	4-40	$1.00
4-Z U Nut	4Z	1.25
S4/.250 Screw	4-40	.60
S4Z/.250 Screw	4Z	.60

TUBE SHIELD BASES

Mount above sockets as base for conventional bayonet type shields.

Cat. No.	Description	Net Price 1-499
S7	7 Pin Steel Cad. Plated	$.07
S7.17	7 Pin Steel Cad. Iridited	.07
S9	9 Pin Steel Cad. Plated	.05
S9.17	9 Pin Steel Cad. Iridited	.05

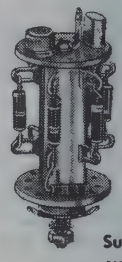
TRANSISTOR TURRETS



7-A-12T-440



8-A-12T



#654 Supplied without wiring

TRANSISTOR SOCKET TURRETS enable user to mount one transistor and other necessary circuit components on a post structure. Sockets furnished accommodate 3-in-line or "top-hat" type transistors. Units furnished with saddle or recessed 4-40 Knurl nut in end opposite socket.

TRANSISTOR WAFER TURRET: Holds four transistors on wafer punched to take JEDEC or in-line leads. 5-40 screw projects 5/16" Min. beyond bottom ground lug for chassis mounting.

Catalog No.	Height	Space Between Rings	Space Between Wafers	Saddle	Knurl Nut	Net Price 1-19
6-A-12T	1½"	⅞"	—	YES	NO	1.06
7-A-12T-440	1¾"	⅞"	—	NO	YES	1.04
8-A-12T	2"	1⅜"	—	YES	NO	1.08
652	2"	1"	1 1/16"	NO	NO	.81
654	2½"	1⅜"	2⅜6"	NO	NO	.87



27XA ETCHED CIRCUIT KIT

Etched circuits in minutes. All you add is hot water! Complete with Vectoresist sheet R322, dry chemical etchant plus etch activator in ready-to-use plastic bag, layout paper, instructions, plus parts listed below for only $5.95. Or order parts separately.

Cat. No.	Description	Price 1-19
3070-1XXXP	4½"x6½" phenolic copper clad one side Vectorbord, pre-punched	.84
CU65/45-1	4½"x6½" phenolic copper clad one side unpunched	.55
2594	Box containing two bags of etchant	1.25





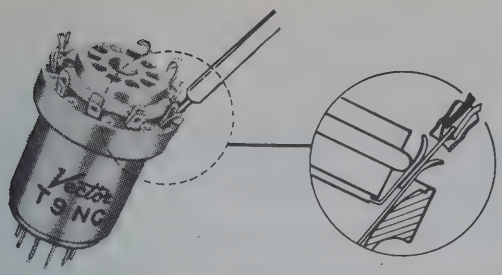
VECTORESIST RUB-ON RESIST FOR MAKING ETCHED CIRCUITS

Vectoresist is an easy-to-use method of making experimental etched circuits which eliminates the need for resist tapes and pens. 10" x 15" sheets have various width lines, curves, circles, standard and miniature transistor pads, standar .156" spaced plug contacts and numbers & letters, all printed as resist. To apply, just rub back of sheet and resist pattern transfers to copper clad board. Etch with Ferric Chloride or Ammonium Persulphate solution. Price $2.00 per sheet.

Cat. No.	Description
R322	Various width lines, circles, pads, solid area and .156" spaced plug contacts.
R393	Letters and numbers, 3/32" high.
R405	Various width lines.
R406	Transistor pads and circles.

© U.C.P., Inc.

CURRENT TEST ADAPTERS

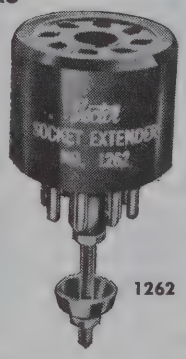


Versatile VECTOR CURRENT TEST ADAPTERS make possible tube circuit current or votage measurements without cutting leads or making computations. All measurements may be made from the tube side of the electronic equipment without disturbing the chassis.

Cat. No.	Type	Net Price 1-19
T-7-M-C	7 Pin Min.	2.30
T-8-O-C	8 Pin Octal	2.90
T-9-N-C	9 Pin Noval	2.45
P-2	Dual Sided Plug-in Probe, Required for above	.75
T-789-C	Set of Above 3 Adapters with P-2 Probe in Case	8.85

SOCKET EXTENDERS

Socket extenders provide a replaceable unit for use in tube testers and expensive meters. Wear is shifted from the socket in the tester to the one in the extender so that when it is worn out a new one can be easily inserted. Sockets have beryllium copper silver plated contacts for long life. An all molded outside shell is used with socket leads soldered to plug pins. All units provided with 1¾" long screw to hold unit firmly in place if desired.

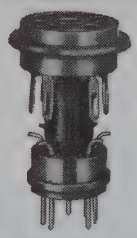


1262

Cat. No.	Socket Type	Net Price 1-19
#1262	Octal 8	1.75
#1263	9 P. Noval	1.75
#1264	7 P. Miniature	1.75

SOCKET CHANGE ADAPTERS

SOCKET CHANGE ADAPTERS facilitate use of unlike tube bases in existing sockets where a change of tube types is required. To be wired by user. Add "S" to number for an outer shell which may be cemented in place.

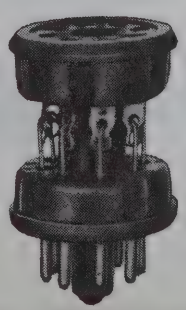


T97

Cat. No.	Socket	Plug	Net Price 1-19
T 780	7 P. Min.	Octal 8	1.05
T 79	7 P. Min.	9 P. Nov.	1.02
T 807	Octal 8	7 P. Min.	1.23
T 809	Octal 8	9 P. Nov.	1.23
T 97	9 P. Nov.	7 P. Min.	1.02
T 980	9 P. Nov.	Octal 8	1.05

EXPERIMENTER'S TEST ADAPTERS

EXPERIMENTER'S TEST ADAPTERS. These are similar to the Socket Test Adapter but are less the shells and tabs so that connections can be cross-connected in any desired way. User must solder connections (Outer shells available at factory — add "S" to number to obtain).



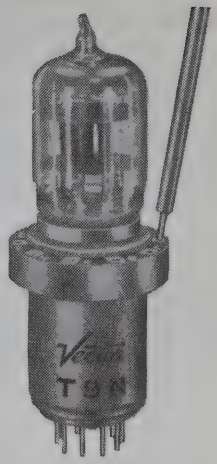
TX-8-0

Cat. No.	Socket Type	Net Price 1-19
TX-8-0	Octal	1.30
TX-7-M	Miniature	.80
TX-9-N	Noval	.85
TX-789	Set of above three in kit	3.25

TUBE SOCKET TEST ADAPTERS



T-789



T9N

TUBE SOCKET TEST ADAPTERS are ideal for making voltage resistance and wave form measurements from the tube side of electronic equipment. To use, insert adapter between tube and socket, and replace tube in adapter socket. Special test tabs are recessed on the adapter skirt and have a hole to grip test probe and protect operator's fingers during insertion and withdrawal. Regular alligator test-clipped probes also hold on tab and socket. Castings are low loss phenolic and fit all shield bases for miniature and noval type or into standard tube clamps. Reduced body diameter permits insertion into new telescoping shields. Adapter socket contacts are beryllium copper, silver plated for long life and low resistance. Electrostatic capacity between adacent leads of the adapter is approximately 1 micro-micro-farad. Flash over voltage between adjacent terminals is in excess of 1500 volts DC.

Adapters may be purchased separately or in kits. Kit T789 consists of the 3 popular "must have" sizes, 7-pin miniature, 8-pin octal, 9-pin noval plus a P1 probe packed into a handy clear plastic carrying case.

Kit T429 consists of 9 adapters as listed below packed in a sturdy plastic case and is a commercial equivalent of the well known Navy tube socket test adapter kit.

Cat. No.	Tube Type	Body Dia.	Skirt Dia.	Length Less Prongs	Price 1 - 19
T-4	4 Pin	1.26	1.56	1.50	2.76
T-5	5 Pin	1.26	1.56	1.50	2.82
T-6	6 Pin	1.26	1.56	1.50	2.89
T-7-O	7 Pin Small	1.26	1.56	1.50	2.95
T-7-L	7 Pin Large	1.45	1.75	1.50	2.95
T-7-M	7 Pin Min.	0.75	1.03	1.50	1.65
T-8-O	8 Pin Octal	1.25	1.56	1.50	1.75
T-8-L	8 Pin Loctal	1.26	1.56	1.50	3.95
T-9-N	9 Pin Noval	0.87	1.16	1.50	1.85
T-429	Set of above Nine types in case.				27.00
T-789	Set of types T-7-M, T-8-O, T-9-N, P1, in case.				5.90
P1	Plug-in Probe with 30" lead.				.39

Special Adapters Designed to Customer Specifications—Write Factory.

EXTENDED TUBE SOCKET TEST ADAPTERS

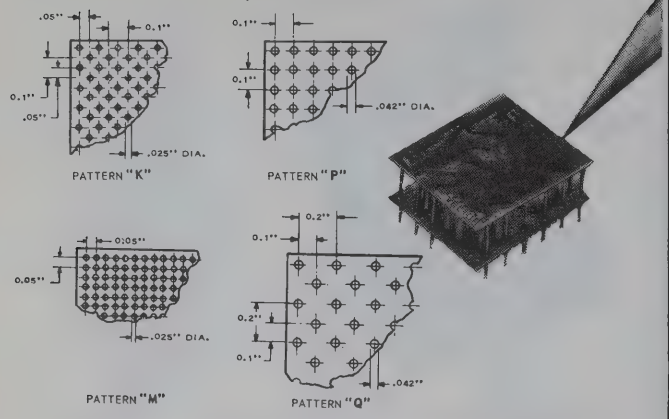
For most work the short, unshielded adapters are adequate. For hard to reach locations or where surrounding equipment restricts use of regular test adapters, the 3 to 4 inch extended adapter may be used. In these the leads between plug and socket are individually shielded to minimize coupling. The shield is brought out to a lug on the wall of the adapter and should be connected to the chassis being tested. Capacity to shield is approx. 8 mmf. per lead.



T7MS

Cat. No.	Tube Type	Body Dia.	Skirt Dia.	Length Less Prongs	Price 1 - 19
T-7-M-S	7 Pin Min.	0.75	1.03	3.25	5.37
T-8-O-S	8 Pin Octal	1.25	1.56	4.00	5.05
T-9-N-S	9 Pin Noval	0.87	1.16	3.25	6.00
P1	Plug-in Probe with 30" lead				.39
T-789-S	Set of above in case				17.70

Micro Vectorboard



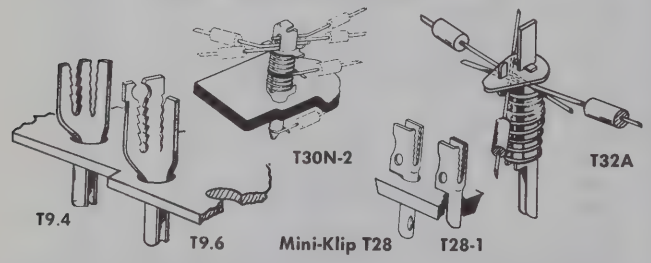
Pattern	Spacing	Pattern	Spacing
M	.05 Centers	P	.10 Centers
K	.05 x. 10	Q	.10 x .20

Micro-Vectorbord has been specially designed for the denser packaging required by cordwood construction and mounting micro-miniature components. All boards listed are 1/32" thick epoxy glass, Type GEE, Grade G-10 per MIL-P-18177, or copper clad epoxy glass, Type FLGE-91 (MIL-P-13949-B). Other thicknesses available on order.

MICRO-VECTORBORD TABLE OF SIZES

Cat. No.	Pattern	Hole Size	Dimension	Number of Holes	Price 1-19
59P19/032	P	.042"	6" x 2" x 1/32"	59 x 19	$1.09
169P59/032	P	.042"	17" x 6" x 1/32"	169 x 59	4.82
29Q9/032	Q	.042"	6" x 2" x 1/32"	(29 x 9) x2	.90
84Q29/032	Q	.042"	17" x 6" x 1/32"	(84 x 29) x2	4.39
76M38/032	M	.025"	4" x 2" x 1/32"	76 x 38	1.52
336M76/032	M	.025"	17" x 4" x 1/32"	336 x 76	8.50
38K19/032	K	.025"	4" x 2" x 1/32"	(38 x 19) x2	1.30
168K38/032	K	.025"	17" x 4" x 1/32"	(168 x 38) x2	6.42
EPOXY GLASS COPPER CLAD ONE SIDE					
169P59/032C1	P	.042"	17" x 6" x 1/32"	169 x 59	$6.61
336M76/032C1	M	.025"	17" x 4" x 1/32"	336 x 76	9.69

VECTOR PUSH-IN TERMINALS

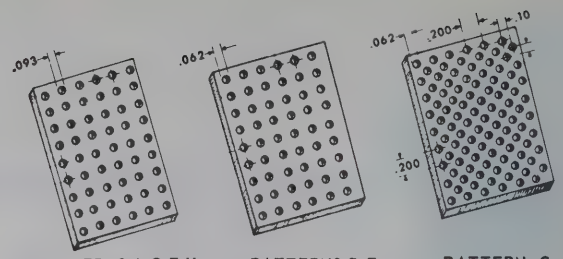


VECTOR PUSH-IN TERMINALS simplify "breadboarding" and production. Push them into .062" or .093" holes in 1/16" or 3/32" Vectorbord panels and they hold without staking. (May be staked by clipping off flush with board surface or flattening with a pair of pliers for maximum holding, if desired). All terminals except T9.4A have serrated slots to grip inserted wires. Large slot accommodates most resistor and capacitor wires. Small slot hold transistor leads. The T9.4A is supplied without "teeth" on the wire slots to permit easy removal of leads when soldered components must be changed. The T9.6 has a special "snap-in" slot to accommodate .075-080 diode leads. All types have thru hole construction enabling riser wires to be inserted down through center of terminal, and slot or hole in shank for additional connections.

SOLDERLESS SPRINGCLIP TERMINALS—Reliable truly solderless terminals for fast setup of experimental circuitry. May be used over and over—permits reusing expensive components by eliminating heat damage. Extremely low contact resistance—less than .002 ohms for T30. Order insertion tool P-92A for easy insertion in .093" holes. Suggested board thickness 3/32" for best support of terminal.

Cat. No.	Fits Holes	Description	Quantity Per Bag	Net Price 1-19 Bags	Bulk Price 1M-4999
T9.4	.093"	Brass, Fused Tin Pltg.	100	$1.25	$ 8.90/M
T9.4A	.093"	Brass, Fused Tin Pltg.	100	1.25	8.90/M
P122		Inserting tool for T9.4 & T9.4A	1	1.00	
T28	.062"	Beryllium Copper, Fused Tin Pltg.	100	1.55	11.00/M
T28S	.062"	Beryllium copper silver pltg.	100	1.55	11.00
T28-1	.062"	Beryllium Copper. Fused Tin Pltg.	100		
P91		Inserting tool for T28 series	1	.50	
T30-2	.093"	Brass, Silver Pltg.	10	.99	
T30-2	.093"	Brass, Silver Pltg.	100	7.40	52.86/M
T30N-2	.093"	Brass, Nickel Pltg.	10	.95	
T30N-2	.093"	Brass, Nickel Pltg.	100	6.95	48.50/M
P92A		Inserting tool for T30-2 series	1	.50	
T32A	.093"	Side Entry U-Clip (Solderless Springclip)	100	9.45	

VECTORBORD



PATTERNS A,C,F,H PATTERNS B,E PATTERN G

Pattern	Spacing	Pattern	Spacing	Pattern	Spacing
A	.265 Centers	B	.188 Centers	H	.100 Centers
C	.200 Centers	E	.141 Centers	G	.20 x .10
		F	.200 Centers		

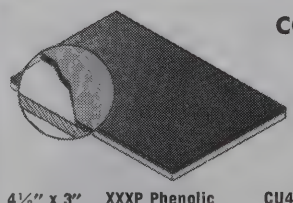
VECTORBORD (Pre-Punched Terminal Board) has precision pre-punched .093" or .062" holes at various spacings on tan XXXP Phenolic (MIL-P-18177) ivory epoxy paper (MIL-P-22324), G-10 Epoxy Glass (MIL-P-1877) or Copper clad epoxy glass type FLGE-91 (MIL-P-13949-B). Ideal for prototypes and many production uses. Vector Push-in Terminals or standard turned terminals and eyelets fit pre-punched holes. User can make own etched circuits with listed copper clad boards. May be sawed, drilled, or punched.

VECTORBORD TABLE OF SIZES

Cat. No.	Pattern	Hole Size	Dimensions	No. of Holes	Price 1-19
XXXP Phenolic					
18A18	A	.093	4.80 x 4.80 x 1/16	18 x 18	$ .43
32A9	A	.093	8.51 x 2.41 x 1/16	32 x 9	.45
32AA18	A	.093	8.51 x 4.80 x 3/32	32 x 18	.84
64A18	A	.093	4.8 x 16.99 x 1/16	64 x 18	1.25
64AA18	A	.093	4.8 x 16.99 x 3/32	64 x 18	1.60
64AA32	A	.093	16.99 x 8.51 x 3/32	64 x 32	2.45
45B30	B	.062	8.51 x 5.69 x 1/16	45 x 30	.84
90B30	B	.062	16.97 x 5.69 x 1/16	90 x 30	1.62
85C24	C	.093	16.99 x 4.80 x 1/16	85 x 23	1.25
95G175	G	.062	35.00 x 19.00 x 1/16	(94 x 175) x 2	7.62
Epoxy Paper					
32AA18EP	A	.093	8.51 x 4.80 x 3/32	32 x 18	1.40
64AA18EP	A	.093	16.99 x 4.80 x 3/32	64 x 18	2.73
64AA32EP	A	.093	16.99 x 8.51 x 3/32	64 x 32	4.39
85F24EP	F	.062	16.99 x 4.80 x 1/16	85 x 23	2.06
85G24EP	G	.062	16.99 x 4.80 x 1/16	(85 x 23) x 2	2.06
85G42EP	G	.062	16.99 x 8.5 x 1/16	(85 x 42) x 2	3.17
120E33EP	E	.062	16.99 x 4 13/16 x 1/16	120 x 33	2.23
Epoxy Glass					
32A18WE	A	.093	8.51 x 4.80 x 1/16	32 x 18	1.89
42G24WE	G	.062	8.5 x 4.80 x 1/16	(42 x 23) x 2	1.94
85G24WE	G	.062	16.99 x 4.80 x 1/16	(85 x 23) x 2	3.81
170H48WE/032H		.062	17.00 x 4.80 x 1/16	170 x 47	3.57
120E33WE	E	.062	16.99 x 4 13/16 x 1/16	120 x 33	3.99
Copper Clad XXXP Phenolic					
3106-1XXXP	F	.062	3 x 4 1/2	18 x 14	.45
3106-2XXXP	F	.062	3 x 4 1/2	18 x 14	.55
3070-1XXXP	F	.062	4 1/2 x 6 1/2	28 x 22	.84
3070-2XXXP	F	.062	4 1/2 x 6 1/2	28 x 22	1.04
42F22C1*	F	.062	4.5 x 8.5	42 x 22	1.05
42F22C2**	F	.062	4.5 x 8.5	42 x 22	1.32
Copper Clad Epoxy Paper					
3070-1EP	F	.062	4.5 x 6.5 x 1/16	28 x 22	1.39
3070-2EP	F	.062	4.5 x 6.5 x 1/16	28 x 22	1.67
Copper Clad Epoxy Glass					
42G22WEC1*	G	.062	8.5 x 4.5 x 1/16	(42 x 22) x 2	2.55
42G22WEC2**	G	.062	8.5 x 4.5 x 1/16	(42 x 22) x 2	2.60
85F42WEC1*	F	.062	16.99 x 8.51 x 1/16	85 x 42	9.33
85F42WEC2**	F	.062	16.99 x 8.51 x 1/16	85 x 42	10.25
3106-1WE	F	.052	3.0 x 4.5 x 1/16	18 x 14	1.01
3106-2WE	F	.062	3.0 x 4.5 x 1/16	18 x 14	1.10
3070-1WE	F	.062	4.5 x 6.5 x 1/16	28 x 22	2.03
3070-2WE	F	.062	4.5 x 6.5 x 1/16	28 x 22	2.21

* Indicates 2 oz. Copper Clad 1 Side
** Indicates 2 oz. Copper Clad 2 Sides

COPPER CLAD PLASTIC SHEETS

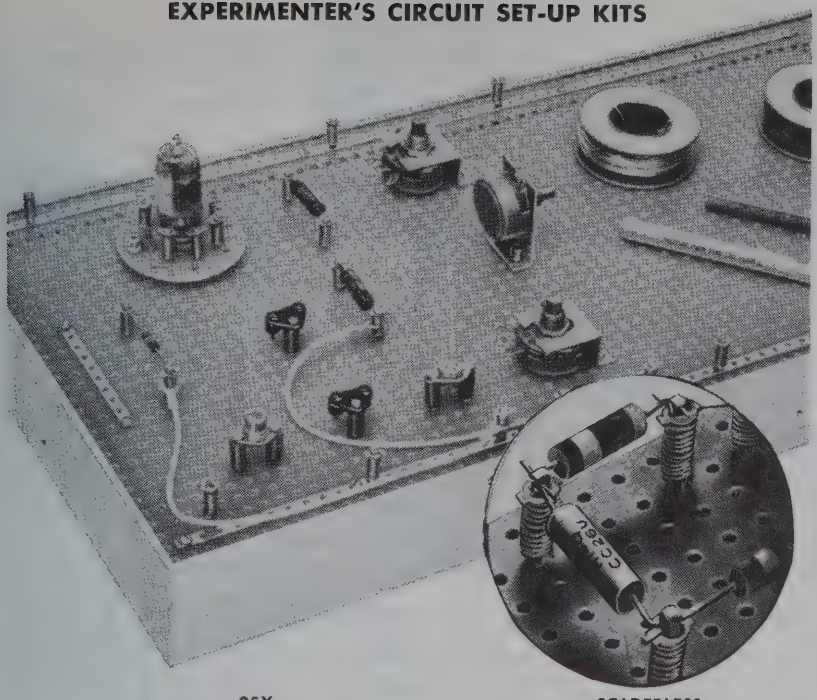


1/16" copper clad unperforated. For making etched circuits, shielding. 2 oz. (.003") clad one or two sides XXXP per MIL-P-13949 Type PP and G-10 epoxy glass per MIL-P-13949B Type FL-GE.

4 1/2" x 3"	XXXP Phenolic	CU45/30-1	.30	CU45/30-2	.40
6 1/2" x 4 1/2"	XXXP Phenolic	CU65/45-1	.55	CU65/45-2	.77
8 1/2" x 4 1/2"	XXXP Phenolic	CU85/45-1	.70	CU85/45-2	.98
4 1/2" x 3"	Epoxy Glass	CU45/30WE-1	.69	CU45/30WE-2	.77
6 1/2" x 4 1/2"	Epoxy Glass	CU65/45WE-1	1.34	CU65/45WE-2	1.52
8 1/2" x 4 1/2"	Epoxy Glass	CU85/45WE-1	1.71	CU85/45WE-2	1.95

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EXPERIMENTER'S CIRCUIT SET-UP KITS



25X
WITH ADDED COMPONENTS

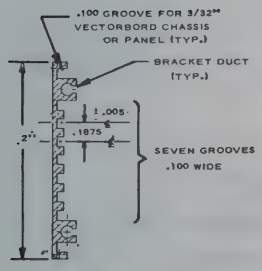
SOLDERLESS
CIRCUIT DETAIL

All Kits are provided with unique extruded aluminum side rails. See detail below and accessory section for description.

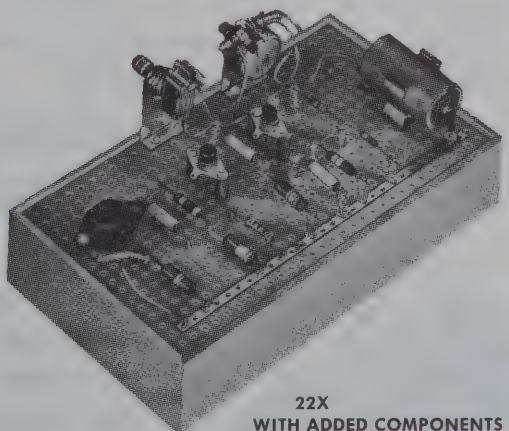
Kit 20X is a starter set with a 4 13/16" x 8½" Vectorbord deck plus 20 T30N-2 Solderless Springclips and 75 T9.4 push-in Terminals; 3 Min. 7 pin, 2 Octal and 3 Noval 9 Pin Tube sockets; 2 Pot Brackets; 2 bus strips; terminal installation tool; 12 spacers; 3 sheets grid layout paper and Plastic Parts Box with 30 assorted screws and nuts. **Price $6.25.**

Kit 21X has a larger chassis with a 4 13/16" x 17" Vectorbord deck and 2 extra pieces of Vectorbord plus 50 solderless Springclips, 100 T9.4 and 4 T9.62 tandem Push-in Terminals; 3 Min. 7 pin, 2 Octal, 3 Noval 9 pin and 6 Transistor Sockets; 4 Pot Brackets; 14 misc. brackets. 3 bus strips; 2 terminal installation tools; 8 patch cords; 22 spacers; 2 spools of bare and insulated hookup wire; 3 sheets layout paper and Plastic Parts Box with 46 assorted screws and 28 nuts. **Price $15.25.**

Kit 25X has the largest assortment with a 8½" x 17" Vectorbord deck and 2 extra pieces of Vectorbord plus 90 Solderless Springclips, 100 T9.4 push-in, 10 solderless Side Entry and 4 T9.62 tandem Terminals; 6 solderless lug clips; 3 Min. 7 pin, 2 Octal, 3 Noval 9 pin, 4 Universal and 2 Power Transistor Sockets; 4 Pot Brackets; 8 assorted brackets. 3 bus strips; 2 terminal installation tools; 8 wafers to make solderless sockets; 10 patch cords; 28 spacers; 2 spools of bare & insulated wire; 3 sheets layout paper; sample of Numletr Transfer Sheet and 2 Plastic Parts Boxes with 70 assorted screws and 48 nuts. **Price $19.50.**



SIDE RAIL CROSS
SECTION VIEW



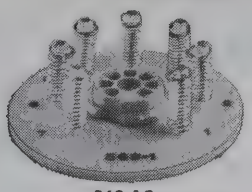
22X
WITH ADDED COMPONENTS

Kit 22X is for transistor experimentation with a 4 13/16" x 17" Vectorbord deck and 2 extra pieces of Vectorbord plus 6 Universal and 2 Pawer Transistor Sockets; 20 Solderless Springclips, 2 T9.62 tandem and 35 T9.4 push-in terminals; Brackets. 8 assorted brackets; 3 bus strips, 1 terminal installation tool; 6 patch cords; 16 spacers; 2 spools of bare and insulated wire; 3 sheets layout paper and Plastic Parts Box with 38 assorted screws and 34 nuts. **Price $10.50.**

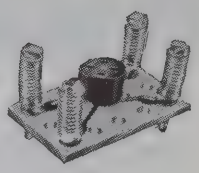
Kit 22XA has a larger chassis for transistors with a 8½" x 17" Vectorbord deck, 2 extra pieces of Vectorbord; 2 power and 6 Universal Transistor Sockets with pig tails; 100 T9.4, 100 Solderless Springclip, 18 T32A Solderless side entry Springclip, 4 T9.62 tandem and 20 T9.6 Push-in terminal installation tools; 14 patch cords; 20 spacers; 2 spools of bare and insulated wire. 3 sheets layout paper; sample of "Numletr" Transfer Sheet for letters and numbers and 2 Plastic Parts Boxes with 54 assorted screws and 32 nuts. **Price $25.50.**

ACCESSORIES

SOLDERLESS SOCKETS

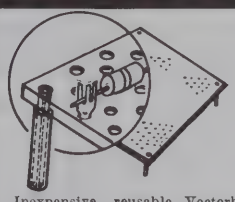


569-1C



570-B

567-1C	Solderless Octal Socket	1.50 ea.
568-1C	Solderless Noval (9 pin) Socket	1.65 ea.
569-1C	Solderless Miniature (7 pin) Socket	1.35 ea.
570-B	Solderless Universal Transistor Socket	1.20 ea.



DRIVE PIN CHASSIS LEGS

	Pkg. of 25
1111-40 .094" Dia. x 1" long	1.24
1110-49 .063" Dia. x ¾" long	1.00

Inexpensive, reusable Vectorboard chassis supports. Mount both sides of board if desired for component protection when inverting chassis.

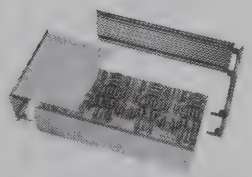


PATCHCORDS FOR INTERCONNECTION BETWEEN SPRINGCLIP TERMINALS

Corrugated spade type lug slips between coils of Springclip terminal and holds tightly. Cords 20 gage standard; lugs plated brass.

Cat. No.	Description	Price
K6.06	6" overall lug ea. end	$3.00/Bdle 25
K6.09	9" overall lug ea. end	3.00/Bdle 25
K6.15	15" overall lug ea. end	3.00/Bdle 25

CHASSIS AND CASE SIDES

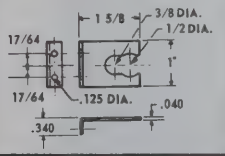


Extruded 2" w. Frame-Loc aluminum rails have .100 grooves spaced .0875 for 3/32 thick and thinner Vectorbords or metal panels. Covers push together and lock with furnished screws, brackets. Sold in pairs for board dimension listed.

Cat. No.	Description	1-49
SR2-3/093	Rails for 3" Lgth panel	$ .69 PR.
SR2-4.8/093	Rails for 4.8" Lgth panel	.79 PR.
SR2-7/093	Rails for 7" Lgth panel	.91 PR.
SR2-8.5/093	Rails for 8½" Lgth panel	.99 PR.
SR2-10/093	Rails for 10" Lgth panel	1.05 PR.
SR2-12/093	Rails for 12" Lgth panel	1.19 PR.
SR2-17/093	Rails for 17" Lgth panel	1.43 PR.
PL-4.8/8.5	4.8 x 8½ Alum. panel	.63 PR.
PL-4.8/17	4.8 x 8½ Alum. panel	1.07 PR.
PL-8.5/17	8.5 x 17 Alum. panel	1.63 PR.

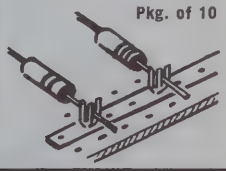
POT & SWITCH BRACKET

B20 Bracket
Pkg. of 4 $.46



BUS STRIP

T-57—PKG X 16" long 1.10
T-58—PKG X 8" long .70
T-104-PKG X 17" long 1.10
Pkg. of 10



GRID PAPER

Tracing paper printed with dot pattern corresponding to Vectorbord patterns A (.093 holes on .265 grid) or "G" (.062 holes on staggered 0.1 grid). Speeds circuit construction by facilitating optimum arrangement of components. Paper, when laid on Vectorbord can serve as layout or checking template. Printed dots "WASH OUT" on reproduced copies supplied in pads of 50 sheets per pad.

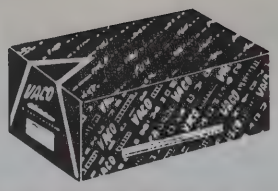
R173A	(A pattern) 8½" x 11" sheets	$1.45/pad
R173A-1	(A pattern) 8½" x 17" sheets	2.50/pad
R173F	(F pattern) 8½" x 11" sheets	1.45/pad
R173G	(G pattern) 8½" x 11" sheets	1.45/pad

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VACO® PRODUCTS CO.



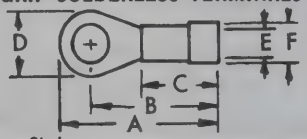
"C" PAK contains 100 terminals of a number and convenient for larger quantity users. Each carton readily identifiable from outside.



"MB" PAK contains 1000 terminals providing minimum terminal cost to large quantity users.

SOLDERLESS TERMINALS and CONNECTORS

DOUBLE-GRIP SOLDERLESS TERMINALS



RING TONGUE

Catalog Number	Wire Size	Stud Size	A	B	C	D	E	F
41204	22-18	4	47/64	5/8	13/32	7/32	5/32	11/64
41205	22-18	5-6	47/64	5/8	13/32	7/32	5/32	11/64
41206	22-18	5-6	13/16	43/64	13/32	9/32	5/32	11/64
41208	22-18	8	13/16	21/32	13/32	21/64	5/32	11/64
41210	22-18	10	13/16	21/32	13/32	21/64	5/32	11/64
41304	16-14	4	23/32	19/32	13/32	15/64	3/16	13/64
41305	16-14	5-6	23/32	19/32	13/32	15/64	3/16	13/64
41306	16-14	5-6	53/64	21/32	13/32	21/64	3/16	13/64
41308	16-14	8	55/64	45/64	13/32	21/64	3/16	13/64
41310	16-14	10	55/64	45/64	13/32	21/64	3/16	13/64
41314	16-14	12-1/4	5/164	27/32	13/32	29/64	3/16	13/64
41338	16-14	3/8	13/164	15/16	13/32	17/32	3/16	13/64



SPADE TONGUE

43204	22-18	4	23/32	9/16	13/32	15/64	5/32	11/64
43206	22-18	5-6	49/64	39/64	13/32	19/64	5/32	11/64
43208	22-18	8	51/64	39/64	13/32	11/32	5/32	11/64
43210	22-18	10	27/32	41/64	13/32	13/32	5/32	11/64
43306	16-14	4-6	3/4	19/32	13/32	19/64	3/16	13/64
43308	16-14	8	51/64	5/8	13/32	11/32	3/16	13/64

SPADE TONGUE (cont.)

43310	16-14	10	27/32	21/32	13/32	13/32	3/16	13/64
44206	22-18	4-6	27/32	5/8	13/32	19/64	5/32	11/64

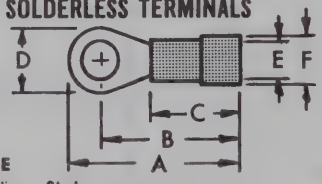
HOOK TONGUE

45208	22-18	4-8	7/8	45/64	13/32	11/32	5/32	11/64
45306	16-14	4-6	3/4	19/32	13/32	19/64	3/16	13/64
45308	16-14	8	51/64	5/8	13/32	11/32	3/16	13/64
45310	16-14	10	27/32	21/32	13/32	13/32	3/16	13/64

QUICK CONNECTORS

48301	16-14		29/32		13/32	1/4	3/16	13/64
48302	16-14		13/16		13/32	1/4	5/32	11/64

INSULATED DOUBLE-GRIP SOLDERLESS TERMINALS



RING TONGUE

Catalog Number	Wire Size	Stud Size	A	B	C	D	E	F
91204	22-18	4	51/64	11/16	29/64	7/32	11/64	13/64
91205	22-18	5-6	51/64	11/16	29/64	7/32	11/64	13/64
91206	22-18	5-6	55/64	47/64	29/64	9/32	11/64	13/64
91208	22-18	8	7/8	23/32	29/64	21/64	11/64	13/64
91210	22-18	10	7/8	23/32	29/64	21/64	11/64	13/64
91304	16-14	4	25/32	21/32	29/64	15/64	13/64	15/64
91305	16-14	5-6	25/32	21/32	29/64	15/64	13/64	15/64

RING TONGUE (cont.)

Catalog Number	Wire Size	Stud Size	A	B	C	D	E	F
91306	16-14	5-6	57/64	23/32	29/64	21/64	13/64	15/64
91308	16-14	8	59/64	49/64	29/64	21/64	13/64	15/64
91310	16-14	10	59/64	49/64	29/64	21/64	13/64	15/64
91314	16-14	12-1/4	1 1/8	1/32	29/64	29/64	29/64	13/64
91338	16-14	3/8	17/164	1	29/64	17/32	13/64	15/64

SPADE TONGUE

93204	22-18	4	3/4	5/8	29/64	15/64	11/64	13/64
93206	22-18	5-6	53/64	43/64	29/64	19/64	11/64	13/64
93208	22-18	8	27/32	43/64	29/64	11/64	11/64	13/64
93210	22-18	10	29/32	45/64	29/64	13/32	11/64	13/64
93306	16-14	4-6	13/16	21/32	29/64	19/64	11/64	13/64
93308	16-14	8	55/64	11/16	29/64	11/32	13/64	15/64
93310	16-14	10	29/32	45/64	29/64	13/32	13/64	15/64
94206	22-18	4-6	57/64	11/16	29/64	19/64	11/64	13/64

HOOK TONGUE

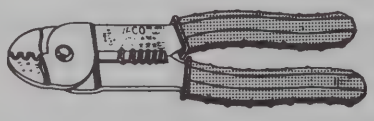
95208	22-18	4-8	15/16	49/64	29/64	11/32	11/64	13/64
95306	16-14	4-6	13/16	21/32	29/64	19/64	13/64	15/64
95308	16-14	8	55/64	11/16	29/64	11/32	13/64	15/64
95310	16-14	10	29/32	45/64	29/64	13/32	13/64	15/64



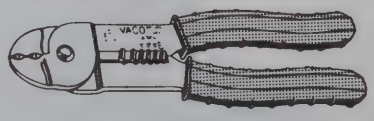
QUICK CONNECTOR

98301	16-14		61/64		29/64	1/4	13/64	15/64
98302	16-14		7/8		29/64	1/4	13/64	13/64

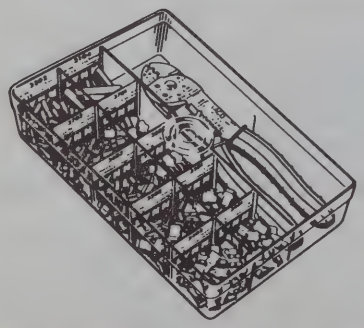
VACO CRIMPING TOOLS and KITS



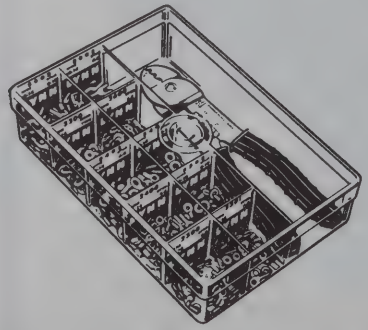
No. 1900 cuts wire, strips wire from 22 to 10 gauge, and crimps non-insulated solderless terminals. Plastic comfort handles are used on all Vaco crimping tools.



No. 1906 cuts and strips wire 22 to 10 gauge and crimps insulated solderless terminals. All Vaco tools are chrome plated, high quality steel.



No. 2195 Service Kit for Radio-TV and General Purpose Use. Contains No. 1900 crimping tool and one bin each of the following numbers: 11205, 11206, 11210, 11305, 11306, 11310, 14206, 13306, 13310, 15208.

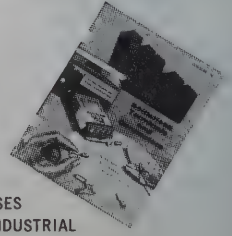


No. 3185 Service Kit for Appliance, Automotive and Electrical Use. Contains No. 1900 crimping tool plus popular assortment of quick-connect terminals and adapters as follows: 18301, 18302, 18303, 18304, 18001, 18002, 18008, 18007, 19301, 19302.

FREE NEW 5 STEP ENGINEERING DESIGN GUIDE and 12-PAGE COMPLETE LINE CATALOG

SAVES TIME, GUARANTEES ACCURACY IN SPECIFYING SOLDERLESS TERMINALS AND CONNECTORS

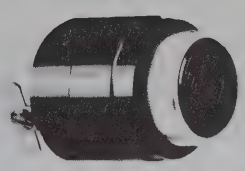
COVERS 6 BASIC CLASSES SERVING OVER 90% INDUSTRIAL AND MILITARY NEEDS



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SOLID STATE AUDIBLE SIGNAL 6 MODELS





MODEL	SC-628	SC-628H	SC-628A	SC-110	SC-250
FREQUENCY	2.5 KC	4.0 KC	2.5 KC	2.5 KC	2.5 KC
OPERATING VOLTAGE	6-28 V DC	6-28 V DC	6-28 V AC/DC	110 V AC/DC	250 V AC/DC
CURRENT	3-14 MA	3-14 MA	3-14 MA	14 MA	14 MA
SOUND INTENSITY	68-80 DB	68-80 DB	68-80 DB	80 DB	80 DB
OPERATING TEMPERATURE	—40°F to 130F°	—40°F to 130F°	—40°F to 130F°	—40°F to 130F°	—40°F to 130F°
VOLUME	2.9 CU. IN.	2.9 CU. IN.	4.0 CU. IN.	4.0 CU. IN.	4.0 CU. IN.
WEIGHT	1¼ OZ.	1¼ OZ.	2 OZ.	2 OZ.	2 OZ.
QUANTITY					
1 - 24	$4.95	$4.95	$7.35	$7.35	$7.75
25 - 49	4.70	4.70	7.00	7.00	7.40
50 - 99	4.45	4.45	6.60	6.60	7.00
100 - 249	4.15	4.15	6.20	6.20	6.60
250 - 499	3.80	3.80	5.65	5.65	6.05
500 - 999	3.45	3.45	5.15	5.15	5.55
1,000 - up	Prices available on request				

NEW!!

SC-628P PULSATING



		QUANTITY	PRICE	FREQUENCY OF PULSE:
FREQUENCY	2.5 KC	1 to 24	$7.35	3 cps @ 6V DC
OPERATING VOLTAGE	6-28 V DC	25 - 49	7.00	5 cps @ 28V DC
CURRENT	3-14 MA	50 - 99	6.60	
SOUND INTENSITY	65-77 DB	100 - 249	6.20	
OPERATING TEMPERATURE	—40°F to 130F°	250 - 499	5.65	
VOLUME	4.0 CU. IN.	500 - 999	5.15	
WEIGHT	2 OZ.	1,000 - up	Prices available on request	

AVAILABILITY

In production. Prototype or evaluation quantities can be purchased at major electronic-parts distributors throughout the United States.

APPLICATIONS ASSISTANCE

Because Sonalert is versatile, it is suited to a variety of manufacturing uses. In Telephones, Instruments, Appliances, Protection, Communications, Detection, Computers, Medicine. To find out exactly how Sonalert can be integrated into your equipment, call or write the sales representative in your area.

SONALERT is a startling innovation in the audible signal-warning field. It is the only product of its kind that produces sound electronically. Not only is this unique new concept highly efficient — emitting a very discernible signal at minimum current — it also eliminates the problems inherent to conventional signals. There is no arcing, no RF noise, no wear on mechanical parts, no high-power consumption. Here, combined in a compact, lightweight low-cost device is the efficiency of a resonant system and the reliability of solid-state technology.

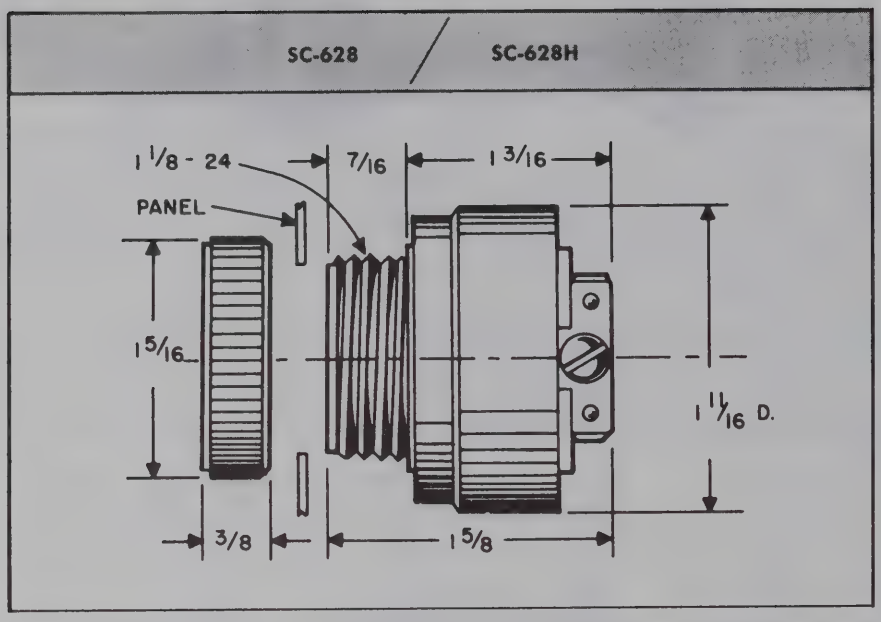
E-PAC

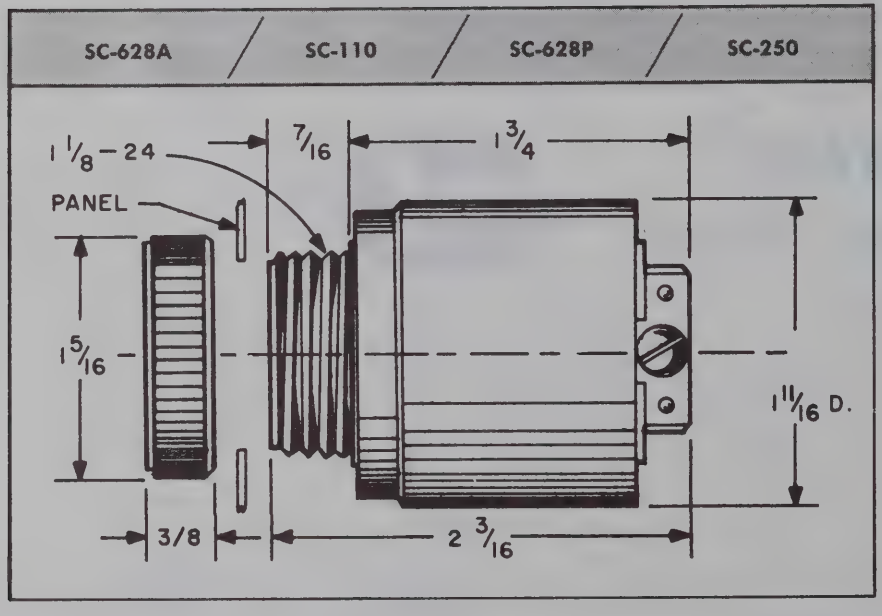
SONALERT IS A PRODUCT OF:
ELECTROPAC INC.
A subsidiary of Computer Control Company

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MECHANICAL

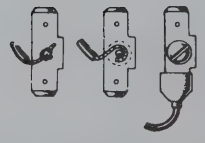




MOUNTING

The Sonalert can be mounted on any panel, bracket, or junction box with a material thickness up to 1/4" without counterboring. A 1-9/64" diameter minimum opening is recommended. To secure mounting, the knurled cap should be tightened against the panel.

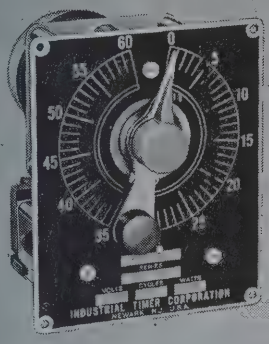
CONNECTIONS

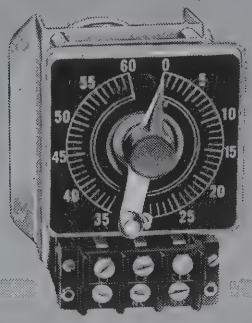


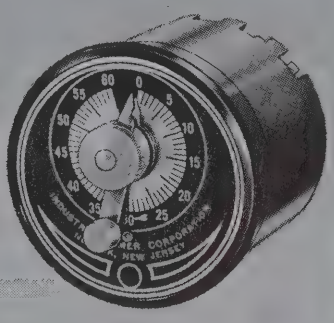
Terminal will accept 1/4" amp Faston or equivalent receptacle. Binding screw will accept AWG #14 wire or smaller, or may be removed to provide hole for solder connection, as shown.

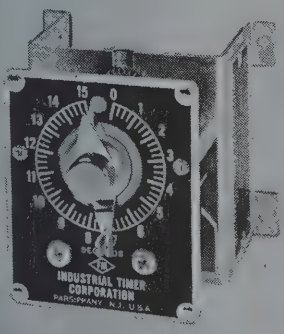
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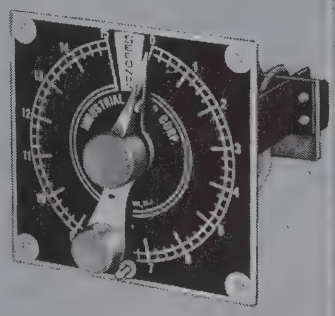
INDUSTRIAL TIMER CORPORATION

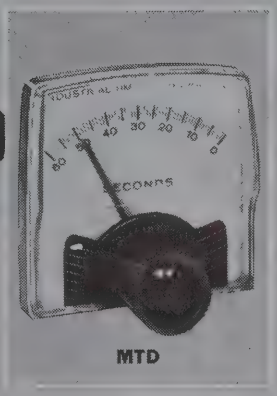

TDAF

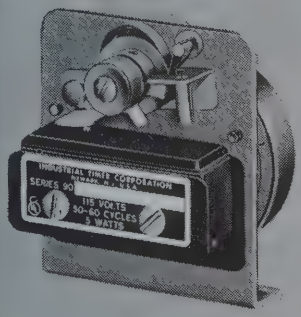

TDAB

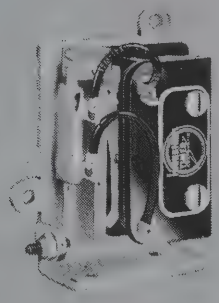

TD

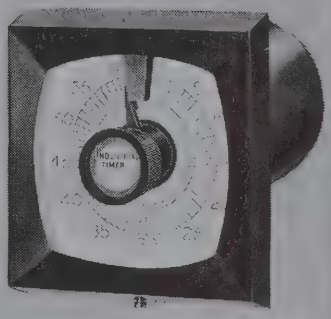

SF


"H"


MTD


90


TH


GTD

DELAY TIMERS

This type of timer introduces a predetermined time delay between the closing of a switch and the opening or closing of a load switch. The sequence is: The timer is started by a switch closure, the load switch remains in normal condition until commencement of time delay, at which time it is operated.

TDAF (BULLETIN #300) Time cycles from 1/60 second to 3 hours, instant reset, 10 amp contact rating, panel mounting, extremely accurate. **$43.00**

TDAB (BULLETIN #300) Time cycles from 1/60 second to 3 hours, instant reset, 10 amp contact rating, back mounted or available in housing, extremely accurate. **$43.00**

TD (BULLETIN #305) Time cycles from 1/10 second to 5 minutes, 10 amp contact rating, auto-reset, mounts through a round hole. **$30.50**

SF (BULLETIN #305) Time cycles from 1/10 second to 5 minutes, 10 amp contact rating, panel mounted, auto-reset. **$23.00**

"H" (BULLETIN #305) Time cycles from 1/10 second to 5 minutes, 10 amp contact rating, panel mounted, auto-reset. **$26.50**

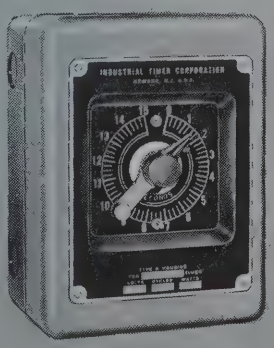
MTD (BULLETIN #304) Time cycles from 6 seconds to 3 hours. Automatic reset. 10 amp contact rating. Matches modern panel instruments. Plastic face. **$30.50**

90 (BULLETIN #305) Time cycles from 1/2 second to 90 seconds. 10 amp contact rating, auto-reset. **$17.00**

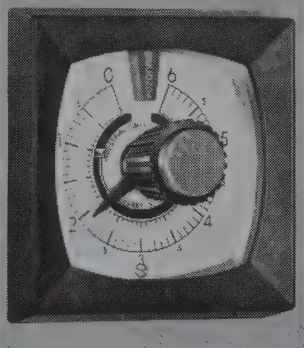
TH (BULLETIN #305) Thermal Time delay switch, snap action contact rated at 10 amps. Time cycles from 15 seconds to 2 minutes, temperature compensated, adjustable. **$8.50**

GTD (BULLETIN #302) Automatic reset, available in 11 models ranging in time cycles from 3 seconds to 3 hours. 10 amp isolated load contacts. Unit mounts through 3 inch hole in panel and features built-in self locking feature that eliminates mounting screws. A.C. voltages of 115 or 220. **$39.50**

PAB



PBM



P & M



INTERVAL TIMERS

An Interval Timer closes (or opens) a load switch at the beginning of a time cycle; at the end of the time interval the load circuit is returned to its original condition.

PAB (BULLETIN #400) Time Intervals from 1/60 second to 3 hours. 15 amp non-inductive. Instant automatic reset. Available with housing. Momentary starting. **$55.00**

PBM (BULLETIN #404) Time cycles from 1/10 seconds to 3 hours. 25 amp non-inductive. Auto-reset. Combination set-start pushbutton knob with interval progress dial indicator. **$19.75**

P & M (BULLETIN #400) "P" Series — 1/10 second to 5 minutes, remote momentary start, auto-reset, 15 amp load rating. **$33.00**

"M" Series—1 second to 1 minute, push button start, auto-reset, 10 amp contact rating. **$26.50**

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INDUSTRIAL TIMER CORPORATION

PROGRAMMING CAM TIMERS

A Recycling Timer opens and closes an electrical circuit in a continuous pre-set sequence.

TANDEM (BULLETIN #500) Interchangeable timing elements provide individual time cycles from 1/10 seconds to 3 hours. Elements operate in sequence. 15 amp load rating. **$142.50 complete**

CM (BULLETIN #200) Single switch rated at 10 amps. Adjustable cam provides 2% to 98% "ON"—"OFF" of any of 600 available time cycles. Each model has 50 available time cycles through use of interchangeable gear racks, cycles continuously. **$20.50**

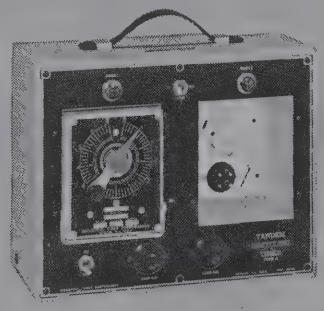
RC (BULLETIN #200) Similar to Series MC, but starts from momentary pulse, makes 1 revolution of cam shaft and stops. The timer recycles from a sustained start. Time cycles from 2/3 second to 72 hours are available, switch rating is 10 amps. **$30.50 to $198.50**

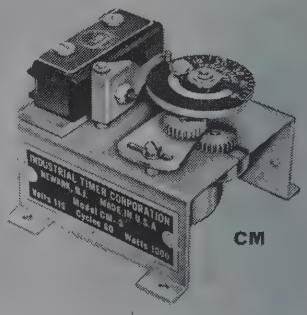
600 (BULLETIN #203) Simplified Recycling Cam Timer available with up to 7 switches from 15 seconds to 60 hours. **$17.00 to $53.00**

PC (BULLETIN #500) Opens and closes a 15 amp load switch continuously. Adjustable from 3% to 97% of time cycles from 15 seconds to 24 hours. Available in housing. **$31.00**

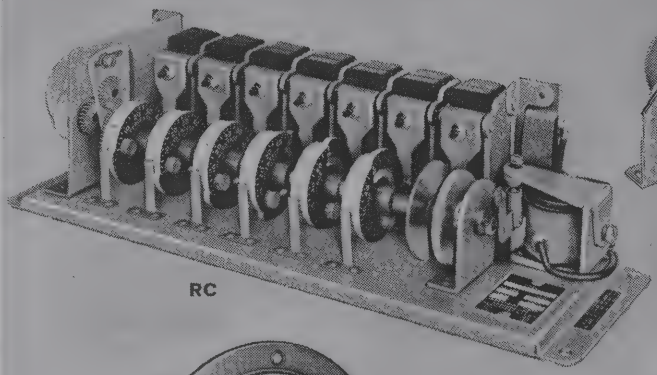
MC (BULLETIN #200, 201, 202) Available with up to 20 individual load circuits. Time cycles from 2/3 second to 72 hours. 10 amp load rating, available in Kit for prototype assembly, or with shaft extension for external drive.

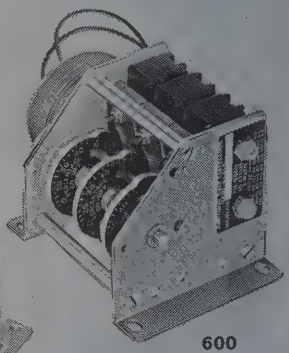
$35.50 for 2 sw. unit up to $191.50 for 20 load switches

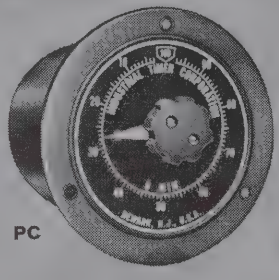

TANDEM

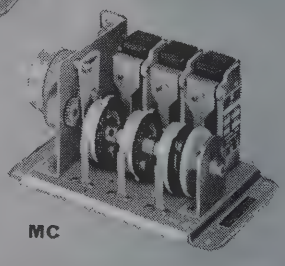


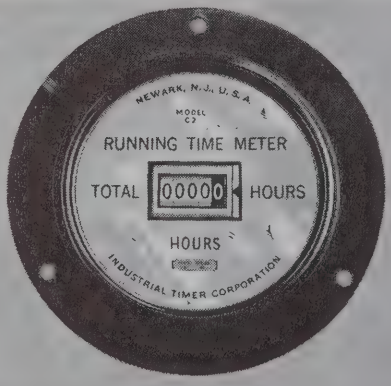
CM


RC

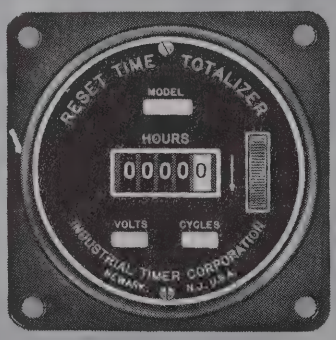

600


PC

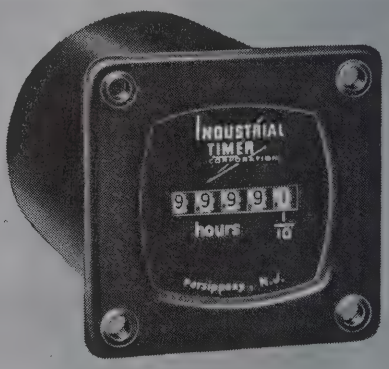

MC



C-2



C-5



C-8 D.C.

TIME MEASUREMENT DEVICES

The running Time Meters and Reset Time Totalizers are used to record the operating time of equipment requiring periodic maintenance.

C-2 (BULLETIN #700) The Series C-2 Running Time Meter is available in counts from 1/10 second to 1 hour. Total accumulation ranges are 10,000 seconds to 100,000 hours. **$20.50**

C-5 (BULLETIN #700) This is a cased type instrument, mounted in a black, baked-finish housing. With heavy steel mounting flange. Screw terminals on back. Model C-5 incorporates a special type of counter that permits resetting to zero at any time. Offered for 115 and 220 volts, 60, 50, and 25 cycles. **$42.50**

C-8 D.C. (BULLETIN #701) The C-8 is a compact Running Time Meter for use on equipment using D.C. voltages. Available for 6, 12, 24, 28 or 32 VDC. Mounts through round 2-3/16" hole in panel, secures with 4 screws. The C-8 accumulates up to 9999.9 hours with a minimum count of 1/10 hour. **$19.25**

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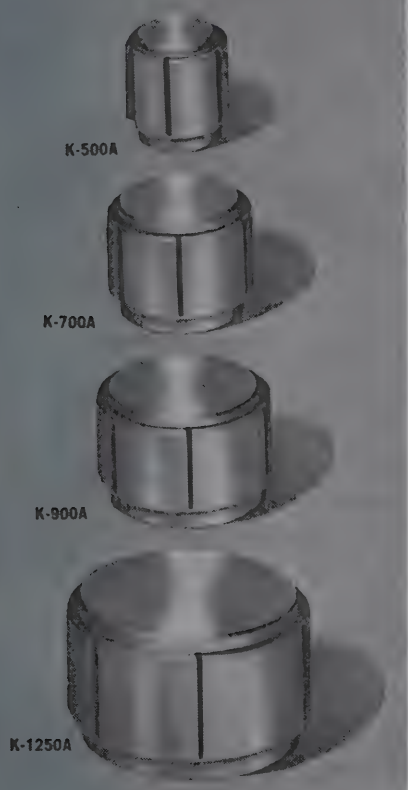
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UPGRADE YOUR EQUIPMENT WITH • NEW • MODERNIZED • DECORATIVE KNOBS OF FABRICATED ALUMINUM.

- ☆ *1-PIECE CONSTRUCTION*
- ☆ *SUPERIOR APPEARANCE*
- ☆ *MODERATELY PRICED*
- ☆ *EXPENSIVE STYLING*

STOCK KNOBS
Available off the shelf in production quantities

NATURAL ALUMINUM

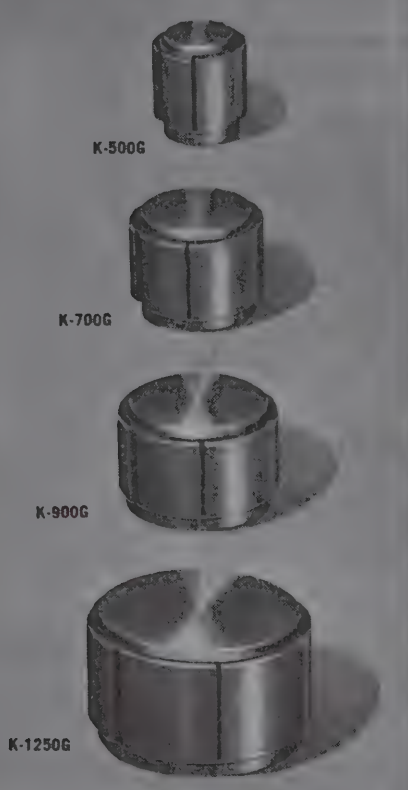


NATURAL ALUMINUM

MODEL	SIZE	SHAFT	POINTER
K-500A	.500	*⅛" or ¼"	Black
K-700A	.750	¼"	Black
K-900A	.937	¼"	Black
K-1250A	1.250	¼"	Black

*Specify

GOLD ANODIZED



GOLD ANODIZED

MODEL	SIZE	SHAFT	POINTER
K-500G	.500	*⅛" or ¼"	Red
K-700G	.750	¼"	Red
K-900G	.937	¼"	Red
K-1250G	1.250	¼"	Red

*Specify

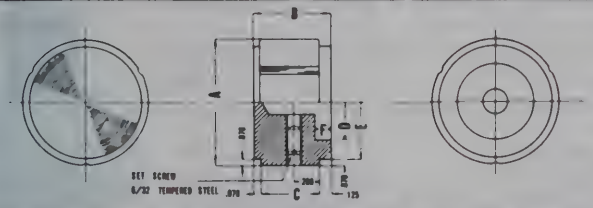
BLACK ANODIZED



BLACK ANODIZED

MODEL	SIZE	SHAFT	POINTER
K-500B	.500	*⅛" or ¼"	White
K-700B	.750	¼"	White
K-900B	.937	¼"	White
K-1250B	1.250	¼"	White

*Specify



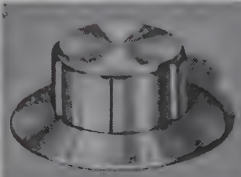
TOLERANCE ON MAJOR DIMENSIONS ± .010

DIMENSIONS

MODEL	A	B	C	D	E	F
K - 500	.500	.625	.435	.354	.433	.160
K - 700	.750	.625	.435	.512	.670	.160
K - 900	.937	.625	.435	.710	.855	.160
K -1250	1.250	.750	.560	.787	1.018	.160

WE WILL CUSTOM FABRICATE & ANODIZE KNOBS TO YOUR SPECIFICATIONS

Give full description for quotation



ABOVE KNOBS AVAILABLE SKIRTED ON SPECIAL ORDER

Quotations upon request

INDUSTRIAL NET PRICE SCHEDULE

MODEL	1-99	100-249	250-499	500-999
K-500	.45	.39	.37	.35
K-700	.49	.44	.41	.38
K-900	.55	.49	.47	.45
K-1250	.65	.59	.56	.53

Quantity prices are for each individual type.
Choice of stock colors at same prices.

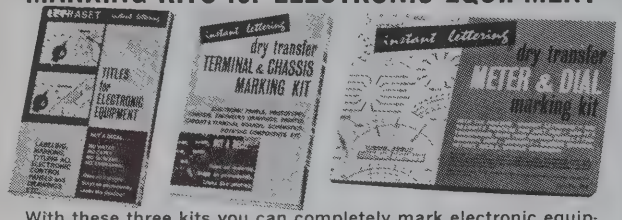
ALCOSWITCH

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MARKING KITS for ELECTRONIC EQUIPMENT



With these three kits you can completely mark electronic equipment from component parts to finished control panel — even especially calibrated two-color meter dials, tap switch markings, panel nomenclatures, circuit boards — at less cost and greater ease. Makes prototypes look like finished production equipment. Ideal for field changes.

TITLES FOR ELECTRONIC EQUIPMENT

A complete set of preprinted dry transfer titles for fast easy marking of electronic equipment, control panels, parts, etc. Includes 24 easy-to-handle 3" x 5" sheets containing multiples of hundreds of preset words researched to give up to 95% of all electronic panel markings; also alphabets and numerals.

No. 958 — COMPLETE SET IN BLACK $4.95
No. 959 — COMPLETE SET IN WHITE 4.95

Refill Sets—12 sheets

No. 960 — ALPHABETS ONLY IN BLACK $2.50
No. 961 — ALPHABETS ONLY IN WHITE 2.50
No. 962 — NUMERALS ONLY IN BLACK 2.50
No. 963 — NUMERALS ONLY IN WHITE 2.50

Refill Sets—4 sheets

No. 964A — ALPHABETS ONLY IN BLACK $1.00
No. 964N — NUMERALS ONLY IN BLACK 1.00
No. 965A — ALPHABETS ONLY IN WHITE 1.00
No. 965N — NUMERALS ONLY IN WHITE 1.00

TERMINAL & CHASSIS MARKING KIT

All the standard component identification letters used in marking electronic panels, prototypes, chassis, printed circuit and terminal boards, mechanical and electrical components, etc. The letters are arranged so that there are more of those most frequently used. Also included are sheets of consecutively arranged numerals. 24 sheets, 3" x 5".

No. 966 — COMPLETE SET IN BLACK $4.95
No. 967 — COMPLETE SET IN WHITE 4.95

METER & DIAL MARKING KIT

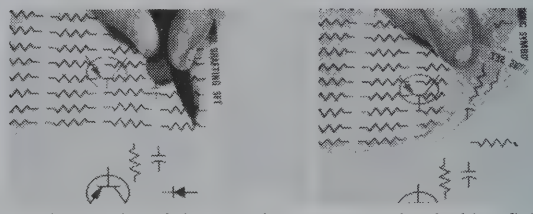
Contains dry transfer switch patterns, arcs, graduation lines, etc. (plus letters and numerals) for marking standard and special rotary tap switches, potentiometers, prototype and especially calibrated meter dials, etc. 12 sheets, 5" x 7". The sheets are in black, white and red for marking scales and switches in different colors to simplify the use of complex equipment.

No. 968 — METER & DIAL MARKING KIT $4.95
REFILL SHEETS — any sheet in this set can be ordered in sets of 4 of a number and color.

No. 968R — (Specify number and color) ..... Per Set — $2.00

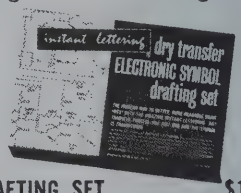
ELECTRONIC SYMBOL DRAFTING SET

... the fast new way to better more readable schematics and drawings!



Now the wonder of dry transfers comes to the drafting field. Just rub and sharp, uniform electronic drafting symbols are transferred to your schematics and drawings. INSTANT LETTERING dry transfer symbols are uniform and correct in every detail according to military and A.S.A. drafting standards. Completely opaque, reproduction quality. Easily erased yet will not come off in diazo machines. Faster than lettering guides or templates plus no chance of blots or smears. Letter and numeral sheets take the tedium out of labeling components. ALSO INCLUDED — a specially prepared 16-page booklet on drawing with dry transfer symbols.

The complete set contains 40 sheets, 5" x 7", of all the commonly used symbols plus letters and numerals (all in black) and the instruction booklet. Less frequently used symbols are easily made from elements in the set. This flexibility allows the draftsman to get the maximum use out of each sheet.



No. 970 — ELECTRONIC SYMBOL DRAFTING SET $15.95
REFILL SHEETS — any sheet in this set may be ordered in sets of 4 of a number.

No. 970R — (Specify number) ..... Per Set — $2.00

INTRODUCTORY ASSORTMENT

Contains everything you need to prepare schematics and drawings the new dry transfer way. Contains: the complete Electronic Symbol Drafting Set, Koh-I-Noor Rapidograph Pen No. 2, 1 oz. bottle of Rapidograph Ink, burnishing tool and the 16-page instruction booklet.

No. 970-2 — INTRODUCTORY ASSORTMENT $18.95

DATAKOAT — Clear Protective Coating

DATAKOAT is specially designed for INSTANT LETTERING Products. It is water-clear, dries quickly and protects against abrasion and weathering. DATAKOAT is particularly effective on non-porous surfaces.

DATAKOAT Protective Coating Kit contains a 1 oz. bottle of Coating and a 1 oz. bottle of Thinner.

No. 04176 ..... $1.00

DATAKOAT Spray Coating is the handy way to spray on DATAKOAT. 16 oz. spray can.

No. 04177 ..... $2.95

DATAKOAT Mat Protective Coating leaves your surface with a non-reflecting finish. 16 oz. spray can.

No. 04178 ..... $2.95



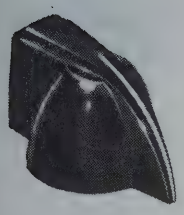
ASK YOUR DISTRIBUTOR FOR A FREE SAMPLE PLUS COMPLETE INFORMATION ON THE ENTIRE LINE OF INSTANT LETTERING DRY TRANSFER PRODUCTS. Standard INSTANT LETTERING sheets are available in over 50 type styles, in sizes ranging from 8 point to 3 inches and in colors that include black, white, red, yellow, blue and gold. Special sheets can also be made to meet your specific requirements.

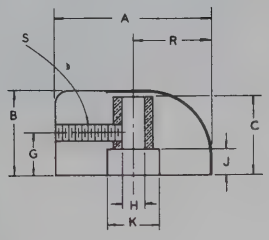
THE DATAK CORPORATION

© U.C.P., Inc.

POINTER & BAR KNOBS

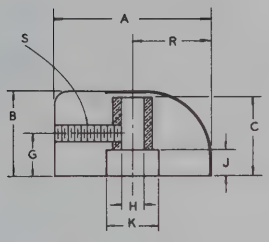
POINTER & BAR KNOBS





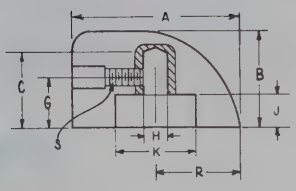
Part No. SFX	SPECIFICATIONS DIMENSIONS (INCHES)							
	A	B	C	G	H	J	K	R
S-292 – 1L	1-1/4	5/8	1/2	5/16	1/4	3/32	5/8	5/8
S-292 – 3L	1-1/4	5/8	1/2	5/16	1/4	3/32	5/8	5/8





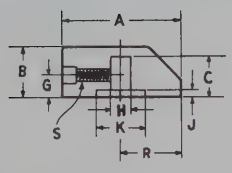
Part No. SFX	SPECIFICATIONS DIMENSIONS (INCHES)							
	A	B	C	G	H	J	K	R
S-293 – 1L	2-1/4	5/8	1/2	1/4	1/4	3/32	5/8	1-1/8
S-293 – 3L	2-1/4	5/8	1/2	1/4	1/4	3/32	5/8	1-1/8





Part No. SFX	SPECIFICATIONS DIMENSIONS (INCHES)							
	A	B	C	G	H	J	K	R
S-246 – 1L	1-1/2	7/8	23/32	1/2	1/4	5/16	23/32	3/4
S-246 – 3L	1-1/2	7/8	23/32	1/2	1/4	5/16	23/32	3/4





Part No. SFX	SPECIFICATIONS DIMENSIONS (INCHES)							
	A	B	C	G	H	J	K	R
S-657 – 1L	1-1/8	5/8	1/2	1/4	1/4	3/32	11/16	9/16
S-657 – 3L	1-1/8	5/8	1/2	1/4	1/4	3/32	11/16	9/16

OUR EXCLUSIVE WARRANTY—
all standard parts and knobs are warranted for the life of the product on which they are used.

key to suffixes

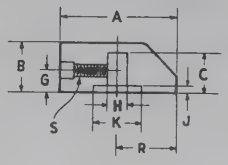
—1 Molded hole to fit standard ¼" shaft, with one setscrew.

—3 Flush type brass insert to fit standard ¼" shaft, with one setscrew.

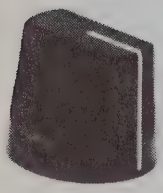
POINTER & BAR KNOBS

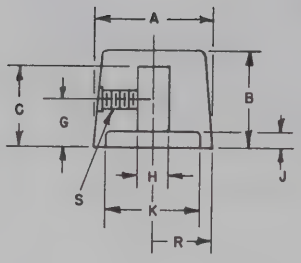
POINTER & BAR KNOBS





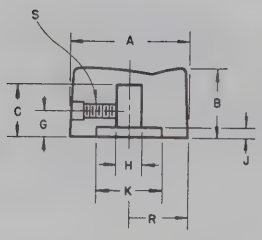
Part No. SFX	SPECIFICATIONS DIMENSIONS (INCHES)							
	A	B	C	G	H	J	K	R
S-626 - 1L	1-1/2	5/8	1/2	9/32	1/4	3/32	5/8	3/4



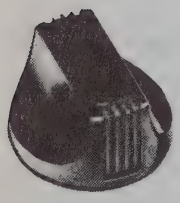


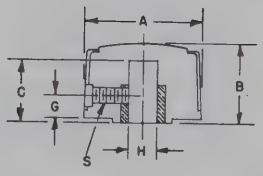
Part No. SFX	SPECIFICATIONS DIMENSIONS (INCHES)							
	A	B	C	G	H	J	K	R
S-400 - 1L	15/16	3/4	5/8	3/8	1/4	1/8	3/4	15/32





Part No. SFX	SPECIFICATIONS DIMENSIONS (INCHES)							
	A	B	C	G	H	J	K	R
S-658 - 1L	1-1/8	11/16	1/2	1/4	1/4	3/32	5/8	9/16





Part No. SFX	SPECIFICATIONS DIMENSIONS (INCHES)							
	A	B	C	G	H	J	K	R
S-453 - 1	1	21/32	–	–	1/4	–	–	–
S-453 - 3	1	21/32	–	–	1/4	–	–	–

OUR EXCLUSIVE WARRANTY—
all standard parts and knobs are warranted for the life of the product on which they are used.

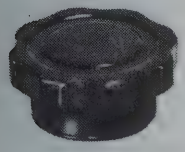
key to suffixes

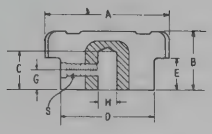
—1 Molded hole to fit standard ¼" shaft, with one setscrew.

—3 Flush type brass insert to fit standard ¼" shaft, with one setscrew.

SERIES "300"
HEAVY DUTY INSTRUMENT KNOBS

SERIES 300
HEAVY DUTY INSTRUMENT KNOB
without skirt

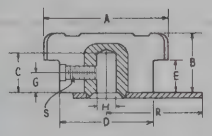




Part No. SFX	SPECIFICATIONS DIMENSIONS (INCHES)							
	A	B	C	D	G	H	J	S
S-319 – 3	1	5/8	7/16	3/4	7/32	1/4	–	#8-32
S-308 – 3	1-1/8	5/8	15/32	13/16	7/32	1/4	–	#8-32
S-385 – 3	1-3/8	11/16	15/32	1-1/16	1/4	1/4	–	#10-32
S-309 – 3	1-5/8	3/4	15/32	1-3/16	1/4	1/4	–	#10-32
S-310 – 3	2-3/8	7/8	15/32	1-3/4	1/4	1/4	–	#10-32

SERIES 300
HEAVY DUTY INSTRUMENT KNOB
with pointer, without skirt

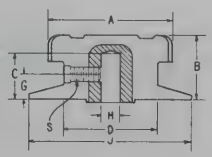




Part No. SFX	SPECIFICATIONS DIMENSIONS (INCHES)							
	A	B	C	D	G	H	R	S
S-319 – 3P	1	5/8	7/16	3/4	7/32	1/4	3/4	#8-32
S-308 – 3P	1-1/8	5/8	15/32	13/16	7/32	1/4	3/4	#8-32
S-385 – 3P	1-3/8	11/16	15/32	1-1/16	1/4	1/4	7/8	#10-32
S-309 – 3P	1-5/8	3/4	15/32	1-3/16	1/4	1/4	1-1/16	#10-32
S-310 – 3P	2-3/8	7/8	15/32	1-3/4	1/4	1/4	1-1/4	#10-32

SERIES 300
HEAVY DUTY INSTRUMENT KNOB
with skirt and indicator line





Part No. SFX	SPECIFICATIONS DIMENSIONS (INCHES)							
	A	B	C	D	G	H	J	S
S-380 – 3	1-1/8	13/16	19/32	13/16	3/8	1/4	1-1/2	#10-32
S-381 – 70	1-3/8	27/32	19/32	7/8	3/8	1/4	1-3/4	#10-32
S-311 – 3	1-5/8	7/8	21/32	1-3/16	3/8	1/4	2-1/16	#10-32
S-312 – 70	2-3/8	15/16	19/32	1-7/8	3/8	1/4	3	#10-32

AVAILABLE AS MADE TO SPECIFICATION MS-91531 AND PROCUREMENT SPECIFICATION MIL-K-3926

OUR EXCLUSIVE WARRANTY—
all standard parts and knobs are warranted for the life of the product on which they are used.

key to suffixes

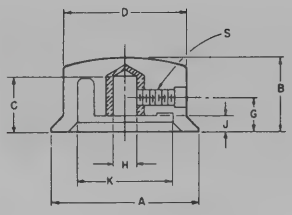
—3 Flush type brass insert to fit standard ¼" shaft, with one setscrew.

—70 Heavy duty flush type brass insert to fit standard ¼" shaft, with one setscrew.

SERIES "600" INSTRUMENT KNOBS

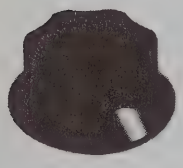
SERIES 600
INSTRUMENT KNOB
with skirt and indicator line

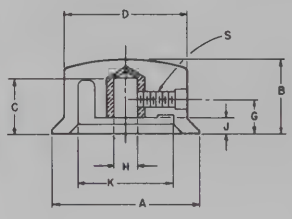




Part No. SFX	SPECIFICATIONS DIMENSIONS (INCHES)								
	A	B	C	D	G	H	J	K	S
S-645 - 1L	3/4	7/16	3/8	5/8	7/32	1/4	1/16	9/16	#6-32
S-645 - 3L	3/4	7/16	3/8	5/8	7/32	1/4	1/16	9/16	#6-32
S-645 - 5L	3/4	7/16	3/8	5/8	7/32	1/8	1/16	9/16	#6-32
S-645 - 21L	3/4	7/16	5/16	5/8	7/32	1/8	1/16	9/16	#6-32
S-647 - 1L	1	19/32	1/2	13/16	9/32	1/4	3/32	11/16	#8-32
S-647 - 3L	1	19/32	1/2	13/16	9/32	1/4	3/32	11/16	#8-32
S-648 - 1L	1-1/4	21/32	1/2	1	9/32	1/4	3/32	11/16	#8-32
S-648 - 3L	1-1/4	21/32	1/2	1	9/32	1/4	3/32	11/16	#8-32
S-653 - 1L	1-1/2	3/4	5/8	1-1/4	11/32	1/4	5/32	31/32	#8-32
S-653 - 3L	1-1/2	3/4	9/16	1-1/4	11/32	1/4	5/32	31/32	#8-32
S-649 - 1L	2	7/8	11/16	1-5/8	13/32	1/4	3/32	13/16	#8-32
S-649 - 3L	2	7/8	21/32	1-5/8	13/32	1/4	3/32	13/16	#8-32

SERIES 600
INSTRUMENT KNOB
with skirt, without indicator line

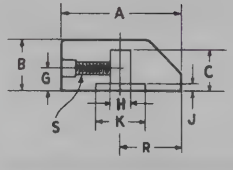




Part No. SFX	SPECIFICATIONS DIMENSIONS (INCHES)								
	A	B	C	D	G	H	J	K	S
S-676 - 1	3/4	7/16	3/8	5/8	7/32	1/4	1/16	9/16	#6-32
S-676 - 3	3/4	7/16	3/8	5/8	7/32	1/4	1/16	9/16	#6-32
S-676 - 5	3/4	7/16	3/8	5/8	7/32	1/8	1/16	9/16	#6-32
S-676 - 21	3/4	7/16	5/16	5/8	7/32	1/8	1/16	9/16	#6-32
S-677 - 1	1	19/32	1/2	13/16	9/32	1/4	3/32	11/16	#8-32
S-677 - 3	1	19/32	1/2	13/16	9/32	1/4	3/32	11/16	#8-32
S-678 - 1	1-1/4	21/32	1/2	1	9/32	1/4	3/32	11/16	#8-32
S-678 - 3	1-1/4	21/32	1/2	1	9/32	1/4	3/32	11/16	#8-32
S-642 - 1	1-1/2	3/4	5/8	1-1/4	11/32	1/4	5/32	31/32	#8-32
S-642 - 3	1-1/2	3/4	9/16	1-1/4	11/32	1/4	5/32	31/32	#8-32
S-654 - 1	2	7/8	11/16	1-5/8	13/32	1/4	3/32	13/16	#8-32
S-654 - 3	2	7/8	21/32	1-5/8	13/32	1/4	3/32	13/16	#8-32

SERIES 600
INSTRUMENT KNOB
with pointer





Part No. SFX	SPECIFICATIONS DIMENSIONS (INCHES)						
	A	B	C	G	J	K	R
S-657 - 1L	1-1/8	5/8	1/2	1/4	3/32	11/16	9/16
S-657 - 3L	1-1/8	5/8	1/2	1/4	3/32	11/16	9/16

OUR EXCLUSIVE WARRANTY—
all standard parts and knobs are warranted for the life of the product on which they are used.

key to suffixes

—1 Molded hole to fit standard ¼" shaft, with one setscrew.

—3 Flush type brass insert to fit standard ¼" shaft, with one setscrew.

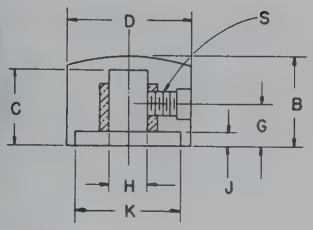
—5 Flush type brass insert to fit standard ⅛" shaft, with one setscrew.

—21 Molded hole to fit standard ⅛" shaft, with one setscrew.

SERIES "700" INSTRUMENT KNOBS

SERIES 700
INSTRUMENT KNOB
with indicator line

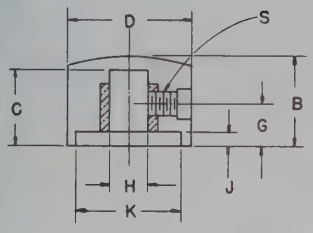




Part No. SFX	SPECIFICATIONS DIMENSIONS (INCHES)								
	A	B	C	D	G	H	J	K	S
S-745 -1L	—	7/16	3/8	5/8	7/32	1/4	1/16	9/16	#6-32
S-745 -3L	—	7/16	3/8	5/8	7/32	1/4	1/16	9/16	#6-32
S-745 -5L	—	7/16	3/8	5/8	7/32	1/8	1/16	9/16	#6-32
S-745 -21L	—	7/16	5/16	5/8	7/32	1/8	1/16	9/16	#6-32
S-747 -1L	—	19/32	1/2	13/16	9/32	1/4	3/32	11/16	#8-32
S-747 -3L	—	19/32	1/2	13/16	9/32	1/4	3/32	11/16	#8-32
S-748 -1L	—	21/32	1/2	1	9/32	1/4	3/32	11/16	#8-32
S-748 -3L	—	21/32	1/2	1	9/32	1/4	3/32	11/16	#8-32
S-753 -1L	—	3/4	5/8	1-1/4	11/32	1/4	5/32	31/32	#8-32
S-753 -3L	—	3/4	9/16	1-1/4	11/32	1/4	5/32	31/32	#8-32
S-749 -1L	—	7/8	11/16	1-5/8	13/32	1/4	3/32	13/16	#8-32
S-749 -3L	—	7/8	21/32	1-5/8	13/32	1/4	3/32	13/16	#8-32

SERIES 700
INSTRUMENT KNOB
without indicator line





Part No. SFX	SPECIFICATIONS DIMENSIONS (INCHES)								
	A	B	C	D	G	H	J	K	S
S-776 -1	—	7/16	3/8	5/8	7/32	1/4	1/16	9/16	#6-32
S-776 -3	—	7/16	3/8	5/8	7/32	1/4	1/16	9/16	#6-32
S-776 -5	—	7/16	3/8	5/8	7/32	1/8	1/16	9/16	#6-32
S-776 -21	—	7/16	5/16	5/8	7/32	1/8	1/16	9/16	#6-32
S-777 -1	—	19/32	1/2	13/16	9/32	1/4	3/32	11/16	#8-32
S-777 -3	—	19/32	1/2	13/16	9/32	1/4	3/32	11/16	#8-32
S-778 -1	—	21/32	1/2	1	9/32	1/4	3/32	11/16	#8-32
S-778 -3	—	21/32	1/2	1	9/32	1/4	3/32	11/16	#8-32
S-742 -1	—	3/4	5/8	1-1/4	11/32	1/4	5/32	31/32	#8-32
S-742 -3	—	3/4	9/16	1-1/4	11/32	1/4	5/32	31/32	#8-32
S-754 -1	—	7/8	11/16	1-5/8	13/32	1/4	3/32	13/16	#8-32
S-754 -3	—	7/8	21/32	1-5/8	13/32	1/4	3/32	13/16	#8-32

OUR EXCLUSIVE WARRANTY—
all standard parts and knobs are warranted for the life of the product on which they are used.

key to suffixes

—1 Molded hole to fit standard ¼" shaft, with one setscrew.

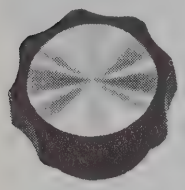
—3 Flush type brass insert to fit standard ¼" shaft, with one setscrew.

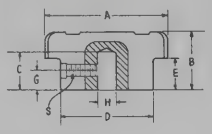
—5 Flush type brass insert to fit standard ⅛" shaft, with one setscrew.

—21 Molded hole to fit standard ⅛" shaft, with one setscrew.

SERIES "1300"
HEAVY DUTY INSTRUMENT KNOBS

SERIES 1300
HEAVY DUTY INSTRUMENT KNOB
without skirt, with decorative spun aluminum inlay

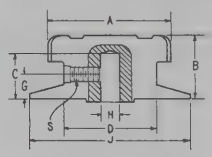




Part No. SFX	SPECIFICATIONS DIMENSIONS (INCHES)							
	A	B	C	D	G	H	J	S
S-1319 – 3	1	5/8	7/16	3/4	7/32	1/4	–	#8-32
S-1308 – 3	1-1/8	5/8	15/32	13/16	7/32	1/4	–	#8-32
S-1385 – 3	1-3/8	11/16	15/32	1-1/16	1/4	1/4	–	#10-32
S-1309 – 3	1-5/8	3/4	15/32	1-3/16	1/4	1/4	–	#10-32
S-1310 – 3	2-3/8	7/8	15/32	1-3/4	1/4	1/4	–	#10-32

SERIES 1300
HEAVY DUTY INSTRUMENT KNOB
with skirt, indicator line and decorative spun aluminum inlay





Part No. SFX	SPECIFICATIONS DIMENSIONS (INCHES)							
	A	B	C	D	G	H	J	S
S-1380 – 3	1-1/8	13/16	19/32	13/16	3/8	1/4	1-1/2	#10-32
S-1381 – 70	1-3/8	27/32	19/32	7/8	3/8	1/4	1-3/4	#10-32
S-1311 – 3	1-5/8	7/8	21/32	1-3/16	3/8	1/4	2-1/16	#10-32
S-1312 – 70	2-3/8	15/16	19/32	1-7/8	3/8	1/4	3	#10-32

OUR EXCLUSIVE WARRANTY—
all standard parts and knobs are warranted for the life of the product on which they are used.

key to suffixes

—3 Flush type brass insert to fit standard ¼" shaft, with one setscrew.

—70 Heavy duty flush type brass insert to fit standard ¼" shaft, with one setscrew.

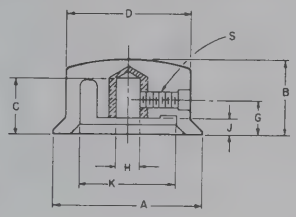
KURZ-KASCH, INC.

KK6

SERIES "1600" INSTRUMENT KNOBS

SERIES 1600
INSTRUMENT KNOB
with skirt, decorative spun aluminum inlay and indicator line

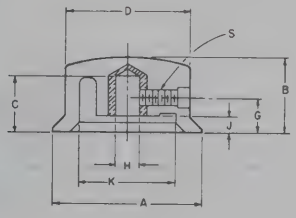




Part No. SFX	SPECIFICATIONS DIMENSIONS (INCHES)								
	A	B	C	D	G	H	J	K	S
S-1645 - 1L	3/4	7/16	3/8	5/8	7/32	1/4	1/16	9/16	#6-32
S-1645 - 3L	3/4	7/16	3/8	5/8	7/32	1/4	1/16	9/16	#6-32
S-1645 - 5L	3/4	7/16	3/8	5/8	7/32	1/8	1/16	9/16	#6-32
S-1645 - 21L	3/4	7/16	5/16	5/8	7/32	1/8	1/16	9/16	#6-32
S-1647 - 1L	1	19/32	1/2	13/16	9/32	1/4	3/32	11/16	#8-32
S-1647 - 3L	1	19/32	1/2	13/16	9/32	1/4	3/32	11/16	#8-32
S-1648 - 1L	1-1/4	21/32	1/2	1	9/32	1/4	3/32	11/16	#8-32
S-1648 - 3L	1-1/4	21/32	1/2	1	9/32	1/4	3/32	11/16	#8-32
S-1653 - 1L	1-1/2	3/4	5/8	1-1/4	11/32	1/4	5/32	31/32	#8-32
S-1653 - 3L	1-1/2	3/4	9/16	1-1/4	11/32	1/4	5/32	31/32	#8-32
S-1649 - 1L	2	7/8	11/16	1-5/8	13/32	1/4	3/32	13/16	#8-32
S-1649 - 3L	2	7/8	21/32	1-5/8	13/32	1/4	3/32	13/16	#8-32

SERIES 1600
INSTRUMENT KNOB
with skirt, and decorative spun aluminum inlay (Does not include indicator line)

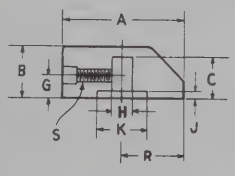




Part No. SFX	SPECIFICATIONS DIMENSIONS (INCHES)								
	A	B	C	D	G	H	J	K	S
S-1676 - 1	3/4	7/16	3/8	5/8	7/32	1/4	1/16	9/16	#6-32
S-1676 - 3	3/4	7/16	3/8	5/8	7/32	1/4	1/16	9/16	#6-32
S-1676 - 5	3/4	7/16	3/8	5/8	7/32	1/8	1/16	9/16	#6-32
S-1676 - 21	3/4	7/16	5/16	5/8	7/32	1/8	1/16	9/16	#6-32
S-1677 - 1	1	19/32	1/2	13/16	9/32	1/4	3/32	11/16	#8-32
S-1677 - 3	1	19/32	1/2	13/16	9/32	1/4	3/32	11/16	#8-32
S-1678 - 1	1-1/4	21/32	1/2	1	9/32	1/4	3/32	11/16	#8-32
S-1678 - 3	1-1/4	21/32	1/2	1	9/32	1/4	3/32	11/16	#8-32
S-1642 - 1	1-1/2	3/4	5/8	1-1/4	11/32	1/4	5/32	31/32	#8-32
S-1642 - 3	1-1/2	3/4	9/16	1-1/4	11/32	1/4	5/32	31/32	#8-32
S-1654 - 1	2	7/8	11/16	1-5/8	13/32	1/4	3/32	13/16	#8-32
S-1654 - 3	2	7/8	21/32	1-5/8	13/32	1/4	3/32	13/16	#8-32

SERIES 1600
INSTRUMENT KNOB
with pointer and decorative spun aluminum inlay





Part No. SFX	SPECIFICATIONS DIMENSIONS (INCHES)						
	A	B	C	G	J	K	R
S-1657 - 1L	1-1/8	5/8	1/2	1/4	3/32	11/16	9/16
S-1657 - 3L	1-1/8	5/8	1/2	1/4	3/32	11/16	9/16

OUR EXCLUSIVE WARRANTY—
all standard parts and knobs are warranted for the life of the product on which they are used.

key to suffixes

—1 Molded hole to fit standard 1/4" shaft, with one setscrew.

—3 Flush type brass insert to fit standard 1/4" shaft, with one setscrew.

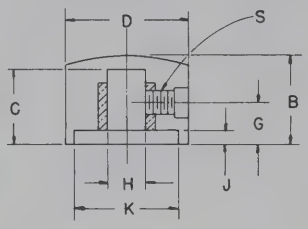
—5 Flush type brass insert to fit standard 1/8" shaft, with one setscrew.

—21 Molded hole to fit standard 1/8" shaft, with one setscrew.

SERIES "1700" INSTRUMENT KNOBS

SERIES 1700
INSTRUMENT KNOB
with indicator line and decorative spun aluminum inlay

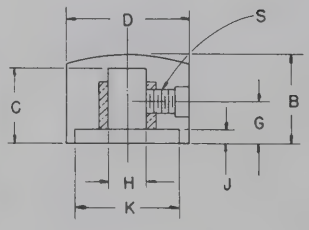




Part No. SFX	SPECIFICATIONS								
	DIMENSIONS (INCHES)								
	A	B	C	D	G	H	J	K	S
S-1745 - 1L	—	7/16	3/8	5/8	7/32	1/4	1/16	9/16	#6-32
S-1745 - 3L	—	7/16	3/8	5/8	7/32	1/4	1/16	9/16	#6-32
S-1745 - 5L	—	7/16	3/8	5/8	7/32	1/8	1/16	9/16	#6-32
S-1745 - 21L	—	7/16	5/16	5/8	7/32	1/8	1/16	9/16	#6-32
S-1747 - 1L	—	19/32	1/2	13/16	9/32	1/4	3/32	11/16	#8-32
S-1747 - 3L	—	19/32	1/2	13/16	9/32	1/4	3/32	11/16	#8-32
S-1748 - 1L	—	21/32	1/2	1	9/32	1/4	3/32	11/16	#8-32
S-1748 - 3L	—	21/32	1/2	1	9/32	1/4	3/32	11/16	#8-32
S-1753 - 1L	—	3/4	5/8	1-1/4	11/32	1/4	5/32	31/32	#8-32
S-1753 - 3L	—	3/4	9/16	1-1/4	11/32	1/4	5/32	31/32	#8-32
S-1749 - 1L	—	7/8	11/16	1-5/8	13/32	1/4	3/32	13/16	#8-32
S-1749 - 3L	—	7/8	21/32	1-5/8	13/32	1/4	3/32	13/16	#8-32

SERIES 1700
INSTRUMENT KNOB
with decorative spun aluminum inlay, without indicator line





Part No. SFX	SPECIFICATIONS								
	DIMENSIONS (INCHES)								
	A	B	C	D	G	H	J	K	S
S-1776 - 1	—	7/16	3/8	5/8	7/32	1/4	1/16	9/16	#6-32
S-1776 - 3	—	7/16	3/8	5/8	7/32	1/4	1/16	9/16	#6-32
S-1776 - 5	—	7/16	3/8	5/8	7/32	1/8	1/16	9/16	#6-32
S-1776 - 21	—	7/16	5/16	5/8	7/32	1/8	1/16	9/16	#6-32
S-1777 - 1	—	19/32	1/2	13/16	9/32	1/4	3/32	11/16	#8-32
S-1777 - 3	—	19/32	1/2	13/16	9/32	1/4	3/32	11/16	#8-32
S-1778 - 1	—	21/32	1/2	1	9/32	1/4	3/32	11/16	#8-32
S-1778 - 3	—	21/32	1/2	1	9/32	1/4	3/32	11/16	#8-32
S-1742 - 1	—	3/4	5/8	1-1/4	11/32	1/4	5/32	31/32	#8-32
S-1742 - 3	—	3/4	9/16	1-1/4	11/32	1/4	5/32	31/32	#8-32
S-1754 - 1	—	7/8	11/16	1-5/8	13/32	1/4	3/32	13/16	#8-32
S-1754 - 3	—	7/8	21/32	1-5/8	13/32	1/4	3/32	13/16	#8-32

OUR EXCLUSIVE WARRANTY—
all standard parts and knobs are warranted for the life of the product on which they are used.

key to suffixes

—1 Molded hole to fit standard ¼" shaft, with one setscrew.

—3 Flush type brass insert to fit standard ¼" shaft, with one setscrew.

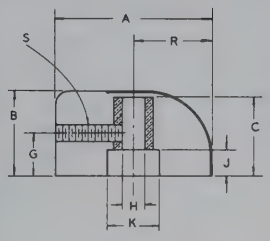
—5 Flush type brass insert to fit standard ⅛" shaft, with one setscrew.

—21 Molded hole to fit standard ⅛" shaft, with one setscrew.

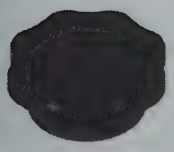
MILITARY KNOBS

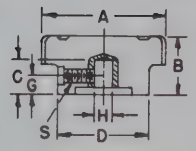
MILITARY KNOBS





Mil. No.	SPECIFICATIONS DIMENSIONS (INCHES)								
	A	B	C	G	H	J	K	R	S
AN-3219-1	1-1/4	5/8	1/2	9/32	1/4	3/32	5/8	5/8	1-#8-32
AN-3220-1	1-1/2	7/8	23/32	1/2	1/4	5/16	23/32	3/4	2-#8-32
AN-3220-3	1-1/2	7/8	23/32	7/16	1/4	5/16	23/32	3/4	1-#8-32

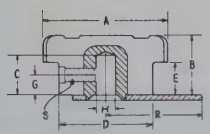




Mil. No.	SPECIFICATIONS DIMENSIONS (INCHES)								
	A	B	C	D	E	G	H	J	S
MS-91531-1N1B	3/4	1/2	3/8	5/8	1/4	5/32	1/8	—	2-#4-40
MS-91531-1N2B	3/4	1/2	3/8	5/8	1/4	5/32	1/4	—	2-#4-40
MS-91531-2N2B	1-1/8	5/8	15/32	13/16	11/32	7/32	1/4	—	2-#8-32
MS-91531-3N2B	1-5/8	3/4	1/2	1-3/16	13/32	1/4	1/4	—	2-#8-32
MS-91531-4N2B	2-3/8	7/8	43/64	1-3/4	7/16	1/4	1/4	—	2-#8-32

Made to meet Military specifications MIL-K-3926 and MIL-M-14F(CFG)





Mil. No.	SPECIFICATIONS DIMENSIONS (INCHES)								
	A	B	C	D	E	G	H	R	S
MS-91531-1P1B	3/4	1/2	3/8	5/8	1/4	5/32	1/8	11/16	2-#4-40
MS-91531-1P2B	3/4	1/2	3/8	5/8	1/4	5/32	1/4	11/16	2-#4-40
MS-91531-2P2B	1-1/8	5/8	7/16	13/16	11/32	7/32	1/4	1-1/32	2-#8-32
MS-91531-3P2B	1-5/8	3/4	1/2	1-3/16	13/32	1/4	1/4	1-9/32	2-#8-32
MS-91531-4P2B	2-3/8	7/8	43/64	1-3/4	7/16	1/4	1/4	1-11/16	2-#8-32

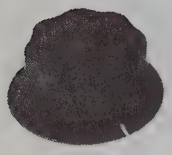
Made to meet Military specifications MIL-K-3926 and MIL-M-14F(CFG)

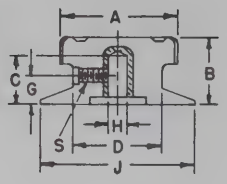
Supplied standard with brass insert

OUR EXCLUSIVE WARRANTY—
all standard parts and knobs are warranted for the life of the product on which they are used.

MILITARY KNOBS

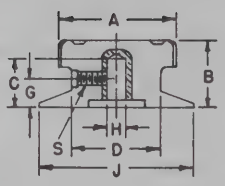
MILITARY KNOBS





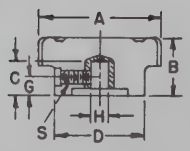
Mil. No.	SPECIFICATIONS DIMENSIONS (INCHES)								
	A	B	C	D	E	G	H	J	S
MS-91531-1F1B	3/4	23/32	3/8	5/8	1/4	5/32	1/8	1-1/6	2-#4-40
MS-91531-1F2B	3/4	23/32	3/8	5/8	1/4	5/32	1/4	1-1/6	2-#4-40
MS-91531-2F2B	1-1/8	13/16	41/64	13/16	—	3/8	1/4	1-1/2	2-#8-32
MS-91531-3F2B	1-5/8	7/8	41/64	1-3/16	—	3/8	1/4	2-1/16	2-#8-32
MS-91531-4F2B	2-3/8	15/16	41/64	1-7/8	—	3/8	1/4	3	2-#8-32



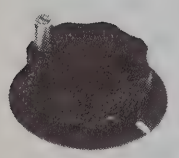


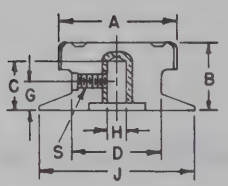
Mil. No.	SPECIFICATIONS DIMENSIONS (INCHES)								
	A	B	C	D	E	G	H	J	S
MS-91531-2O2B	1-1/8	13/16	41/64	13/16	—	3/8	1/4	1-1/2	2-#8-32
MS-91531-3O2B	1-5/8	7/8	41/64	1-3/16	—	3/8	1/4	2-1/16	2-#8-32
MS-91531-4O2B	2-3/8	15/16	41/64	1-7/8	—	3/8	1/4	3	2-#8-32





Mil. No.	SPECIFICATIONS DIMENSIONS (INCHES)								
	A	B	C	D	E	G	H	J	S
MS-91531-3B2B	1-5/8	3/4	1/2	1-3/16	13/32	1/4	1/4	—	2-#8-32
MS-91531-4B2B	2-3/8	7/8	43/64	1-3/4	7/16	1/4	1/4	—	2-#8-32





Mil. No.	SPECIFICATIONS DIMENSIONS (INCHES)								
	A	B	C	D	E	G	H	J	S
MS-91531-4V2B	2-3/8	15/16	41/64	1-7/8	—	3/8	1/4	3	2-#8-32

Made to meet Military specifications MIL-K-3926 and MIL-M-14F(CFG)

Supplied standard with brass insert

OUR EXCLUSIVE WARRANTY—
all standard parts and knobs are warranted for the life of the product on which they are used.

Suggested Price Schedule

3-1-65

(PRICE PER M)

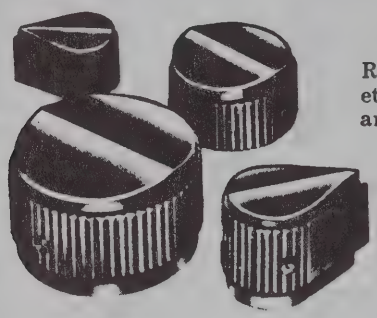
Part #	Color	1-99	100-499	500-999
S-17-1L	Blk	161.20	120.90	112.84
S-17-64L	Blk	228.30	171.23	160.01
S-18-1L	Blk	192.50	144.38	134.75
S-18-3L	Blk	259.50	194.13	181.65
S-68-3	Blk	375.20	281.40	262.64
S-76-8		Renumbered to K-217		
S-76-18F		Renumbered to K-218		
S-76-18S		Renumbered to K-219		
S-76-18T		Renumbered to K-220		
S-76-18U		Renumbered to K-221		
S-76-18Y		Renumbered to K-222		
S-76-18Z		Renumbered to K-223		
S-78-3	Blk	179.10	133.58	124.67
S-81-3	Blk	253.20	189.90	177.24
S-82-1		Renumbered to K-207		
S-82-2		Renumbered to K-208		
S-82-3		Renumbered to K-209		
S-82-18		Renumbered to K-224, 225, 226		
K-200	Blk	112.20	84.15	78.50
K-201	Blk	112.20	84.15	78.50
K-202	Blk	112.20	84.15	78.50
K-207	Blk	143.10	107.32	100.17
K-208	Blk	143.10	107.32	100.17
K-209	Blk	143.10	107.32	100.17
K-217	Blk	86.00	64.50	60.20
K-218	Blk	155.30	116.48	107.71
K-219	Blk	155.30	116.48	107.71
K-220	Blk	155.30	116.48	107.71
K-221	Blk	155.30	116.48	107.71
K-222	Blk	155.30	116.48	107.71
S-222-1		Renumbered to K-200		
S-222-2		Renumbered to K-201		
S-222-3		Renumbered to K-202		
K-223	Blk	155.30	116.48	107.71
K-224	Blk	143.10	107.28	100.27
K-225	Blk	143.10	107.28	100.27
K-226	Blk	143.10	107.28	100.27
S-230-64	Blk	185.70	139.28	130.99
S-246-1L	Blk	199.10	149.33	139.37
S-246-3L	Blk	267.30	200.48	187.11
S-292-1L	Blk	103.40	77.55	72.38
S-292-1L	Wal	101.90	76.42	71.33
S-292-1L	Red	105.40	79.05	73.78
S-292-3L	Blk	150.20	112.65	105.14
S-292-3L	Red	151.30	113.80	105.91
S-293-1L	Blk	174.40	130.80	122.08
S-293-3L	Blk	254.50	190.92	178.15
S-308-3	Blk	217.80	163.35	152.46
S-308-64	Blk	271.70	203.78	190.19
S-308-64P	Blk	349.10	261.82	244.37
S-309-3	Blk	289.50	217.13	202.65
S-309-64	Blk	363.90	272.95	254.73
S-309-64P	Blk	441.40	331.05	286.91
S-310-3	Blk	442.40	331.80	287.56
S-310-64	Blk	528.50	396.38	343.53
S-310-64P	Blk	606.00	454.50	393.90
S-311-3	Blk	634.20	475.70	412.23
S-311-64	Blk	700.70	525.43	455.45

Part #	Color	1-99	100-499	500-999
S-312-64	Blk	1110.00	782.50	721.50
S-312-70	Blk	1124.10	843.08	730.67
S-319-3	Blk	213.50	160.13	149.45
S-319-64P	Blk	291.00	220.85	203.68
S-328-30	Blk	83.40	62.55	58.38
S-328-30	Wal	83.40	62.55	58.38
S-330-30	Blk	88.80	66.60	62.08
S-332-30	Blk	83.40	62.55	58.38
S-332-30	Wal	83.40	62.55	58.38
S-343-30	Blk	88.80	66.60	62.08
S-345-30	Blk	88.80	66.60	62.08
S-380-3	Blk	567.10	425.33	368.60
S-380-64	Blk	645.70	484.28	419.61
S-381-64	Blk	683.20	512.40	444.08
S-385-64	Blk	394.90	296.18	276.43
S-385-64P	Blk	472.40	354.30	307.06
S-400-1L	Blk	383.00	287.25	268.10
S-442-4		Renumbered to K-814		
S-446-3		Renumbered to K-805		
S-446-5		Renumbered to K-806		
S-481-64	Blk	372.30	279.23	260.61
S-482-64	Blk	526.60	394.95	342.29
S-483-64	Blk	288.40	216.30	201.88
S-618-3L	Blk	401.40	301.05	260.91
S-626-1L	Blk	185.80	139.35	130.07
S-626-79L	Blk	127.10	95.33	88.97
S-642-1	Blk	185.50	139.13	129.85
S-642-3	Blk	248.00	186.00	173.60
S-645-1L	Blk	161.80	121.35	113.26
S-645-3L	Blk	218.10	163.58	152.67
S-645-5L	Blk	218.10	163.58	152.67
S-645-5L	Red	218.90	164.38	153.47
S-645-21L	Blk	161.80	121.35	113.26
S-647-1L	Blk	163.40	122.55	114.38
S-647-3L	Blk	215.50	161.63	150.85
S-648-1L	Blk	170.00	127.50	119.00
S-648-3L	Blk	221.90	166.43	155.33
S-649-1L	Blk	443.50	332.63	288.28
S-649-3L	Blk	515.10	386.33	334.82
S-653-1L	Blk	185.50	139.13	129.85
S-653-3L	Blk	248.00	186.00	173.60
S-654-1	Blk	443.50	332.63	288.28
S-654-3	Blk	515.10	386.33	334.82
S-656-1L	Blk	303.60	227.70	212.52
S-656-3L	Blk	370.40	277.80	259.28
S-657-1L	Blk	221.30	165.98	154.91
S-657-3L	Blk	269.20	201.90	188.44
S-658-1L	Blk	119.50	89.25	83.30
S-676-1	Blk	161.80	121.35	113.26
S-676-3	Blk	218.10	163.58	152.67
S-676-5	Blk	218.10	163.58	152.67
S-676-21	Blk	161.80	121.35	113.26
S-677-1	Blk	163.40	122.55	114.38
S-677-3	Blk	215.50	161.63	150.85
S-678-1	Blk	170.00	127.50	119.00
S-678-3	Blk	221.90	166.43	155.33
S-742-1	Blk	264.60	198.45	185.22
S-742-3	Blk	327.10	245.33	228.83

National COMPONENTS

MIL-Spec KNOBS

BULLETIN NO. 59-3B



NATIONAL RADIO KMS KNOBS

There are an unlimited number of different control knobs in the National Radio Company KMS series, consisting of five sizes, six styles, three shaft diameters, and three finishes. KMS knobs are made in conformance to MS-91528 and MIL-K-3926.

SIZES

SIZE NO.	DIAMETER
KMS — 7	0.703 in.
9	0.906 in.
12	1.250 in.
17	1.750 in.
22	2.250 in.

STYLES

DESIGNATION	DESCRIPTION	SIZES AVAILABLE
N*	Round	All
D*	Round, plain skirted	All
F	Round, dial skirted	All
S	Crank	12, 17, 22
P	Pointer, plain	7, 9
K	Pointer, skirted	7, 9

*Available on special order with optional white dot.

SHAFT SIZES

DESIGNATION	SIZE	TYPES AVAILABLE	SIZES AVAILABLE
1	1/8"	N, D, F, P, K	7
2	1/4"	All	All
3	3/16"	N, D, F, P, K	This shaft size provided only on special order

FINISHES**

DESIGNATION	DESCRIPTION
D (per MIL-SPEC)	Semi gloss — No. 27038 per Fed Std No. 595
L (per MIL-SPEC)	Lusterless — No. 37038 per Fed Std No. 595
S	Glossy black

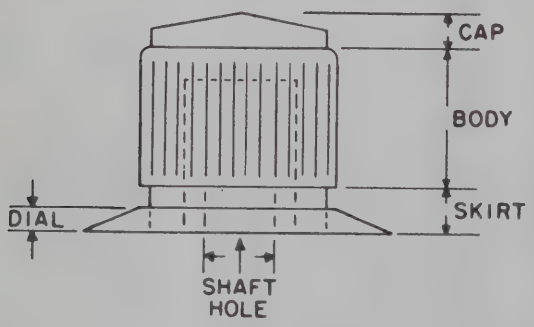
**Other colors and color combinations available on special order. Quotations on request.

MATERIALS

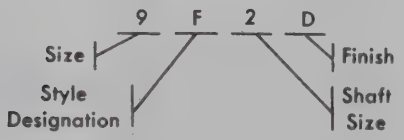
KNOBS:

Made of plastic, type III, class H2, per Specification L-P-349. Set Screws: Cadmium plated, class 3, type II, per Specification QQ-P-416. Inserts: Brass, composition 22 , per Specification QQ-B-626.

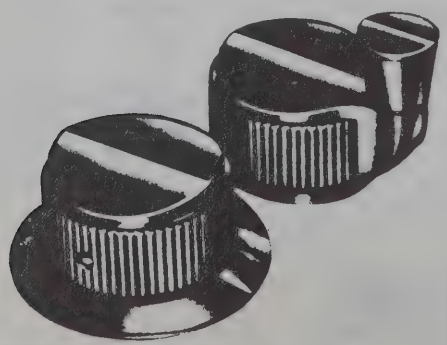
HOW TO SELECT A KMS KNOB



Example



9 = 0.906 in. diameter
F = Round, dial skirted
2 = 1/4 in. shaft size
D = semi gloss

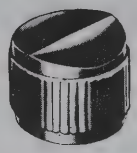
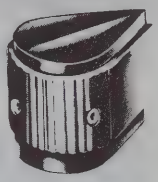


Specifications subject to change without notice

National Radio Company, Inc.

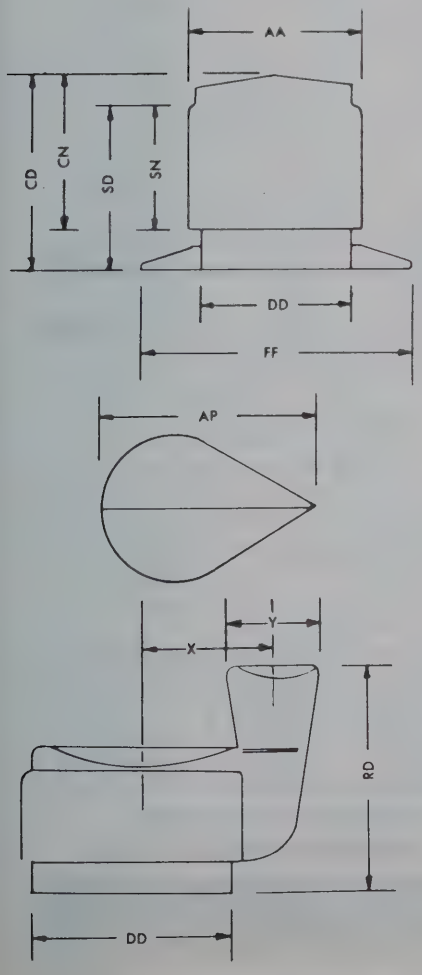
a wholly owned subsidiary of National Company, Inc.

NAT 1

Style ▶	N* Round — without skirt	D* Round — with skirt	F Round — with dial	S Spinner — with skirt	P Pointer — without skirt	K Pointer — with skirt
						
Type ▶	National Type No. / Mil No.	National Type No. / Mil No.	National Type No. / Mil No.	National Type No. / Mil No.	National Type No. / Mil No.	National Type No. / Mil No.
	7N1D 1N1D 7N2D 1N2D 7N1S 7N2S 7N1L 7N2L	7D1D 1D1D 7D2D 1D2D 7D1S 7D2S 7D1L 7D2L	7F1D 1F1D 7F2D 1F2D 7F1S 7F2S 7F1L 7F2L		7P1D 1P1D 7P2D 1P2D 7P1S 7P2S 7P1L 7P2L	7K1D 1K1D 7K2D 1K2D 7K1S 7K2S 7K1L 7K2L
	9N2D 2N2D 9N2S 9N2L	9D2D 2D2D 9D2S 9D2L	9F2D 2F2D 9F2S 9F2L		9P2D 2P2D 9P2S 9P2L	9K2D 2K2D 9K2S 9K2L
	12N2D 3N2D 12N2S 12N2L	12D2D 3D2D 12D2S 12D2L	12F2D 3F2D 12F2S 12F2L	12S2D 3S2D 12S2S 12S2L	Note: Styles N, D, F, P, K available without caps on special order. All styles may be procured with colored caps, bodies or dials on special order.	
	17N2D 4N2D 17N2S 17N2L	17D2D 4D2D 17D2S 17D2L	17F2D 4F2D 17F2S 17F2L	17S2D 4S2D 17S2S 17S2L		
	22N2D 5N2D 22N2S 22N2L	22D2D 5D2D 22D2S 22D2L	22F2D 5F2D 22F2S 22F2L	22S2D 5S2D 22S2S 22S2L		

* White dot on cap available on special order. White line on cap or body available on special order.

DIMENSIONS

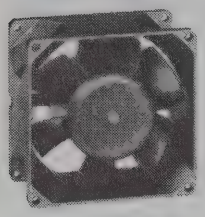


AREA	STYLES INVOLVED	INCHES
Size 7		
AA	N, D, P, K, F	0.703
AP	P, K	1.045
DD	D, K	0.608
FF	F	1.130
CN	N, P	0.615
SN	N*	0.505
CD	D, K, F	0.790
SD	D*	0.665
Size 9		
AA	N, D, P, K, F	0.906
AP	P, K	1.354
DD	D, K	0.781
FF	F	1.505
CN	N, P	0.795
SN	N*	0.640
CD	D, K, F	1.015
SD	D*	0.850
Size 12		
AA	N, D, F, S	1.250
DD	D, S	1.119
FF	F	1.817
X	S	0.800
Y	S	0.580
CN	N	0.700
SN	N*	0.520
CD	D, F, S	0.850
SD	D*	0.670
RD	S	1.364
Size 17		
AA	N, D, F, S	1.750
DD	D, S	1.618
FF	F	2.448
X	S	1.094
Y	S	0.780
CN	N	0.850
SN	N*	0.650
CD	D, F, S	1.073
SD	D*	0.873
RD	S	1.758
Size 22		
AA	N, D, F, S	2.250
DD	D, S	2.125
FF	F	3.000
X	S	1.344
Y	S	0.780
CN	N	0.875
SN	N*	0.650
CD	D, F, S	1.099
SD	D*	0.874
RD	S	1.784

National Radio Company standard KMS knobs are supplied with two No. 5-40 NC-2B or 8-32 NC-2B Allen-head set screws, placed 90 deg apart, in accordance with military specifications. The knobs may be obtained with other set screw arrangements to your specifications.

PAMOTOR

Miniature Axial Fans for High-Reliability Applications



ALL METAL CONSTRUCTION: Precision die cast housing, hub and impellers • Corrosion resistant • Warp free • Natural heat sink

POWERFUL MOTOR: Shaded pole and induction types • Hand fitted sleeve bearings • Extremely low internal heat rise • Impedance protected • Efficient inside-out design

LONG LIFE: 20,000 + operational hours, continuous duty at 45° C (115° F) without maintenance

RELIABILITY: Precision engineered and tested • Large oil lubrication reservoir • Dynamically balanced rotor

EFFICIENCY: Maximum air delivery at higher back pressures • 60 cycle performance at 50 cycles

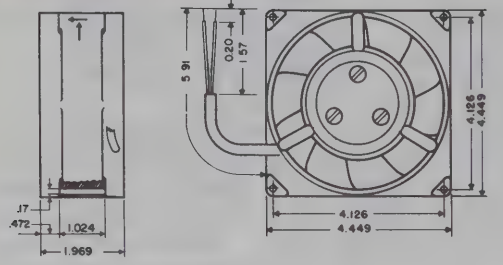
SPECIFICATIONS: Tested to applicable portions of MIL specifications • Tested to U. L. acceptance

INTERCHANGEABILITY: Universal 4⅛" mounting on all 4½" models

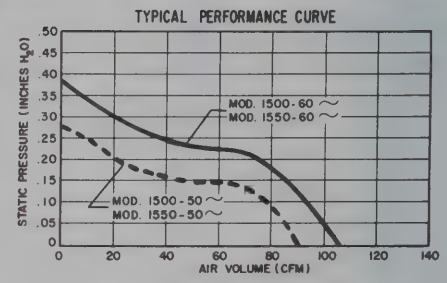
VERSATILITY: 50, 60, and 400 cycle operation • 110 or 220 volt • 3½", 4½", and 5½" size • 2" maximum depth

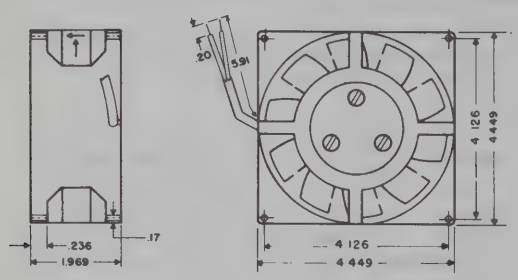
WARRANTY: 1 full year against defects in workmanship and materials

SHADED-POLE TYPES

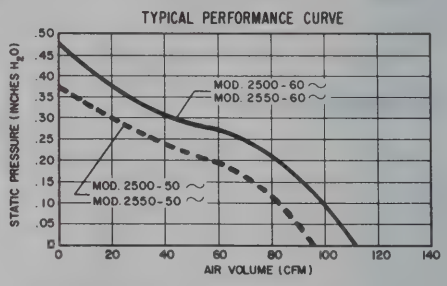


Models 1500 1550

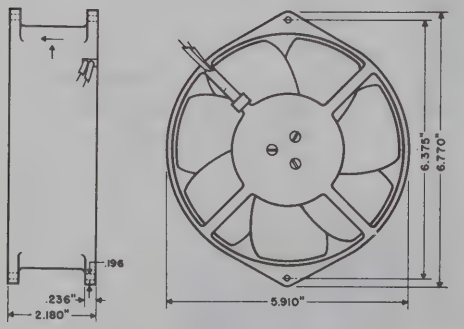




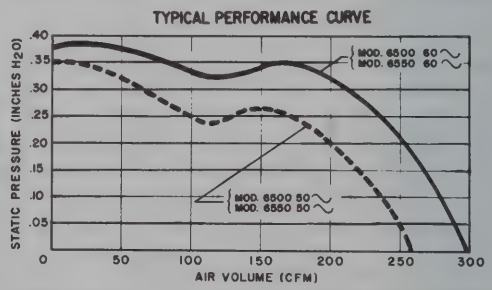
Models 2500 2550



Characteristic	MODEL 1500		MODEL 1550		MODEL 2500		MODEL 2550	
Voltage	115 volts	115 volts	220 volts	220 volts	115 volts	115 volts	220 volts	220 volts
Frequency	60 cycle	50 cycle	60 cycle	50 cycle	60 cycle	50 cycle	60 cycle	50 cycle
Air Flow	105 cfm	90 cfm	105 cfm	90 cfm	115 cfm	95 cfm	115 cfm	95 cfm
Speed	3400 rpm	2850 rpm	3400 rpm	2850 rpm	3400 rpm	2850 rpm	3400 rpm	2850 rpm



Models 6500 6550



Characteristic	MODEL 6500		MODEL 6550	
Voltage	115 volts	115 volts	220 volts	220 volts
Frequency	60 cycle	50 cycle	60 cycle	50 cycle
Air Flow	300 cfm	260 cfm	300 cfm	260 cfm
Speed	3000 rpm	2700 rpm	3000 rpm	2700 rpm

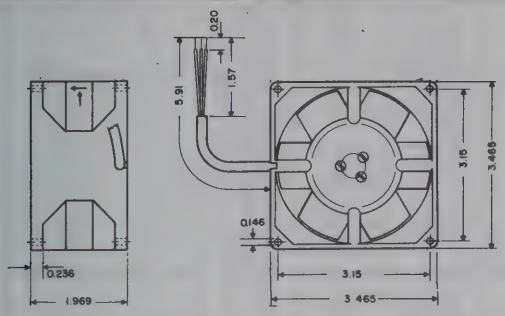
PAMOTOR FANS ARE STOCKED FOR IMMEDIATE DELIVERY FROM LEADING ELECTRONICS DISTRIBUTORS THROUGHOUT THE UNITED STATES AND CANADA. CONTACT YOUR LOCAL DISTRIBUTOR FOR COMPLETE ENGINEERING DATA AND PRICES.

PAMOTOR INC.

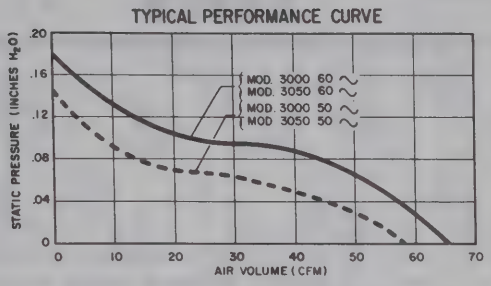
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PAMOTOR

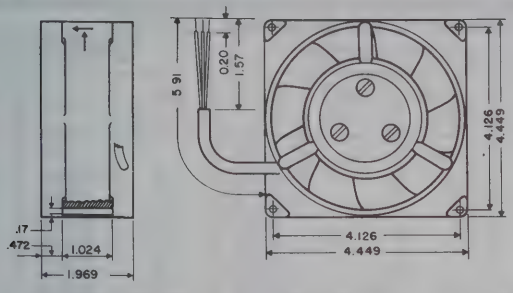
INDUCTION TYPES



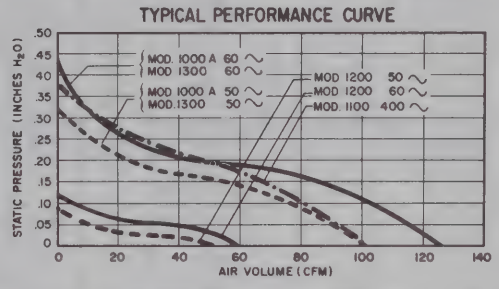
Models 3000 3050



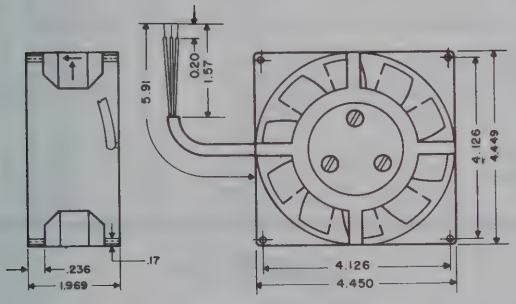
Characteristic	MODEL 3000		MODEL 3050	
Voltage	115 volts	115 volts	220 volts	220 volts
Frequency	60 cycle	50 cycle	60 cycle	50 cycle
Air Flow	65 cfm	58 cfm	65 cfm	58 cfm
Speed	3200 rpm	2800 rpm	3200 rpm	2800 rpm



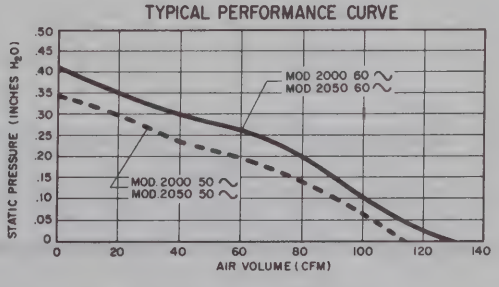
Models 1000A 1100 1200 1300



Characteristic	MODEL 1000A		MODEL 1100	MODEL 1200		MODEL 1300	
Voltage	115 volts	115 volts	115 volts	115 volts	115 volts	220 volts	220 volts
Frequency	60 cycle	50 cycle	400 cycle	60 cycle	50 cycle	60 cycle	50 cycle
Air Flow	125 cfm	100 cfm	100 cfm	60 cfm	50 cfm	125 cfm	110 cfm
Speed	3400 rpm	2900 rpm	3200 rpm	1700 rpm	1450 rpm	3400 rpm	2900 rpm



Models 2000 2050



Characteristic	MODEL 2000		MODEL 2050	
Voltage	115 volts	115 volts	220 volts	220 volts
Frequency	60 cycle	50 cycle	60 cycle	50 cycle
Air Flow	130 cfm	110 cfm	134 cfm	116 cfm
Speed	3500 rpm	2900 rpm	3500 rpm	2900 rpm

PAMOTOR FANS ARE STOCKED FOR IMMEDIATE DELIVERY FROM LEADING ELECTRONICS DISTRIBUTORS THROUGHOUT THE UNITED STATES AND CANADA. CONTACT YOUR LOCAL DISTRIBUTOR FOR COMPLETE ENGINEERING DATA AND PRICES.

PAMOTOR INC.

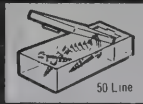
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GC ELECTRONICS

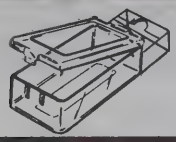
RADIO & TV HARDWARE

ALL 50 LINE BOXES - 36 Net









50 LINE

HINGED COVER PLASTIC BOXES — 50 LINE — Dir. Net Price. 36c Per Box



No. 1020, 100 Asst. Dir. Net ..... $ .67

GC SOLDERING LUGS *TINNED*

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
No. 6, 5/8" Length (A)	H100-F	30	8466-C	$1.58	8466-M	$12.63
No. 6, 23/32" Length (B)			8467-C	2.82	8467-M	22.50
No. 8, 23/32" Length (B)			8468-C	2.65	8468-M	21.15
No. 6, 23/32" Length (C)	H104-F	25	1021-BC	1.05	1021-BM	8.40
No. 8, 23/32" Length (C)	H106-F	25	7445-C	1.20	7445-M	9.57
No. 10, 23/32" Length (C)			8473-C	1.17	8473-M	9.30
No. 6, 1/2" Length (D)			5708-C	1.68	5708-M	13.50
No. 8, 13/16" Length (D)			5704-C	1.68	5704-M	13.50
No. 10, 13/16" Length (D)			5705-C	1.68	5705-M	13.50
No. 6, 11/16" Length (D)	H108-F	30	1021-CC	.93	1021-CM	8.08
No. 6, 3/16" Length (E)	H112-F	30	1021-FC	.92	1021-FM	7.38
No. 8, 3/16" Length (E)	H113-F	30	7451-C	.87	7451-M	6.98
No. 6, 1" Length (F)	H114-F	25	7454-C	.67	7454-M	5.33
No. 8, 1" Length (F)	H117-F	25	7455-C	.86	7456-M	6.50
No. 10, 1" Length (F)	H118-F	25	7456-C	.86	7455-M	6.50
No. 4, 13/16" Length (G)			7458-C	1.85	7458-M	14.85
No. 8, 13/16" Length (G)			7460-C	1.87	7460-M	14.88
No. 10, 13/16" Length (G)			7461-C	1.87	7461-M	14.88
No. 6, 5/8" Length (H)	H122-F	20	7462-C	1.07	7462-M	8.52
No. 8, 5/8" Length (H)			7463-C	1.07	7463-M	8.52
No. 4, 7/8" Length (E)			5706-C	1.68	5706-M	13.50
No. 8, 7/8" Length (E)			5707-C	1.68	5707-M	13.50
No. 6, 7/8" Length (E)			5708-C	1.68	5708-M	13.50
No. 6, 11/16" Length (J)	H124-F	25	7441-C	1.18	7441-M	9.45
No. 8, 11/16" Length (J)	H134-F	25	7442-C	1.13	7442-M	9.12
No. 10, 11/16" Length (J)	H102-F	25	1021-AC	1.13	1021-AM	9.12
Solderless TV Line Lug (K)	H225-F	10	8633-C	1.65	8633-M	13.13



GC CABLE HOLDER CLAMPS *NICKEL PLATED*

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Assorted	H500-F	20				
To Fit Cable / Mounting Hole						
1/8" to 3/16" No. 6	H502-F	25	6251-C	$ .98	6251-M	$ 7.83
5/16" to 1/4" No. 6	H503-F	20	6252-C	1.12	6252-M	8.88
1/4" to 5/16" No. 6			7503-C	1.73	7503-M	13.80
5/16" to 1/2" No. 6	H506-F	15	6253-C	1.27	6253-M	10.13
Baseboard Clips Blk.	H509-F	20	8345-C	2.07	8345-M	16.17

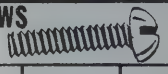


GC ROUND HEAD MACHINE SCREWS *STEEL-NICKEL PLATED*

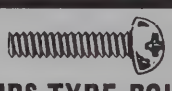
Description and Spec.	50-Line No.	Qty. In Box
Assorted Screws	H1000-F	35
Assorted Screws & Nuts	H1001-F	40
Assorted No. 2 & 4 Screws & Nuts	H1002-F	35
Assorted 4-36 Screws	H1010-F	40
Assorted 6-32 Screws	H1012-F	40
Assorted 8-32 Screws	H1016-F	40
Assorted 10-32 Screws	H1018-F	25

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
2-56 x 1/4"	H1022-F	40	7130-C	$ .45	7130-M	$3.53
2-56 x 1/2"	H1024-F	40	7131-C	.48	7131-M	3.85
2-56 x 3/4"	H1026-F	40	7132-C	.55	7132-M	4.43
3-48 x 3/4"	H1028-F	40	7124-C	.58	7124-M	4.65
4-36 x 1/4"	H1032-F	40	6005-IC	.48	6005-M	3.87
4-36 x 3/8"	H1033-F	35	7138-C	.50	7138-M	3.97
4-36 x 1/2"	H1034-F	35	6006-C	.52	6006-M	4.18
4-36 x 5/8"			5651-C	.87	5651-M	7.36
4-36 x 3/4"	H1036-F	35	6007-C	.77	6997-M	6.63
4-40 x 1/4"	H1042-F	40	6005-AC	.48	6005-AM	3.87
4-40 x 1/2"	H1044-F	35	6005-BC	.53	6005-BM	4.22
4-40 x 5/8"			5652-C	.57	5652-M	4.53
4-40 x 3/4"	H1046-F	35	6005-CC	.78	6005-CM	6 60
6-32 x 1/4"	H1062-F	40	6008-C	.53	6008-M	4.25
6-32 x 1/2"	H1064-F	30	6009-C	.62	6009-M	4.93
6-32 x 5/8"			5653-C	.68	5653-M	5.40
6-32 x 3/4"	H1066-F	30	6010-C	.80	6010-M	6.86
6-32 x 1"	H1068-F	30	6011-C	.83	6011-M	6.67
6-32 x 1 1/4"	H1070-F	30	7141-C	1.00	7141-M	8.00
6-32 x 2"	H1076-F	20	7148-C	1.50	7148-M	12.07
8-32 x 1/4"	H1082-F	30	6013-C	.70	6013-M	5.55
8-32 x 3/8"	H1083-F	25	6014-C	.78	6014-M	6.48
8-32 x 1/2"	H1084-F	25	6015-C	.82	6015-M	6.48
8-32 x 5/8"			5654-C	.87	5654-M	6.95
8-32 x 3/4"	H1086-F	25	6016-C	.93	6016-M	7.42
8-32 x 1"	H1088-F	20	6017-C	1.07	6017-M	8.50
8-32 x 1 1/4"	H1090-F	20	7142-C	1.23	7142-M	9.87
10-32 x 1/2"	H1104-F	20	6020-C	.95	6020-M	7.63
10-32 x 5/8"			5655-C	1.03	5655-M	8.32
10-32 x 3/4"	H1106-F	20	6021-C	1.12	6021-M	8.93
10-32 x 1"	H1108-F	17	6022-C	1.25	6022-M	10.05
10-32 x 1 1/2"	H1112-F	15	7143-C	1.65	7143-M	13.22

GC ROUND HEAD MACHINE SCREWS *BRASS-NOT PLATED*



Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Assorted	H1210-F	30				
2-56 x 1/4"			5657-C	.67	5657-M	$ 5.32
2-56 x 1/2"			5658-C	.80	5658-M	6.42
2-56 x 5/8"			5659-C	.87	5659-M	6.97
2-56 x 3/4"			5660-C	.93	5660-M	7.50
3-48 x 3/4"			5661-C	1.05	5661-M	8.33
4-36 x 1/4"			5662-C	.80	5662-M	6.45
4-36 x 1/2"			5663-C	1.02	5663-M	8.10
4-36 x 5/8"			5664-C	1.10	5664-M	8.82
4-36 x 3/4"			5665-C	1.20	5665-M	9.53
4-40 x 1/4"			5666-C	.93	5666-M	7.73
4-40 x 1/2"			5667-C	1.02	5667-M	8.10
4-40 x 5/8"			5668-C	1.43	5668-M	12.79
4-40 x 3/4"			5669-C	1.27	5669-M	10.80
6-32 x 1/4"			8501-C	1.08	8501-M	8.63
6-32 x 3/8"			5670-C	1.15	5670-M	9.22
6-32 x 1/2"			8502-C	1.30	8502-M	10.38
6-32 x 5/8"			5671-C	1.43	5671-M	11.47
6-32 x 3/4"			8503-C	1.58	8503-M	12.67
6-32 x 1"			8504-C	1.88	8504-M	15.00
6-32 x 1 1/4"			5672-C	2.18	5672-M	17.82
6-32 x 2"			5673-C	3.68	5673-M	29.40
8-32 x 1/4"			8505-C	1.60	8505-M	12.78
8-32 x 3/8"			5674-C	1.68	5674-M	13.43
8-32 x 1/2"			8506-C	1.92	8506-M	15.37
8-32 x 5/8"			5675-C	2.12	5675-M	16.92
8-32 x 3/4"			8507-C	2.35	8507-M	18.75
8-32 x 1"			8508-C	2.80	8508-M	22.35
8-32 x 1 1/4"			5676-C	3.28	5676-M	26.25
10-32 x 1/2"			5677-C	2.43	5677-M	19.50
10-32 x 5/8"			5678-C	2.70	5678-M	21.67
10-32 x 3/4"			5679-C	2.95	5679-M	23.55
10-32 x 1"			5680-C	3.52	5680-M	28.08
10-32 x 1 1/2"			5681-C	4.80	5681-M	38.40



GC PHILLIPS TYPE ROUND HEAD MACHINE SCREWS *STEEL-NICKEL PLATED*

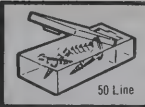
Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Assorted	H1180-F	25				
6-32 x 1/4"			8511-C	1.18	8511-M	$ 9.47
6-32 x 1/2"			8512-C	1.07	8512-M	8.53
6-32 x 5/8"			5689-C	1.18	5689-M	9.47
6-32 x 3/4"			8513-C	1.22	8513-M	9.75
6-32 x 1"			8514-C	1.37	8514-M	10.87
8-32 x 5/16"			8515-C	1.03	8515-M	8.32
8-32 x 1/2"			8516-C	1.27	8516-M	10.70
8-32 x 5/8"			5690-C	1.23	5690-M	9.90
8-32 x 3/4"			8517-C	1.33	8517-M	10.65
8-32 x 1"			8518-C	1.45	8518-M	13.57

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GC ELECTRONICS

RADIO & TV HARDWARE

ALL 50 LINE BOXES - 36 Net







GC BINDING HEAD MACHINE SCREWS
STEEL-NICKEL PLATED

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Assorted	H1168-F	35				
5-36 x 1/4"	H1170-F	35	7154-C	.53	7154-M	$4.20
6-32 x 3/16"			7151-C	.53	7151-M	4.20
6-32 x 1/4"	H1172-F	35	7152-C	.53	7152-M	4.20
6-32 x 3/8"			7153-C	.57	7153-M	4.50
7-32 x 3/8"	H1174-F	30	7155-C	1.57	7155-M	12.48
8-32 x 5/16"			7158-C	.87	7158-M	7.41

GC BINDING HEAD MACHINE SCREWS
BRASS-NICKEL PLATED

Description and Spec.	Part No.	Net Per 100	No.	Net Per M
2-56x1/4"	7160-1-C	$ .84	7160-1-M	$ 6.98
2-56x1/2"	7161-1-C	.96	7161-1-M	8.28
2-56x3/4"	7162-1-C	1.11	7162-1-M	9.55
4-36x1/4"	7163-1-C	.97	7163-1-M	8.32
4-36x1/2"	7164-1-C	1.19	7164-1-M	10.18
4-36x3/4"	7165-1-C	1.40	7165-1-M	12.05
4-40x1/4"	7170-1-C	.97	7170-1-M	8.32
4-40x1/2"	7171-1-C	1.19	7171-1-M	10.18
4-40x3/4"	7172-1-C	1.40	7172-1-M	12.15
5-36x1/4"	7154-1-C	1.40	7154-1-M	12.99
6-32x3/16"	7151-1-C	1.34	7151-1-M	11.47
6-32x1/4"	7152-1-C	1.27	7152-1-M	10.90
6-32x3/8"	7153-1-C	1.35	7153-1-M	11.54
6-32x1/2"	7118-1-C	1.51	7118-1-M	12.90
6-32x3/4"	7173-1-C	1.83	7173-1-M	15.65
8-32x1/4"	7174-1-C	1.85	7174-1-M	15.70
8-32x3/8"	7119-1-C	1.94	7119-1-M	16.65
8-32x1/2"	7120-1-C	2.20	7120-1-M	18.80
8-32x5/16"	7158-1-C	1.88	7158-1-M	16.20
8-32x3/4"	7175-1-C	2.70	7175-1-M	23.15
10-32x1/2"	7176-1-C	2.54	7176-1-M	21.80
10-32x3/4"	7177-1-C	3.43	7177-1-M	29.50

GC DUAL HEAD RACK AND CABINET SCREWS
STEEL-NICKEL PLATED

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Assorted Screws and Washers	H1005-F	15				
6-32 x 1/2"			6540-C	.62	6540-M	$4.93
6-32 x 5/8"			5691-C	.87	5691-M	7.43
6-32 x 3/4"			6541-C	.73	6541-M	5.80
8-32 x 5/8"			5692-C	.95	5692-M	7.90
8-32 x 3/4"			6542-C	.93	6542-M	7.42
10-32 x 1/2"			8848-C	1.17	8848-M	9.30
10-32 x 5/8"			5693-C	1.03	5693-M	8.32
10-32 x 3/4"			6543-C	1.12	6543-M	8.93

GC ORNAMENTAL HEAD SCREWS
STEEL-BRONZE PLATED

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Assorted	H1250-F	20				
6-32 x 3/4"	H1252-F	25	1097-C	1.28	1097-M	$10.27
6-32 x 1"	H1253-F	20	1098-C	1.40	1098-M	11.28
8-32 x 1 1/4"	H1255-F	12	1099-C	1.92	1099-M	15.30

GC ROUND HEAD WOOD SCREWS
STEEL-NICKEL PLATED

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Assorted	H1502-F	25				
No. 4 x 1/2"			6114-C	.78	6114-M	$ 6.23
No. 4 x 5/8"			5694-C	.90	5694-M	7.33
No. 4 x 3/4"			6115-C	.90	6115-M	7.20
No. 6 x 3/4"			6116-C	.97	6116-M	7.73
No. 6 x 1"			6117-C	1.20	6117-M	9.57
No. 8 x 3/4"			6118-C	1.15	6118-M	9.15
No. 8 x 1 1/4"			8071-C	1.58	8071-M	12.68
No. 10 x 1 1/2"			8073-C	2.12	8073-M	16.95
No. 12 x 1 1/2"			8075-C	2.70	8075-M	21.60
No. 14 x 1 3/4"			8076-C	3.80	8076-M	30.45

GC SPADE BOLTS OR MOUNTING SCREWS
STEEL-NICKEL PLATED

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Assorted	H1570-F	15				
A B No. C D E						
6-32 6 3/32" 1 1/16" 3/16"			6081-C	1.15	6081-M	$ 9.15
6-32 6 1 3/32" 7/8" 1 1/16"			6082-C	1.75	6082-M	14.66
8-32 8 1/4" 1 3/32" 1 5/16"			6084-C	2.93	6084-M	23.40

GC SHEET METAL SCREWS POINTED TYPE "A" HEX HEAD-SLOTTED-SELF-TAPPING
NICKEL PLATED

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asstd	H1300-F	25				
Asstd. No. 4 & 6						
Asstd. No. 8 & 10						
No. 4 x 1/2"	H1350-F	35	6090-C	$ .87	6090-M	$ 7.33
No. 6 x 1/4"	H1362-F	30	6091-C	.87	6091-M	7.33
No. 6 x 3/8"	H1363-F	25	6092-C	.90	6092-M	7.66
No. 6 x 1/2"	H1364-F	25	6093-C	.92	6093-M	7.75
No. 6 x 5/8"			5695-C	.95	5695-M	7.57
No. 6 x 3/4"	H1366-F	20	6094-C	1.00	6094-M	8.16
No. 8 x 1/4"	H1382-F	20	8102-C	1.00	8102-M	8.03
No. 8 x 3/8"	H1383-F	20	6095-C	1.05	6095-M	8.33
No. 8 x 1/2"	H1384-F	20	6096-C	1.08	6096-M	8.63
No. 8 x 5/8"			5696-C	1.10	5696-M	8.78
No. 8 x 1"	H1388-F	15	6097-C	1.38	6097-M	11.03
No. 10 x 3/8"	H1403-F	15	6098-C	1.25	6098-M	10.00
No. 10 x 1/2"	H1404-F	15	6099-C	1.27	6099-M	10.13
No. 10 x 3/4"	H1406-F	12	6100-C	1.40	6100-M	11.17

GC ROUND HEAD-SLOTTED ESCUTCHEON PLATE SCREWS *BRONZE PLATED*

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asstd.	H1500-F	25				
No. 2 x 1/4"			1091-C	$ .87	1091-M	$7.08
No. 2 x 3/8"			1093-C	.80	1093-M	6.61

GC RADIO KNOB SET SCREWS SLOTTED-HEADLESS-CUP POINT STANDARD

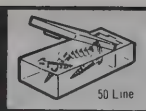
Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asst. 6-32, 8-32, 10-32	H1605-F	15				
6-32 x 3/16"	H1623-F	15	6072-C	$1.80	6072-M	$14.40
8-32 x 3/16"	H1633-F	15	6075-C	1.80	6075-M	14.40
8-32 x 1/4"	H1634-F	15	6076-C	1.80	6076-M	14.40
10-32 x 1/4"			6079-C	1.80	6079-M	14.40

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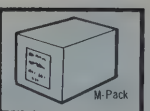
GC ELECTRONICS

RADIO & TV HARDWARE

ALL 50 LINE BOXES - 36 Net









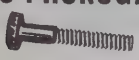
GC ALLEN HEX SET SCREWS
STEEL - HEADLESS

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asstd. Lengths, 4-36	H1674-F	5				
Asstd. Lengths, 6-32	H1676-F	5				
Asstd. Lengths, 8-32	H1678-F	5				
8-32 x 1/8"			7201-C	$4.93	7201-M	$39.45
8-32 x 3/16"			7202-C	4.93	7202-M	39.45



GC PHONO CARTRIDGE MOUNTING SCREWS
STEEL - NICKEL PLATED

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Assorted	H1560-F	60				
4-36 x 1/4"	H1562-F	40	6005-1C	.48	6005-M	$3.87
4-40 x 1/4"	H1564-F	40	6005-AC	.48	6005-AM	3.87



GC PHONOGRAPH NEEDLE & STYLUS SET SCREWS
STEEL - BRONZE PLATED

Description and Spec.	50-Line No.	Qty. In Box
Assorted	H1550-F	12
2-56 x 5/16"	H1551-F	12
2-64 x 3/4"	H1553-F	12
1-72 x 23/32"	H1555-F	5



GC HEXAGON NUTS
STEEL - NICKEL PLATED

Description and Spec.			50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Assorted			H1800-F	30				
Thread	Width	Thick-ness						
2-56	3/16"	1/16"	H1802-F	30	7225-C	$ .68	7225-M	$ 5.52
3-48	3/16"	1/16"	H1803-F	30	7226-C	.68	7226-M	5.52
4-36	1/4"	3/32"	H1805-F	30	6041-C	.67	6041-M	5.28
4-40	1/4"	3/32"	H1804-F	30	6041-AC	.67	6041-AM	5.28
5-40	5/16"	1/64"			6045-BC	.73	6045-BM	5.82
6-32	1/4"	3/32"	H1806-F	30	6042-C	.68	6042-M	5.52
6-32	5/16"	1/64"	H1807-F	30	7230-C	.73	7230-M	5.82
8-32	1/4"	3/32"	H1803-F	30	6043-C	.73	6043-M	5.85
8-32	11/64"	1/8"	H1809-F	30	7233-C	.73	7233-M	5.85
10-32	3/8"	5/64"	H1810-F	30	6044-C	.97	6044-M	7.68
10-32	3/8"	1/8"			6049-C	.87	6049-M	6.98
1/4-20	7/16"	3/16"	H1820-F	25	7235-C	1.33	7235-M	10.62
11/32-32	7/16"	1/16"			7236-C	1.95	7236-M	15.60
3/8-32	9/16"	3/32"	H1923-F	15	6050-AC	1.47	6050-AM	11.70
7/16-27	9/16"	1/8"	H1924-F	10	7238-C	3.30	7238-M	26.40
15/32-32	9/16"	5/64"			6050-BC	1.80	6050-BM	14.40



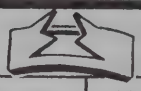
GC BRASS HEXAGON NUTS
NOT PLATED

Description and Spec.			50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Thread	Width	Thick-ness						
2-56	3/16"	1/16"			7241-C	$ .98	7241-M	$ 7.83
3-48	3/16"	1/16"			7242-C	.90	7242-M	7.13
4-36	1/4"	3/32"	H1842-F	35	7243-C	1.18	7243-M	9.42
4-40	1/4"	3/32"	H1844-F	25	7244-C	1.17	7244-M	9.33
6-32	1/4"	3/32"	H1846-F	25	7245-C	1.17	7245 M	9.33
6-32	5/16"	1/64"			5697-C	1.40	5697-M	11.18
8-32	1/4"	3/32"			5693-C	1.17	5698-M	9.30
8-32	5/16"	1/64"	H1848-F	15	7248-C	1.40	7248-M	11.18
10-32	3/8"	1/8"	H1850-F	15	7249-C	1.53	7249-M	12.27
1/4-20	7/16"	3/16"			5699-C	3.13	5699-M	25.02



GC MOUNTING NUTS
STEEL - NICKEL PLATED

Description and Spec.			50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Assorted			H1920-F	12				
Thread	Width	Thick-ness						
11/32-32 (Rotary Switch Size)	7/16"	1/16"			7236-C	$1.95	7236-M	$15.60
3/8-32 (Volume Control Size)	9/16"	3/32"	H1923-F	15	6050-AC	1.47	6050-AM	11.70
7/16-27 (Pilot Light Size)	9/16"	1/8"			7238-C	3.30	7238-M	26.40
15/32-32 (Toggle Switch Size)	9/16"	5/64"	H1924-F	10	6050-BC	1.80	6050-BM	14.40
15/32-32 Ring Nut (Toggle Switch Size)	Round	1/16"	H1926-F	8	6050-CC	3.47	6050-CM	27.78



GC TINNERMAN SPEED NUTS

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Assorted	H1960-F	30				
No. 4			6051-C	$ .73	6051-M	$ 5.70
No. 6			6052-C	.78	6052-M	6.23
No. 8			6053-C	.78	6053-M	6.23



GC ACORN NUTS
SOLID BRASS - NICKEL PLATED

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Assorted	H1950-F	10				
6-32			6031-C	$2.82	6031-M	$22.50
8-32			6032-C	3.00	6032-M	24.00
10-32			6033-C	3.63	6033-M	29.10



GC KNURLED THUMB NUTS
BRASS - NICKEL PLATED

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Assorted	H1941-F	10				
6-32	H1943-F	8	6655-C	$2.27	6655-M	$18.15
8-32	H1944-F	8	6656-C	2.27	6656-M	18.15
10-32	H1945-F	5	6657-C	4.98	6657-M	39.90



GC WING NUTS *NICKEL PLATED*

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Assorted	H1931-F	10				
6-32	H1933-F	10	6658-C	$3.32	6658-M	$26.52
8-32	H1934-F	10	6659-C	2.45	6659-M	19.65
10-32	H1935-F	8	6660-C	2.73	6660-M	21.90



GC METAL WASHERS *NICKEL PLATED*

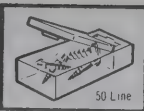
Description and Spec.				50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asstd. Screw Size No.	Hole Size	O.D.	Thick-ness	H870-F	80				
4	1/8"	9/32"	1/32"	H874-F	80	6154-C	$ .50	6154-M	$ 4.03
6	5/32"	3/8"	1/32"	H876-F	80	6155-C	.50	6155-M	4.03
8	3/16"	7/16"	1/32"	H878-F	80	6156-C	.50	6156-M	4.03
10	13/64"	3/8"	1/32"	H880-F	70	7306-C	.47	7306-M	3.92
10	13/64"	7/16"	1/32"			7307-C	.47	7307-M	3.92
10	13/64"	1/2"	.049			6157-C	.50	6157-M	4.03
12	.228	7/16"	.021			7308-C	.47	7308-M	3.92
1/4"	9/32"	5/8"	1/16"	H882-F	50	6158-C	.57	6158-M	4.33
1/4"	17/64"	1/2"	1/16"			7311-C	.63	7311-M	5.07
5/16"	5/16"	11/16"	1/16"			7312-C	.58	7312-M	4.68

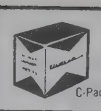
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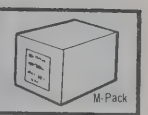
GC ELECTRONICS

RADIO & TV HARDWARE

ALL 50 LINE BOXES - 36 Net







GC INTERNAL LOCK WASHERS
CADMIUM PLATED

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asstd. All Types	H918-F	45				
Asstd. Internal Screw	H920-F	50				
Screw Size O.D.						
2	H922-F	35	7322-C	$ .72	7322-M	$ 5.78
3			7323-C	.63	7323-M	5.03
4	H924-F	50	7324-C	.45	7324-M	3.63
6 9/32"	H926-F	50	7326-C	.45	7326-M	3.63
8 21/64"	H928-F	50	7328-C	.50	7328-M	3.98
10 3/16"	H930-F	45	7330-C	.50	7330-M	3.98
1/4" 9/16"			7332-C	.65	7332-M	5.25
5/16" 19/32"			7333-C	.82	7333-M	6.53
3/8" 11/16"			7334-C	1.10	7334-M	8.78
7/16" 25/32"	H938-F	25	7335-C	1.25	7335-M	9.98
15/32" 13/16"			7338-C	1.58	7338-M	12.63

GC EXTERNAL LOCK WASHERS
CADMIUM PLATED

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asstd.	H950-F	60				
No. 4			7354-C	$ .45	7354-M	$ 3.63
No. 6			7356-C	.45	7356-M	3.63
No. 8			7358-C	.50	7358-M	3.98
No. 10			7360-C	.48	7360-M	3.87
No. 1/4" 1/2"			7361-C	.65	7361-M	5.22
No. 3/8" 11/16"			7363-C	.97	7363-M	7.68

GC SPLIT TYPE LOCK WASHERS
CADMIUM PLATED

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asstd. Screw Size O.D. Thick.	H960-F	60				
No. 4 3/16" 1/32"			6503-C	$ .57	6503-M	$ 4.50
No. 6 15/64" 1/32"			6504-C	.48	6504-M	3.90
No. 8 11/32" .025			6505-C	.47	6505-M	3.70
No. 10 5/16" .050			6506-C	.53	6506-M	4.32
No. 1/4" 7/16" 5/64"			6507-C	.80	6507-M	6.38

GC SPRING FRICTION WASHERS

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asstd. A B C Thick.	H750-F	12				
9/64" 3/16" 1/32" .012			7385-C	$1.95	7385-M	$15.60
3/16" 3/8" 1/32" .008			7386-C	1.65	7386-M	13.27
3/16" 1/16" 1/16" .008			7387-C	1.62	7387-M	12.93
1/4" 5/16" 1/16" .012			7389-C	1.87	7389-M	14.77

GC CUP FINISHING WASHERS
NICKEL PLATED

Description and Spec.	50-Line No.	Qty. InBox	Part No.	Net Per 100	No.	Net Per M
Asstd. Screws & Washers	H1005-F	15				
Asstd. Washers	H805-F	40				
No. 6	H806-F	45	6161-C	$ .47	6161-M	$ 3.92
No. 8	H808-F	45	6162-C	.53	6162-M	4.20
No. 10	H810-F	35	6163-C	.55	6163-M	4.47

GC "C" WASHERS AND RETAINING RINGS
STEEL-CADMIUM PLATED

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asst'd. C-Washers	H770-F	25				
Shaft Diam. A B C D						
3/16" .171 .125 .062 .031	H772-F	15	6182-C	$ .95	6182-M	$ 7.53
1/4" .234 .156 .046 .031	H774-F	15	6183-C	1.07	6183-M	8.58
1/4" .260 .187 .062 .031			6184-C	1.10	6184-M	8.73
1/4" 9/32" O.D. Wire Ring .029	H778-F	50	6185-C	.42	6185-M	3.30

GC HAIR PIN COTTERS

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asstd. A B C	H380-F	50				
9/32" 1/16" .026			7375-C	$ .48	7375-M	$ 3.90
3/8" 1/16" .026			7376-C	.42	7376-M	3.30
13/32" 3/32" .026			7377-C	.47	7377-M	3.78
1/2" 5/32" .026			7378-C	.48	7378-M	3.90
21/32" 5/16" .032			7379-C	.50	7379-M	3.93

GC FLAT FIBRE WASHERS

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asstd. Screw Size I.D. O.D. Thick.	H820-F	35				
6 .140 1/4" 1/32"	H824-F	30	6513-C	$ .50	6513-M	$ 4.08
8 11/64" 3/8" 1/32"	H825-F	30	6514-C	.50	6514-M	4.08
10 .196 3/8" 1/32"	H826-F	30	6515-C	.50	6515-M	4.08
1/4" 1/4" 1/2" 3/64"	H827-F	24	6516-C	.53	6516-M	4.33
3/8" .390 25/64" 3/64"	H828-F	20	6517-C	.77	6517-M	6.12
15/32" 13/32" 1/4" 1/32"			6518-C	.77	6518-M	6.12

GC EXTRUDED FIBRE WASHERS

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asstd. Extruded & Flat	H854-F	30				
Asstd. Extruded	H855-F	30				
Screw Size A B C D						
6 3/16" .187 .140 .039			6525-C	$ .87	6525-M	$ 6.90
8 3/8" .250 .169 .031			6526-C	.87	6526-M	6.90
10 7/16" .255 .196 .032			6527-C	.95	6527-M	7.53
1/4" 1/2" .375 .250 .032			6528-C	.95	6528-M	7.53
3/8" 5/8" .437 .380 .031	H864-F	20	6529-C	.98	6529-M	7.92

GC SNAP BUTTON HOLE PLUGS
NICKEL PLATED

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asstd.	H300-F	8				
No. 1710 Asst. 50 Plugs in Box Dlr. Net $3.05						
1/4" 13/32" 1/4" 17/64" 3/64"	H306-F	8	1711-AC	$2.25	1711-AM	18.00
5/16" 7/16" 1/4" 21/64" 1/16"			1711-BC	2.40	1711-BM	19.20
3/8" 17/32" 3/8" 25/64" 3/64"	H308-F	8	1711-C	3.08	1711-M	24.60
1/2" 21/32" 17/64" 17/32" 3/64"	H310-F	6	1712-C	3.08	1712-M	24.60
5/8" 51/64" 9/32" 41/64" 3/64"	H312-F	6	1713-C	3.30	1713-M	26.40
3/4" 13/16" 19/64" 49/64" 3/32"	H314-F	5	1714-C	3.60	1714-M	28.80
7/8" Fits Switch Box Knockout Hole			1714-AC	4.62	1714-AM	36.90
1 " 13/32" 19/64" 1 1/32" 3/64"	H316-F	5	1715-AC	4.95	1715-AM	39.60
1 1/8" 13/16" 11/32" 1 3/64" 3/32"			1715-BC	5.93	1715-BM	59.40
1 1/4" 1 7/16" 5/16" 1 17/64" 3/32"			1715-C	6.45	1715-M	51.60
1 3/8" 1 9/16" 13/32" 1 13/32" 3/32"			5700-C	7.13	5700-M	57.00
1 7/16" 1 39/64" 27/64" 1 15/32" 1/64"			5701-C	7.28	5701-M	58.20
1 1/2" 1 41/64" 13/32" 1 17/32" 3/32"			5702-C	9.38	5702-M	75.00

GC SNAP-IN VENTILATING PLUGS
NICKEL PLATED

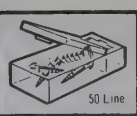
Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
1" Punched Holes	H334-F	4	1709-C	$ 8.10	1709-M	$65.16
1" Screen Vent			1708-C	21.38	1708-M	170.99

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RADIO & TV HARDWARE

ALL 50 LINE BOXES - 36 Net









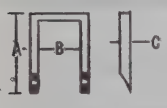
GC FAHNESTOCK CLIPS *NICKEL PLATED*

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Assorted L W Hole Wire	H590-F	12				
(A) ½" 7/32" 4 16	H592-F	15	6301-C	1.50	6301-M	$13.05
(B) ¾" 5/16" 6 14	H594-F	14	6302-C	1.73	6302-M	13.98
(C) 1 1/16" 3/8" 8 10			6303-C	2.97	6303-M	23.85
(D) 1½" 5/16" 6 10			6304-C	11.02	6304-M	98.06
(E) ¾" 5/16" 6 14			6306-C	4.03	6306-M	32.28



GC SNAP-IN TRIMOUNTS

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
No. 1720 Asst. 100 Trimounts Net Price ..... $ .82 Assorted	H370-F	20				
To Fit Hole A B						
⅛" 3/32" 3/16"			1721-C	$1.13	1721-M	$ 9.60
⅛" 3/32" 13/64"	H373-F	25	1722-C	1.20	1722-M	9.90
.136 11/32" 17/64"			1723-C	1.38	1723-M	11.10
.136 23/64" 5/32"	H375-F	20	1724-C	1.45	1724-M	11.63
5/32" 3/16x11/32" 25/64"	H378-F	17	1726-C	1.77	1726-M	14.10
5/32" 3/16x11/32" 21/32"	H379-F	15	1727-C	1.77	1727-M	14.10



GC DIAL CORD CLIPS *NICKEL PLATED*

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Used on Cord No. A B C						
75-75A ⅛" 7/64" 3/32"	H745-F	30	6221-C	$ .68	6221-M	$ 5.43
74-74L ¼" 5/32" 5/32"	H746-F	40	6222-C	.77	6222-M	6.08
73-73X 3/16" 7/64" 3/16"			6223-C	.78	6223-M	6.30



GC TERMINAL STRIP ASSORTMENT

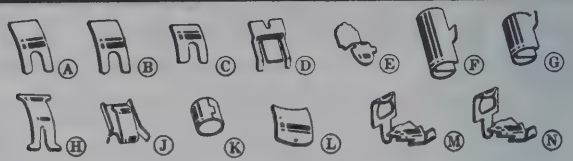
1/16" INSULATION - 3/8" SPACING

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100
Assorted	H250-F	4		
1 Lug			1781-C	$ 2.70
2 Lugs			1782-C	2.70
3 Lugs			1783-C	2.82
4 Lugs			1784-C	3.90
5 Lugs			1785-C	4.50
6 Lugs			1786-C	4.80
7 Lugs			1787-C	8.70
8 Lugs			1788-C	9.60



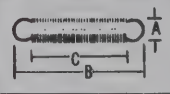
GC DIAL PULLEYS *BRASS*

Description and Spec.	50-Line No.	Part No.	Net Per 100	No.	Net Per M
Assorted A B C D (Groove Wd.)	H1966-F				
3/8" .120 1/8" 3/32"		6057-AC	4.62	6057-AM	36.97
7/16" .067 13/64" 1/8"		6057-BC	6.85	6057-BM	54.88
½" 1/8" 7/16" 3/32"		6057-GC	8.48	6057-GM	67.93
.620 .128 .165 1/16"		6057-CC	9.35	6057-CM	74.76
.860 .128 5/32" .050		6057-FC	16.05	6057-FM	128.34



GC RADIO KNOB SPRINGS

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asst.	H480-F	18				
TV Spring Asst.	H460-F	12				
No. 1050 Kit of 35 Springs						
No. 1051 Kit of 100 Springs						
Width Length For Knob Shaft Dia.						
(A) 5/32" Light 7/16" ¼"	H482-F	20	6460-C	1.05	6460-M	$ 8.38
(B) 5/32" Heavy 7/16" ¼"	H484-F	20	6461-C	1.10	6461-M	8.78
(C) 5/32" 5/16" ¼"	H487-F	20	6462-C	.88	6462-M	7.10
(D) 3/8" 5/32" ¼"	H489-F	10	6463-C	1.18	6463-M	9.40
(E) 7/32" 13/32" ¼"			6464-C	1.85	6464-M	14.78
(F) 5/32" 3/8" ¼"	H492-F	8	6465-C	2.35	6465-M	18.83
(G) 9/32" ¼" ¼"			6466-C	2.80	6466-M	22.43
(H) 5/32" ½" ¼"			6467-C	1.27	6467-M	10.10
(J) 5/32" 3/8" ¼"	H494-F	10	6468-C	1.50	6468-M	11.93
(K) 11/32" ¼" ¼"			6469-C	2.35	6469-M	18.83
(L) 3/8" 3/8" ¼"	H497-F	10	6470-C	1.50	6470-M	12.02
(M) 3/8" 7/16" ¼"	H498-F	10	6471-C	2.55	6471-M	20.40
(N) 3/8" 7/16" 5/16"	H499-F	10	6472-C	2.33	6472-M	18.68
TV Knob Spring .202" Shaft	H462-F	10	8541-C	1.27	8451-M	10.10
TV Knob Spring 3/8" Flat Shaft	H464-F	10	8542-C	1.52	8542-M	12.08



GC DIAL DRIVE TENSION PHONO SPRINGS

STEEL-CADMIUM PLATED

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asst. Reg. Dial Drive						
Asst. Small Dial Drive						
No. 1055 Kit of 25 Asst. Net $1.23	H401-F	8				
No. 1056 Kit of 100 Asst. Net $3.57	H400-F	10				
Asst. Lge. Tension Spgs.	H421-F	10				
Asst. Sm. Tension Spgs.	H420-F	10				
A B C Wire Size						
⅛" ½" ¼" .019	H403-F	10	6450-C	$ 5.03	6450-M	$40.33
⅛" 1" ¾" .019	H406-F	8	6451-C	3.78	6451-M	30.30
3/16" 1" 5/8" .020	H408-F	8	6452-C	4.23	6452-M	33.82
3/16" 1 3/8" 1" .020	H410-F	8	6453-C	4.33	6453-M	34.72
¼" 1½" 1" .026	H412-F	6	6454-C	5.60	6454-M	44.85
¼" 2" 1½" .026			6455-C	6.92	6455-M	55.35



GC COMPRESSION SPRINGS

Description and Spec.	50-Line No.	Qty. In Box
Asst. Small	H440-F	20
Asst. Large	H441-F	15



GC FUSE CLIPS

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
For ¼" Fuses, No. 6 Mounting Hole TV Fuse Clip, No. 8618 ($ .25) Net)	H600-F	12	6311-C	$1.85	6311-M	$14.82



GC PHONO TURNTABLE MOUNTING SPRINGS

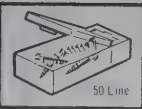
Description and Spec.	Part No.	Net Per 100	No.	Net Per M
O.D. Lgth. Wire Size No. of Coils				
1"x1 1/16" 13/16" .079 4	7497-C	$ 3.17	7497-M	$25.35

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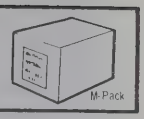
GC ELECTRONICS

RADIO & TV HARDWARE

ALL 50 LINE BOXES - .36 Net









GC EYELETS *BRASS*

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asst. Rivets and Eyelets	H526-F	55				
Asst. Eyelets and Clamps	H744-F	60				
Eyelet Asst.	H510-F	50				
Shank Dia. / Length Under Head / Head Dia.						
.087 / 1/8" / .145			7251-C	$ .28	7251-M	$ 2.27
.087 / 5/32" / .145			7252-C	.35	7252-M	2.85
.087 / 7/32" / .145			7253-C	.47	7253-M	3.20
.087 / 11/32" / .180			7254-C	1.08	7254-M	8.70
.123 / 5/32" / .197	H515-F	50	7257-C	.50	7257-M	3.98
.123 / 7/32" / .195			7259-C	.40	7259-M	3.20
.123 / 1/4" / .195			7260-C	.52	7260-M	4.18
.123 / 9/32" / .195			7261-C	.53	7261-M	4.25
.125 / 3/16" / .289			7264-C	.92	7264-M	7.30
.127 / 13/32" / .222			7265-C	1.12	7265-M	8.93
.182 / 3/16" / .315			7269-C	.32	7269-M	2.53



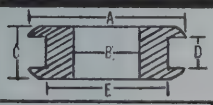
GC RIVETS *NICKEL PLATED*

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asst. Rivets and Eyelets	H526-F	55				
Rivet Assortment	H525-F	50				
TV Interlock Receptacle Rivets	H527-F	Asst.				
Shank Dia. / Length Under Head						
.059 / 5/32"			7276-C	$ .88	7276-M	$6.98
.059 / 3/16"			7277-C	.88	7277-M	6.98
.060 / 1/4"			7278-C	.58	7278-M	4.72
.088 / 3/16"			7280-C	.95	7280-M	7.53
.098 / 3/16"			7283-C	.98	7283-M	7.92
.121 / 1/8"			7286-C	.77	7286-M	6.20
.121 / 3/16"			7288-C	.60	7288-M	4.75
.121 / 1/4"			7290-C	.70	7290-M	5.70
.121 / 1/2"			7293-C	.65	7293-M	5.15
.146 / 5/16"			7296-C	.82	7296-M	6.83



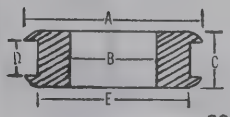
GC GRID CAPS *NICKEL PLATED*

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asstd.	H609-F	8				
Glass			6291-C	$1.33	6291-M	$10.73
Metal			6292-C	1.35	6292-M	10.77
TV Spring Type, Asstd.	H610-F					
1/4" High-Voltage			8838-IRC	3.80	8838-IRM	30.35
3/8" High-Voltage			8838-2RC	3.97	8838-2RM	31.75
1/4" Insulated High-Voltage	H612-F	1	8834-C	25.13	8834-M	228.96
3/8" Insulated High-Voltage	H614-F	1	8835-C	25.13	8835-M	228.96



GC RUBBER GROMMETS

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asstd. Soft Grommets No. 1040 Kit of 50 Asstd. Grommets Net $.75	H025-F	15				
A / B / C / D / E						
11/32" / 1/8" / 3/16" / 1/16" / 1/4"	H030-F	16	1041-2C	$1.12	1041-2M	$8.93
1/4" / 3/16" / 1/32" / 1/16" / 3/16"	H032-F	14	1041-C	1.27	1041-M	10.08
3/16" / 1/4" / 1/4" / 1/16" / 3/8"	H034-F	12	1042-C	1.68	1042-M	13.50
5/8" / 3/8" / 1/4" / 1/16" / 1/2"	H036-F	10	1043-C	1.90	1043-M	15.15
1/2" / 3/16" / 1/4" / 1/16" / 5/16"			5710-C	3.80	5710-M	34.15
1/2" / 1/4" / 5/16" / 1/8" / 3/8"			7566-C	2.45	7566-M	19.53
7/8" / 9/16" / 15/64" / 1/16" / 3/4"			5711-C	3.53	5711-M	31,82
3/4" / 7/16" / 1/4" / 1/16" / 5/16"			5712-C	5.15	5712-M	41.22
13/16" / 1/2" / 9/32" / 1/16" / 5/8"	H038-F	8	1043-IC	2.88	1043-IM	26.40
1 1/16" / 3/8" / 5/16" / 1/16" / 13/16"			7569-C	5.75	7569-M	45.93
3/4" / 5/16" / 11/32" / 3/32" / 13/32"			5715-C	6.80	5715-M	54.36
1 1/8" / 5/8" / 5/16" / 1/16" / 7/8"			5716-C	5.73	5716-M	45.90
1 5/16" / 1 1/16" / 3/8" / 1/16" / 1"			5717-C	11.55	5717-M	98.46



GC PURE GUM GROMMETS

Soft rubber grommets for shock dampening. For mounting tuning condensers, sockets, phono motors, etc.

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asst. No. 7581 Kit of 100 Asst. Grommets. $1.62	H040-F	12				
A / B / C / D / E						
7/16" / 3/16" / 7/32" / 1/16" / 5/16"	H042-F	12	7582-C	1.62	7582-M	12.90
5/16" / 1/4" / 1/4" / 1/16" / 3/8"	H043-F	10	7584-C	2.30	7584-M	18.38



GC RADIO KNOB FELTS

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
1/4" O.D. x 1/4" Hole, Brown	H760-F	40	1065-C	.38	1065-M	3.22



GC RUBBER FEET *SCREW TYPE*

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
O.D. / High	H050-F	8				
3/8" / 3/16"	H052-F	8	1075-BC	1.32	1075-BM	10.80
1/2" / 1/4"	H054-F	8	1075-CC	1.74	1075-CM	14.40
5/8" / 5/16"	H056-F	8	1075-FC	2.46	1075-FM	19.90



GC RUBBER BUTTON BUMPERS

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
A O.D. / B Height / C Hole / E Height						
3/8" / 3/8" / 3/16" / 3/16"			7596-C	1.43	7596-M	11.50
1/2" / 7/16" / 1/4" / 1/4"	H058-F	8	7597-C	2.10	7597-M	16.85
5/8" / 9/16" / 3/8" / 5/16"			7598-C	3.38	7598-M	27.10



GC RUBBER TACK BUMPERS

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
3/8" O.D.	H071-F	10	1075-C	1.85	1075-M	14.78



GC FELT PADS

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asstd. Felt Pads 1/2" O.D. x 1/4" Thick Felt Pads	H074-F	40	1071-C	.30	1071-M	2.38



GC CORD STRAIN RELIEFS

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Will Fit P.O.S.J. Cord	H048-F	5	6675-C	5.27	6675-M	42.11



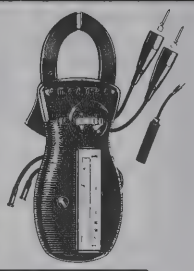
GC ANGLES AND BRACKETS

Description and Spec.	50-Line No.	Qty. In Box	Part No.	Net Per 100	No.	Net Per M
Asstd.	H570-F	12				
A / B / C / Hole Size						
1/4" / 3/16" / 9/32" / 6			6261-C	1.12	6261-M	8.97
3/8" / 1/4" / 9/32" / 6			6262-C	1.40	6262-M	11.12
1/2" / 7/16" / 3/8" / 6			6263-C	1.58	6263-M	12.68

AMPROBE INSTRUMENT

DIVISION OF SOSS MANUFACTURING COMPANY

ROTARY SCALE MODELS

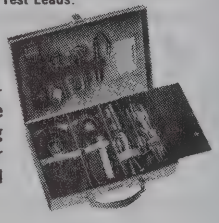


Offer you these outstanding features. • Only the Ohms scale plus one voltage scale or current scale is visible at any one time, providing greater reading speed and accuracy; on models other than RS-3 or RS-1000 only scale selected appears. • Magnified unbreakable window. • Pointer-lock "freezes" pointer at reading. • Accurate within ±3% full scale reading. • One hand operation.

MODEL	RANGES	PRICE
RS-1	0-6/15/40/100 Amps A.C. 0-150/600 Volts A.C.	$43.85
RS-2	0-6/15/40/100 Amps A.C. 0-150/300 Volts A.C.	$43.85
RS-3	0-6/15/40/100/300 Amps A.C. 0-150/300/600 Volts A.C. 25Ω Mid-Scale	$57.50
RS-300	0-6/15/40/100/300 Amps A.C. 0-150/300/600 Volts A.C.	$52.50
RS-1000	0-15/40/100/300/1000 Amps A.C. 0-150/300/600 Volts A.C. 25Ω Mid-Scale	$76.50

Price includes Top-Grain Cowhide Leather Carrying Case and Test Leads.

AMPROBE TEST-MASTER KITS



Truly the sign of the professional, these good-looking, rugged, genuine cowhide cases contain all the equipment you need to do all your electrical testing jobs with precision and accuracy. The Test-Master has a separate covered section to hold your small hand tools easily within reach.

CONTAINS:	Model TM-11	Model TM-33	Model TM-43	Model TM-53	Model HK*
RS-1	one	—	—	—	—
RS-3	—	one	one	one	—
PSA-1	—	—	one	one	—
A-45L	—	—	one	one	—
A-45	one	one	—	—	one
Deca-Tran A50-1	one	one	one	—	one
Price	$78.85	$92.85	$103.85	$76.85	$43.85

*Designed for the man who already owns an Amprobe RS.

HIGH CURRENT AMPROBES



Designed to fill the need of the individual consistently working in current and voltage ranges higher than scale reading available on the rotary scale models.

MODEL	RANGE	PRICE
600	0-15/30/60/150/300/600 Amps A.C. 0-150/300/600 Volts A.C.	$65.50
1200	0-15/60/150/300/1200 Amps A.C. 0-150/300/600 Volts A.C.	$74.50

Price includes Top-Grain Cowhide Leather Carrying Case and Model VL-22 Voltage Test Leads.

AMPROBE CABLE TRACER



Revolutionary new CABLE TRACER lets you search—and unmistakably identify—up to 10 separate circuits simultaneously. With CABLE TRACER there's no needless handling of wires to locate a conductor. Every time the Indicator Button is pressed, you identify a circuit without extra trips between conductor ends. **Price: $49.50**

AMPROBE DECA-TRAN



The Model A-50-1 Amprobe Deca-Tran can be used with any model Amprobe to extend the amperage ranges 10 times up to 1200 amps.

Model A-50-1 w/2' Line Cord Price: $30.50
Model A-50 Price: $27.50

AMPROBE JR. TEST-MASTER KITS



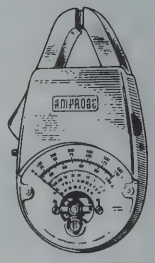
The Amprobe Jr. Test-Master Kit consists of a specially designed leather case that contains one of the all new **YO Amprobe Jr.** voltage testers, an **Amprobe A-45 Energizer,** battery attachment and test leads.

The New YO models are the only precision instruments in their price class that measure voltage, amperage and resistance, instantly and accurately on a calibrated scale. **Price: $36.50**

MODEL	3 AMMETER RANGES (full scale) BASIC INST.	ENERGIZER 5x	ENERGIZER 10x	2 VOLTAGE RANGES
TM-YO "525"	0-25	0-5	0-2.5	0-150/600
TM-YO "550"	0-50	0-10	0-5	0-150/600
TM-YO "500"	0-100		0-10	0-150/600
TM-YO "25"	0-25	0-5	0-2.5	0-125/250
TM-YO "50"	0-50	0-10	0-5	0-125/250
TM-YO "100"	0-100		0-10	0-125/250

OHMMETER RANGE: 25 Ohms Mid-Scale
Frequency—60 cycles A.C. (other frequencies available)

AMPROBE JR. "YO" MODELS

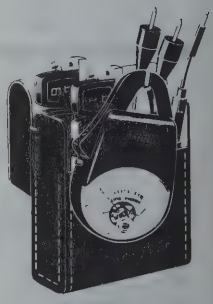


Ranges and models are the same as for TM-YO Models above, except furnished with test leads only. When ordering specify YO "525", YO "550", etc. **Price: $27.50**
P-1 and K leather cases available. Order separately.

AMPROBE JR.

Available in same ranges and models as for TM-YO Models above **without ohmmeter.** One additional model available: Model Y10—0-10 amps AC, 0-125/250 volts, AC. Furnished with test leads only. When ordering specify Y10, Y25, Y500, etc. **Price: $22.50**
P-1 and K leather cases available. Order separately.

AMPROBE JR. LINE-PROBE



Unique, versatile four-in-one pocket-sized tester. Not only lets one man trace up to 10 circuits at one time... it measures voltage (±3% FS)...gives current readings "in-a-snap"...and checks for continuity. Pick from four models... all furnished with 10 station markers, two station marker holders, voltage leads, grounding leads, fused battery attachment and genuine leather case.
Price: $38.50

MODEL	VOLTS, AC	AMPS, AC
ALP25	0-125/250	0-25
ALP50	0-125/250	0-50
ALP525	0-150/600	0-25
ALP550	0-150/600	0-50

AMPROBE ENERGIZERS



The New, more versatile, **Model A-45L ENERGIZER** now permits current readings on permanently wired low-current electrical equipment by simplifying series connection. It increases the sensitivity of your ammeter 5x or 10x for more precise readings directly at outlets by "splitting" double conductor line cords while the appliance is connected to the line. Capacity 10 amps. **Price** w/weatherproof pouch: **$6.75**

Model A-45 ENERGIZER multiplies sensitivity of any Amprobe by 5x or 10x for more precise readings. It also permits low-current readings by "splitting" double conductor line cords. **Price** w/weatherproof pouch: **$5.00**

PHASE SEQUENCE ADAPTOR



The Model PSA-1 Phase Sequence Adaptor is used to determine the phase sequence of polyphase circuits. When used in conjunction with any Amprobe RS model it permits you to determine phase sequence of motors and other electrical equipment using three phase lines up to 550 volts. **Price** w/leather case: **$11.85**

All prices slightly higher outside the U.S.

CANADIAN SALES DIVISION: ATLAS RADIO CORP., TORONTO, ONTARIO • **EXPORT CABLE ADDRESS: AMPROBE LYNBROOK**

© U.C.P., Inc.

AMPROBE RECORDERS

Leather-cased Amprobe Miniature Strip Chart Recorders are supplied with permanently attached motor line cord and one roll each of necessary strip charts. Meter line cord, extensions, adaptors, transducers, etc., supplied where indicated. Specify chart speed desired.

Fig. 1
LEATHER-CASED
TYPE "A"

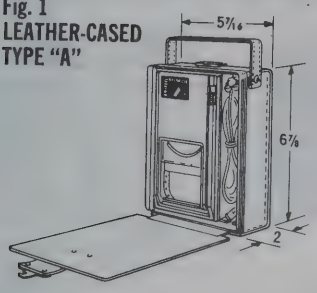
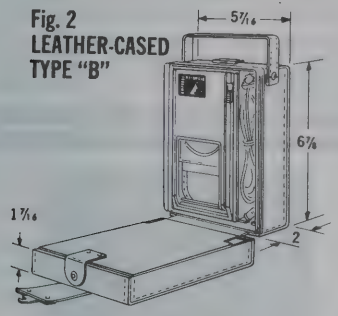


Fig. 2
LEATHER-CASED
TYPE "B"



AMPROBE RECORDER MODELS

Model No.	Fig.	Description	Range	Price
AC VOLTMETERS				
LAV2X	1	Dual Range, Expanded Scale AC Voltmeter	95-130v AC 190-260v AC	$89.85
LAV3X	1	Three Range, Expanded Scale AC Voltmeter	95-130v AC 190-260v AC 380-520v AC	124.85
LAV8600	1	Three Range, AC Voltmeter 1380Ω/V	0-150/300/600v AC	89.95
AC AMMETERS				
LAA81	2	AC Ammeter. Furnished with Model A-70FL Transducer	0-10/50/250/500 Amps AC	99.85
LAA82	2	AC Ammeter. Furnished with Model A-60FL Transducer	0-5/25/100/250 Amps AC	94.85
AC VOLT/AMMETERS		All models supplied with appropriate transducer, one RAL-4 Adaptor lead and one five-foot extension lead.		
LAVA81	2	AC Volt/Ammeter. Furnished with A-70FL Transducer.	Volts: 95-130/190-260 Amps: 0-10/50/250/500	134.85
LAVA82	2	AC Volt/Ammeter. Furnished with A-60FL Transducer.	Volts: 95-130/190-260 Amps: 0-5/25/100/250	129.85
LAVA83	2	AC Volt/Ammeter Furnished with A-70FL Transducer	Volts: 95-130/190-260/380-520 Amps: 0-10/50/250/500	169.85
LAVA84	2	AC Volt/Ammeter Furnished with A-60FL Transducer.	Volts: 95-130/190-260/380-520 Amps: 0-5/25/100/250	164.85
TEMPERATURE RECORDERS		All models supplied with appropriate Temperature probe.		
LT8100	2	Temperature Recorder. (Dual Range) Furnished with FL-RBT-1 Thermometer.	−50° to +100°F +50° to +250°F	103.85

STRIP CHARTS

Individually packaged 30' chart rolls packed six (6) to a box. Sold in multiples of six (6) only. Minimum order 6. Price: $1.50 per roll.

Cat. No.	Description	For Use With Recorder Model
835X3A	Marked: 95-130/190-260/380-520 Volts, AC	LAV2X, LAV3X, LAVA81, LAVA82, LAVA83, LAVA84
830AV600	Marked: 0-150/300/600 Volts, AC	LAV8600
850A	Marked: 0-5/25/100/250 Amps, AC.	LAA81, LAA82, LAVA83, LAVA81, LAVA82, LAVA84
823T1	Marked: −50°F to +100°F	LT8100
833T2	Marked: +50°F to +250°F	LT8100

SPECIFICATIONS

Strip Chart Size: 2½" wide x 30' long

Standard Chart Speeds: 1 inch or 6 inches or 12 inches per hour. (Other speeds available.) Unless otherwise specified, 12 inches per hour chart speed will be shipped.

Impression Rate: Once every 5 seconds at 12 inches per hour
Once every 10 seconds at 6 inches per hour
Once every 1 minute at 1 inch per hour

Power Requirements: 115v AC, 60 cycles 2.5 Watts
(Unless otherwise specified)

Accuracy: AC Ammeters and AC Voltmeters: ±3% F.S.
AC Expanded Scale Voltmeters: ±1.25% F.S.
Temperature Recorders: High Range: +50°F to +250°F: ±5°F
Low Range: −50°F to +20°F: ±4°F
+20°F to +100°F: ±3°F

THERMOMETERS

Amprobe Resistance-Bulb Thermometers are available with either 4¾" or 1" bulb. They are liquid tight and are furnished with a 12 foot lead, allowing flexibility in locating Recorder.

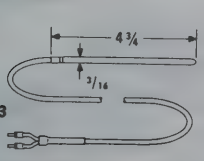


Fig. 3

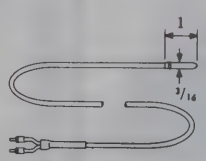


Fig. 4

Model	Description	Fig.	Price
FL-RBT-1	Resistance Bulb Thermometer. Use with Model LT8100. Range: −50°F to +100°F, +50°F to +250°F.	3	$10.00
FL-RBT-2	Resistance Bulb Thermometer. Use with Model LT8100. Range: −50°F to +100°F, +50°F to +250°F.	4	10.00

TRANSDUCERS

Amprobe snap-around (split-core) transformers monitor current without interrupting line or service. Output is provided through six-foot lead, allowing flexibility in locating Recorder.

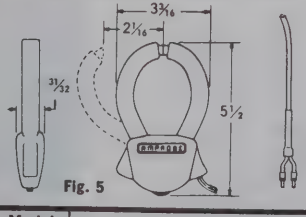
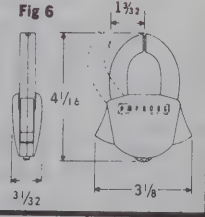


Fig. 5

Fig 6



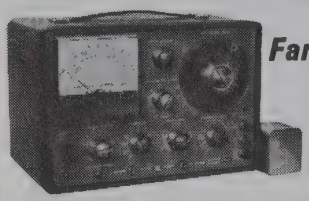
Model	Description	Fig.	Price
A-70FL	Current Transducer: Range: 0 to 10/50/250/500 Amps	5	$24.75
A-60FL	Current Transducer: Range: 0 to 5/25/100/250 Amps	6	19.75

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481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351

For production line testing EICO Test Instruments

EICO Electronic Instrument Co.

professional R-C bridge and R-C-L comparator



EICO 965

FaradOhm Bridge/Analyzer

- 0.5 VAC* (at 60 cps) bridge supply voltage permits testing all types of capacitors without damage. Inputs for external bridge supply or polarizing voltage when desired.
- Sensitive detector amplifier with metered output gives sharply defined null point. AGC eliminates need for sensitivity adjustment.

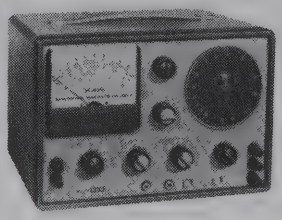
Kit **$99.95**; Wired **$169.95**

- Internal variable DC supply (0.4 to 500V in 6 ranges) for capacitance leakage analysis, with internal DC VTVM (0.15 - 500V in 6 ranges), and DC VT micro-milliameter (.015 μa up to 15 ma in 11 ranges), externally usable for diode reverse & transistor quiescent current measurements.
- Bridge capacitance measurements from 5pf to 5000μf in four ranges • Bridge resistance measurements from 0.5 ohms to 500 megohms in 4 ranges; to 200,000 megohms using internally metered variable DC supply.
- Bridge R-C-L comparison measurement against external standards over ratio range of .025 to 50.

Other features: • Power factor measurement • meter protected against overload • meter lights up to warn of power supply overload • instant 'zero' pushbutton adjustment regardless of connections or control settings.

* Except 10VAC on lowest capacitance range. **$129.95 Wired Only**

IM/harmonic distortion meter & AC VTVM



EICO 902

HD MEASUREMENT: Incorporates a continuously variable 20 - 20,000 cps Wien Bridge rejection filter (in three ranges). Quality tuning capacitor with 6:1 vernier eases frequency setting. Less than 0.7 V. input required for measurement. 0.3% distortion read full-scale. Internal distortion: less than 0.1%.

IM distortion measurement: Incorporates a 7 kc oscillator for a high frequency source, and an additionally filtered line frequency signal for a low frequency source. Selection on panel of either 4:1 or 1:1 LF to HF voltage ratios. External low frequency sources up to 400 cps and external high frequency sources down to 2 kc may be fed to the mixing bridge through panel jacks that switch out the internal sources when used. Less than 0.7 V is sufficient input for IM distortion measurement. 0.3% distortion is read-full-scale. Residual distortion: approx. .05%.

AC VTVM: Provides a highest range of 300V and a lowest range of 10mv, with uniformly excellent frequency response. AC VTVM section employed in all instrument functions, and the linear 0-1 and 0-3 meter scales are used for all measurements. Wired **$250.**



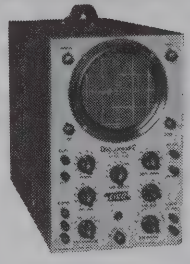
EICO 250 AC VTVM AND AMPLIFIER

Sensitive, stable, and accurate 12-range AC VTVM responses to the average value of the applied waveform and reads in RMS value of a sine wave. Ranges are from 1 mv to 300V, and the 0 - 1, 0 - 3 meter scales are linear. Decibel scales based on 0db = 1 mw in 600 ohms. Frequency response: ±0db, 10c - 600 kc. Input impedance: 10 Mohms. Panel switch converts instrument to wide-band amplifier with 60db gain, maximum undistorted output of 5 V RMS, frequency response +0, −3 db 8c - 800 kc.

Kit **$49.95**; Wired **$79.95**

EICO 255 AC VTVM: Identical to 250 less amplifier facility. Kit **$44.95**; Wired **$72.95**

EICO 261 AC VOLT-WATT METER. Kit **$49.95**; Wired **$79.95**



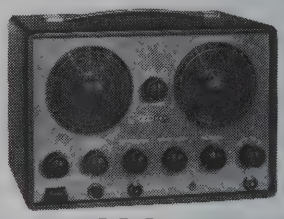
EICO SCOPES

EICO 460 WIDEBAND DC 5" SCOPE: Easily reproduces 3.58 mc color TV synchronizing burst. Vert, amp. flat from DC to 4.5 mc, usable to 10 mc; 25 mv rms/inch sensitivity. Horiz. amp. flat from 1 cps to 400 kc; 0.6 v rms/inch sensitivity. Automatic sync. Sweeps from below 10 cps to 100 kc.

Kit **$89.95**; Wired **$129.50**

EICO 427 HIGH SENSITIVITY G.P. DC 5" SCOPE: Vert. amp. flat from DC to 500 kc, −6 db at 1 mc; 3.5 mv rms/cm sensitivity. Horiz. amp. flat from 2 cps to 450 kc; 0.18 v rms/cm sensitivity. Automatic sync. Sweeps from 10 cps to 100 kc. Kit **$69.95**: Wired **$109.95**

435 WIDEBAND D-C 3" SCOPE: Flat from DC-4.5 mc (usable to 10 mc); 18 mv rms/cm sensitivity; 3-stage p-p amplification; edge-lit calibration grid; Zener diode calibration; distortionless V&H trace expansion; 10 cps-100Kc sweeps in 4 ranges. Kit **$99.95**; Wired **$149.95**



EICO 369

TV/FM Sweep Generator with Built-in Post Injection Marker

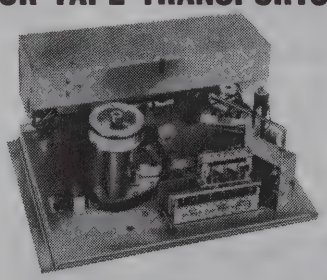
Feeds only the sweep signal to the circuit under test or alignment. A demodulator picks off the response signal and feeds it to a mixer stage where the markers are added before scope display. Troublesome interaction effects eliminated. Sweep generator has controllable inductor sweep circuit (all electronic) and 5 fundamental ranges from 3.5 to 316 mc. Variable frequency marker provides output on 3 fundamental ranges from 2 to 60 mc., and 60 to 225 mc range on harmonics.

Kit **$89.95**; Wired **$139.95**

VERSATILE, TOP QUALITY 3-MOTOR TAPE TRANSPORTS

Very reliable, heavy-duty tape decks of the highest performance quality, with proven application in FM recording for medical electronics, language labs and for high reliability applications. U. S. made. Prices on request.

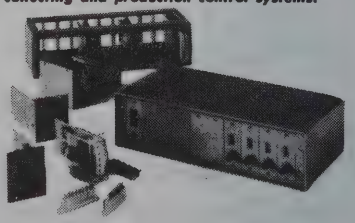
EICO 2460: Heavy duty, very compact 3-motor deck, designed for permanently accurate, spill-free DC braking of the reels. Electrically operated except for mechanical operation of the pinch-roller. Provides 7½ and 3¾ ips tape speeds and 117 VAC, 60 cps operation. May be specified for 1⅞ ips and/or 50 cps operation. Indirect capstan drive with seamless Neoprene belt and precisely machined steel bar stock capstan flywheel for perfect dynamic balance. Supplied normally with one professional head mount, but up to 3 heads may be installed if required. Wow and flutter 0.15% at 7½ ips; 0.2% at 3¾ ips. Speed accuracy within 1%. Vertical or horizontal operation.



EICO 160: Very high quality 3 motor deck with 3 professional head mounts. All of the features given for the 2460 above plus — All-electric push-button operation with two solenoids, and a studio-quality, 24 stator slot, hysteresis synchronous capstan motor with speed accuracy of ±0.3%.

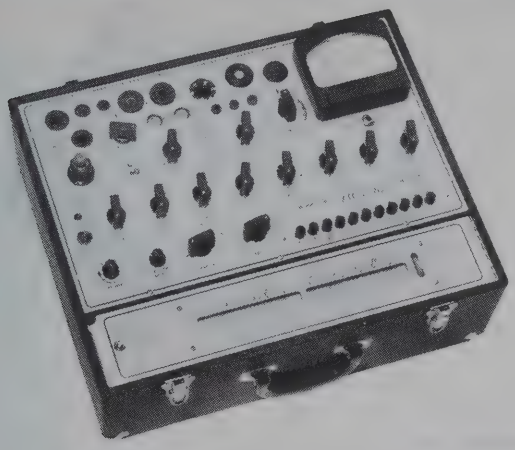
EICO DATA PROCESSING & CONTROL COMPONENTS

Plug-in modules for easy assembly of a wide variety of data collecting and production control systems.



COUNTER-INDICATORS: (Electro-mechanical impulse counter, electro-mechanical pre-set counters, solid state counters, electronic numerical indicators). **CONTROL ELEMENTS:** (Switches, relays, patchboards, coders and decoders, logical matrices and gates.) AUXILIARY EQUIPMENT.

HICKOK TUBE TESTERS



MODEL 580

Laboratory and Industrial Portable Tube Tester

An entirely new instrument which can be set up directly to any tube test condition without having to rely upon the built-in roll chart. All tube potentials individually variable. Accommodates 4, 5, 6, 7-pin, loctal, octal, 7, 9 and 10-pin miniature, 7 and 8-pin sub-miniature, 5 and 7-pin Nuvistors, Compactrons and Novars. Leakage test sensitivity to 50 megohms. Gas test circuit detects grid current to 0.05 microamperes. Gm ranges to 60,000 umhos. Cathode reserve test. Push button feature speeds check on dual section tubes. In black leatherette portable case, 19" x 15½" x 7". 105-125v, 60 cycles. 60 watts. Shipping weight, 35 lbs.

Model 580 Laboratory and Industrial Portable Tube Tester—Net Each **$585.00**

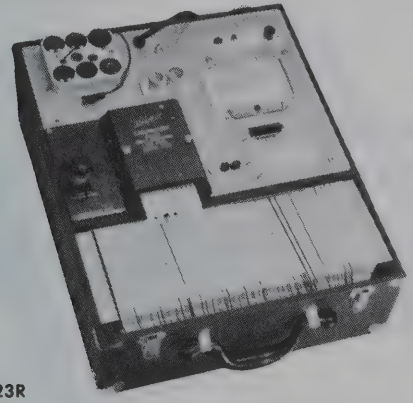


MODEL 539C

New Industrial and Laboratory Portable Tube Tester

Tests VR tubes, low power thyratrons, "4 digit" types. VR test evaluates voltage regulator tubes under actual operating conditions. Tests Nuvistors, Novars, Compactrons, 10-pin types. Provision for separate monitoring of plate current. Panel terminals provide access to grid, plate, cathode and heater circuits, permitting direct measurement of voltages and current for "non-standard" or "tailored" tests. Covers 600 to 60,000 umhos in six ranges. Dual leakage readings: directly on meter or by neon short indicators (Sensitivity to 50 megohms). Complete with socket savers. In black leatherette portable case, 16¾" x 18⅜" x 7½". 105-125v, 50-400 cycles, 40 watts. Shipping weight, 35 lbs.

Model 539C Industrial and Laboratory Tube Tester—Net Each **$485.00**



MODEL 123R

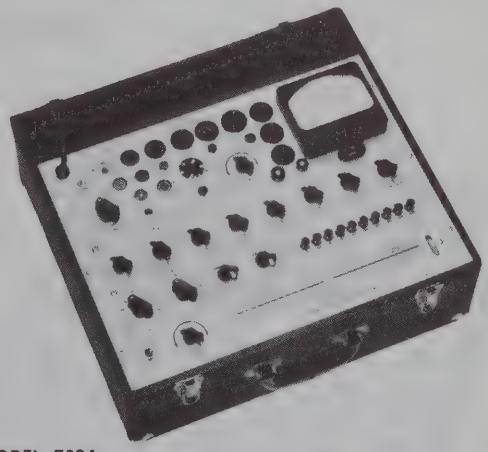
Cardmatic® Automatic Tube Tester

Ideal for Industrial and laboratory application. A genuinely complete tube tester, card-programs complete "fringe" tests, saturation and cut-off tests, in addition to basic Gm measurement. Gm ranges: 500-26,000 umhos; Current ranges: 100 ua to 510MA. Complete with pin straighteners, socket savers and 500 selected cards. In black leatherette portable case, 19½" x 16½" x 9¼". 105-125v, 50-60 cycles, 55 watts. Shipping weight, 57 lbs.

Model 123R—Cardmatic® Automatic Tube Tester—Net Each **$585.00**

Model 121 Cardmatic® Automatic Tube Tester. Low-priced version of the Model 123R. Measures Gm plus saturation, cut-off and important "fringe" tests. Also Tests transistors and diodes. Supplied with 342 selected cards covering popular entertainment tube types. In red leatherette portable case, 19¾" x 13¼" x 8". Shipping weight, 39 lbs.

Net Each **$359.50**



NEW MODEL 752A

New Industrial Communications Portable Tube Tester

Designed for use in maintaining communications equipment and industrial electronic apparatus. New voltage regular test circuit tests VR tubes to handbook specifications, including firing point, regulating voltage and current range. Tests Nuvistors, Compactrons, Novars, 10-pin types. Push button test for dual-section tubes speeds selection of tubes for balanced or matched characteristics. Covers 1500 to 30,000 umhos in five ranges. Interelement leakage read directly on the meter (Sensitivity to 10 megohms). Illuminated meter and roll chart. Complete with socket savers and pin-straighteners. In black leatherette portable case, 18⅜" x 16¾" x 7½". 105-125v, 50-60 cycles, 40-70 watts. Shipping weight, 27 lbs.

Model 752A Industrial and Communication Portable Tube Tester—Net Each **$355.00**

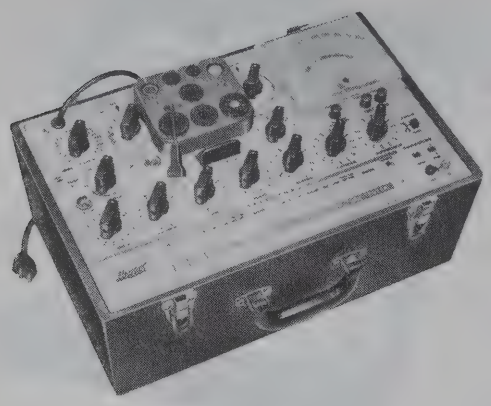
THE HICKOK ELECTRICAL INSTRUMENT CO.

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TUBE TESTERS

HICKOK

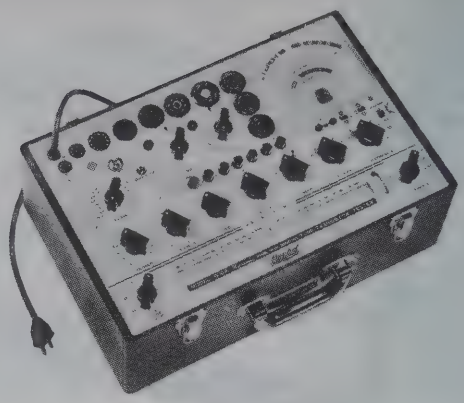


MODEL 6000A

Service Technician's Deluxe Portable Tube and Transistor Tester

Has replaceable socket plate for obsolescence protection. Sensitive, instantaneous inter-element leakage and shorts test (Sensitivity—in excess of 3 megohms) filament continuity test. Covers 3,000 to 15,000 umhos in 3 ranges. Tests Compactrons, Nuvistors, Novars and 10-pin types. 14-position selector switches, no paralleled elements. Also tests transistors and diodes. In red leatherette portable case, 16¾" x 11¾" x 7½". 105-125v, 50-70 cycles, 40 watts. Shipping weight, 21 lbs.

Model 6000A Deluxe Portable Tube and Transistor Tester—Net Each $239.50



MODEL 800A

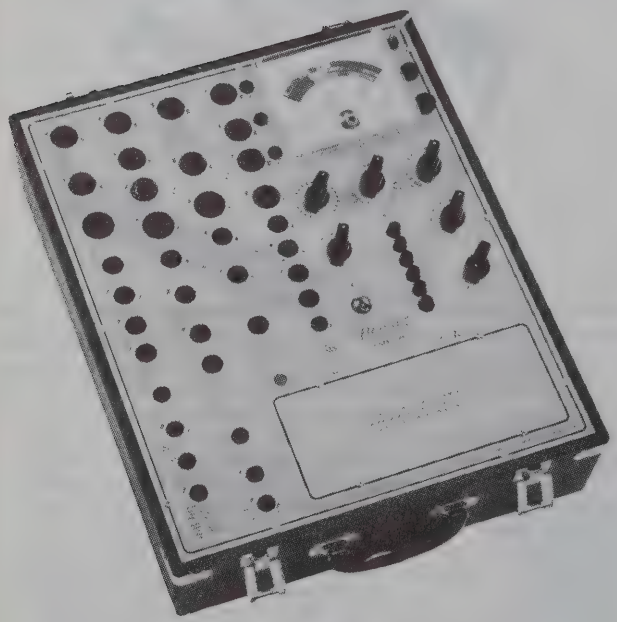
Service Technician's Portable Tube, Transistor and Diode Tester

Tests 4, 5, 6, 7-pin, octal, loctal, compactrons, 10-pin "headers," 5 and 7-pin Nuvistors and Novars. 14-position selector switches, no paralleled elements. Provides direct meter reading of inter-element leakage and shorts. New filament continuity test speeds test of series string tubes. Also tests transistors and diodes. Complete with test leads. In red leatherette portable case, 16¾" x 11¾" x 7½". Shipping weight, 21 lbs.

Model 800A Portable Tube, Transistor and Diode Tester—Net Each $199.95

Model 800A Tube Tester with CRT Adapter, Replaceable Socket Savers and SA-2 Subminiature Socket Adapter—Net Each $234.15

NEW!

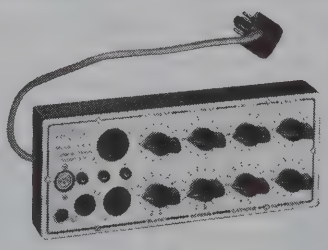


MODEL 799

"Mustang" Multi-Socket Tube Tester

Mutual Conductance tests in a unique solid-state design. Transistorized sensing circuit provides 50 megohm leakage tests, 0.1 ua gas and emission tests. 39 sockets includng new *decal* 10-pin socket. Color-coded "permutator" switch triples effective socket coverage. Two continuously variable Gm ranges to 20,000 umhos. Replaceable panel plate accommodates socket assembly for future tube additions. 15⅝" x 18½" x 6⅛". Shipping weight, 21 lbs.

Model 799 Multi-Socket Tube Tester—Net Each $199.95



MODEL CA-4

Universal Adapter

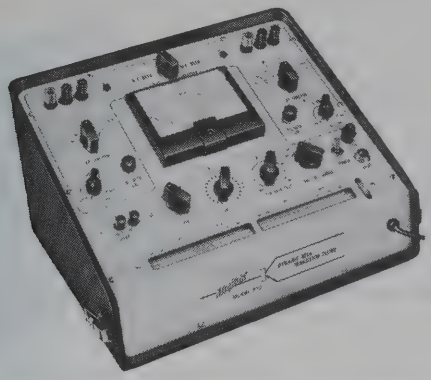
For testing Compactrons, Novars, 5- and 7-pin Nuvistors, 10-pin types. No paralleled connections — gives an honest, complete mutual conductance test when used with a Hickok Tube Tester. Suitable for Cardmatic models and most other models except Models 532, 533, 534, 536, 538, 539A, 546, 600 and 605. Shipping weight, 6 lbs.

Model CA-4 Universal Adapter—Net Each $49.50

THE HICKOK ELECTRICAL INSTRUMENT CO.

© U.C.P., Inc.

HICKOK TRANSISTOR TESTERS



MODEL 870

Dynamic Beta Transistor Tester

Measures AC and DC Beta. Collector test current variable up to 2 amperes, permitting Beta measurement on power transistors rated 5 amperes or more. Variable collector voltage and current permit tests according to manufacturers' specifications—Tests switching transistors, measures large signal DC Beta on power transistors—small signal AC Beta on low and medium power transistors. Icbo Ranges: 100ua, 1ma, 10ma; Beta Ranges: 0-100, 0-300. Complete with replaceable roll chart and test leads in black leatherette portable case 14 9/16" x 11¾" x 7⅞". 115v-60 cycles, 40 watts. Shipping weight, 22 lbs.

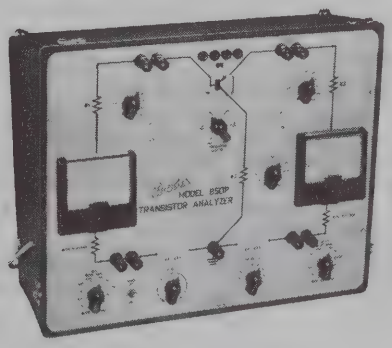
Model 870 DYNAMIC BETA Transistor Tester—Net Each $355.00

MODEL 850P

Engineer's Portable Transistor Analyzer

Ideal for use as a "breadboard" in transistor circuit design and development. Checks basic transistor parameters in any of three configurations; common base, common emitter and common collector. Identical input and output meters cover 100ua to 1 ampere in 5 ranges. Battery operated. Furnished complete with leads in black leatherette portable case, 16½" x 8" x 13½". Shipping weight 20 lbs.

Model 850P Engineer's Portable Transistor Analyzer—Net Each $169.50





MODEL 890

Dynamic Beta In-Circuit Transistor Test

Utilizes unique new test circuit to measure AC Beta in OR OUT of circuit with 5% accuracy. Measures these in-circuit parameters: AC Beta, Ic, Rin (transistor input impedance), Z Ohms (base-emitter circuit impedance). Measures AC Beta, Ic, Rin and Icbo out of circuit. Portable, completely self-contained, fully-transistorized — battery operated. 10¾" x 9" x 6½". Shipping weight 8 lbs.

Model 890 Dynamic Beta In-Circuit Transistor Tester—Net Each $137.50

MODEL 455A

Burn-Out Proof Volt—Ohm—Milliammeter

Has Hickok's exclusive overload cut-out and protection system providing complete safety against burnouts for the meter and all multipliers, shunts and other components. 20,000 ohms/volt AC and DC. AC/DC Volts: 3, 15, 60, 150, 600, 1200v: Resistance, 0-100 megohms in 4 ranges: Center Scale Ranges: 5, 500, 5000, 500,000 ohms. Current Ranges: 50ua, 1, 10, 100, 100 MA, 10 amperes. Attractive, streamlined case, large easy to read meter. Battery operated. 8½"L x 5⅞"W x 3"H tapering to 1¾"H. Complete with leads. Shipping weight (two per carton), 12 lbs.

Model 455A Burn-Out Proof Volt-Ohm-Milliammeter—Net Each $89.50



MODEL 470A

Electronic Volt-Ohmmeter

A major advance in VTVM design, the 470A provides increased ranges in all functions—using just two basic scales to cover eight ranges. AC and DC values are read from the same scales—AC errors due to crowding are eliminated. Ranges: DC, AC rms and AC peak-to-peak, 0.5-1500v. New AC-DC—Ohms single unit probe eliminates the need for multiple leads. Ohmmeter: Center Scale, 10 Ohms, Ohms X1, X10, X100, X1000, X10,000, X100,000, X1M, X10M. Readability 0.2 ohms to 100 megohms. Input impedance DC volts 15 megohms, AC volts 15 megohms. DC resistance paralleled with approximately 150 uufd. 105-125v, 50-400 cycles, 15 watts, 6⅜" x 7½" x 4½". Complete with single unit probe and test leads. Shipping weight, 8 lbs.

Model 470A Electronic Volt-Ohmmeter—Net Each $79.50

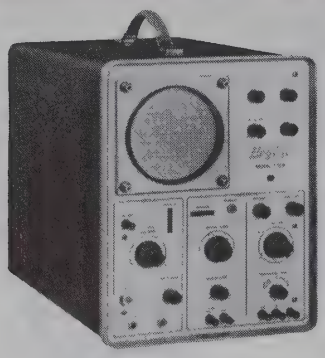
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VTVM - VOM - OSCILLOSCOPES

HICKOK

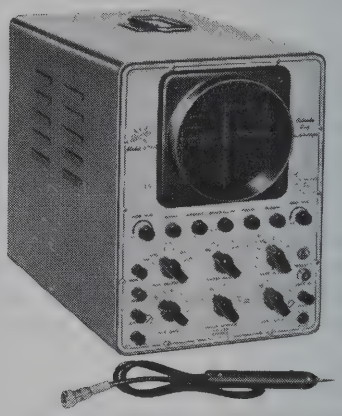


MODEL 770A

5", Wide-band Industrial and General Purpose Oscilloscope.

Calibrated 4MC DC vertical amplifier with 8-step and vernier attenuator. Built-in square wave calibrator. Eighteen direct reading, calibrated sweep rates from 0.5 sec/div to 1 usec/div. Choice of free-running, driven or automatic modes. 5 times sweep magnifier. Flat-faced, post-accelerated CRT. Illuminated, calibrated graticule. 13¾" x 11" x 17½". Shipping weight, 57 lbs.

Model 770A 5", Wide-band Industrial and General Purpose Oscilloscope—Net Each $585.00

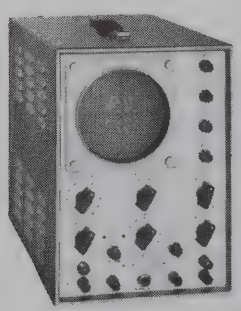


MODEL 675A

Wide Band, High Sensitivity Oscilloscope

5" scope with an illuminated, calibrated screen. Vertical amplifier response within 3 db, DC through 4.5MC, flat through 3.58MC color burst frequency. Astigmatic control provides a new standard of undistorted trace detail. 105-125v, 50-400 cycles, 125 watts. In steel case, 10" x 16" x 13" complete with low capacity probe and ground lead. Shipping weight 45 lbs.

Model 675A, Wide Band, High Sensitivity Oscilloscope—Net Each $299.00

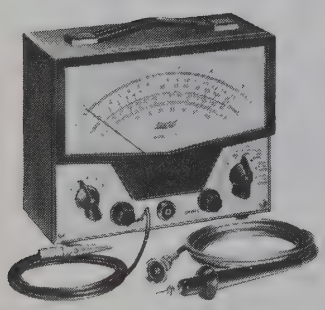


MODEL 677

Wide-Band Service Technicians 5" AC Oscilloscope

5 cps to 4.5MC within 3db. New 1-2-3 circuit approach simplifies peak-to-peak measurements. Pre-set horizontal and vertical sweep positions. Sharp, bright trace with astigmatic correction, facilitates detailed observations of TV sync wave forms, including 3.58MC color burst. Furnished complete with detailed application and instruction book and test leads. 14" x 9½" x 18½". Shipping weight, 36 lbs.

Model 677 Wide-Band Service Technicians 5" Oscilloscope—Net Each $199.50

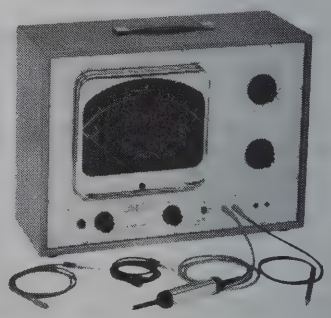


MODEL 209B

True Vacuum Tube Volt-Ohm-Milliampere and Capacitance Meter

100 millivolt sensitivity. Special "lo-ohms" range. Measures capacitance as low as 1uuf and up to 1,000 uf; inductance, 50 mh to 100 henries (with conversion chart). 1% stability with ±10% variation in line voltage. Complete with AC and DC probe assemblies, test leads, low capacity-high frequency probe. 18" x 13½" x 8". Shipping weight, 26 lbs.

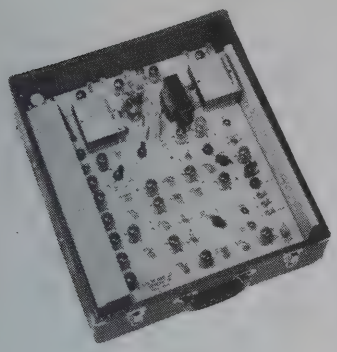
Model 209B True Vacuum Tube Volt-Ohm-Milliampere and Capacitance Meter—Net Each $239.50



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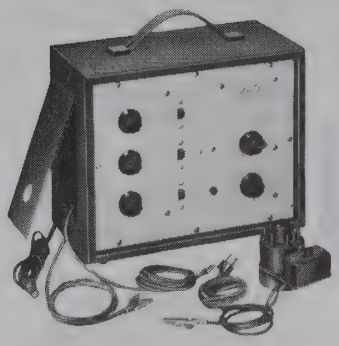
HICKOK SIGNAL GENERATORS



MODEL 656XC
Color Bar-White Dot Generator

Produces 100% fully-saturated NTSC standard patterns. Provides complete range of signals for chroma alignment, including R-Y, B-Y, G-Y demodulation systems. 105-125v, 60 cycles, 40 watts. Furnished in black leatherette portable case, 16¾" x 18⅜" x 7¼", complete with cable. Shipping weight, 48 lbs.

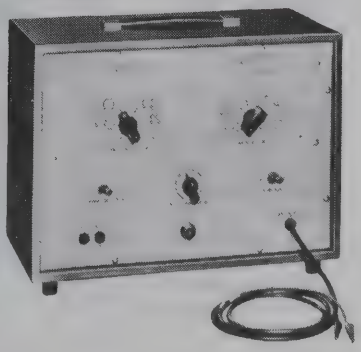
Model 656XC Color Bar-White Dot TV Generator—Net Each $549.50



MODEL 662
Installer's Color TV Generator

Generates ultra-fine crosshatch, vertical bars and horizontal bars. Uses 500 dot system for smallest practical dot and complete screen coverage. Has exclusive crystal-controlled burst phase color reference signal for checking color-circuits, trouble shooting and color alignment. Gun killer facilitates convergence, purity check and chroma alignment. Supplied with leads, "quick-connect" cable assembly and instruction book. In steel case, 11" x 8½" x 5⅜". Available with accessory carrying case. 105-125v, 60 cycle, 25 watts. Shipping weight, 15 lbs.

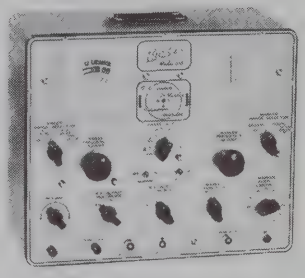
Model 662 Installer's Color TV Generator— Net Each $159.95



MODEL 661
Chrom-Aligner NTSC Color Bar-White Dot Generator

Generates individual 100% saturated color bars to NTSC standards. Provides the following demodulator alignment signals: R-Y, B-Y, G-Y, G-Y at 90°, RF output on channels 3 or 4. Crystal-controlled chroma and sync. Separate video output. 110v, 60 cycles, 20 watts. Complete with leads and 3.58MC crystal. Shipping weight, 20 lbs.

Model 661 Chrom-Aligner Generator—Net Each $349.50



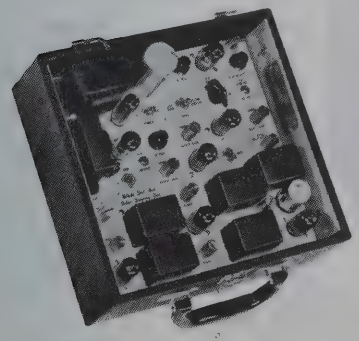
MODEL 615
Sweep and Marker Alignment Generator

For complete TV, IF and RF alignment, including color TV alignment. Also provides harmonic output on UHF. All electronic Sweep with no moving parts. Amplitude modulation less than 0.1db/MC. 110-120v, 60 cycles, 40 watts. Furnished in steel carrying case, 16¼" x 8" x 13½" complete with leads. Shipping weight 39 lbs.

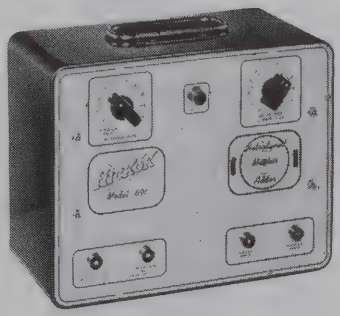
Model 615 Sweep and Marker Alignment Generator—Net Each $359.50

MODEL 660
White Dot/Color Display Generator

A stable, crystal-controlled white dot and crosshatch generator employing the same dot and sync generating circuitry as the Model 656XC described above. Color display is rainbow type. Lightweight and portable for installation, convergence and in-the-home service. 105-125 v, 60 cycles, 40 watts. 10½" x 10½" x 5¼", complete with crystal and output cable. Shipping weight, 21 lbs.



Model 660 White Dot/Color Display Generator—Net Each $245.00



MODEL 691
Heterodyne Marker-Adder

Provides continuously visible marker (including trap points) that will not distort the receiver's response curve. Functions with any marker and sweep equipment with output capability of 0.5 volts, or more. 105-125v, 50-60 cycles, 25 watts. Furnished in steel case, 11¼" x 7" x 8¼", complete with leads. Shipping weight, 16 lbs.

Model 691 Heterodyne Marker Adder—Net Each $129.50

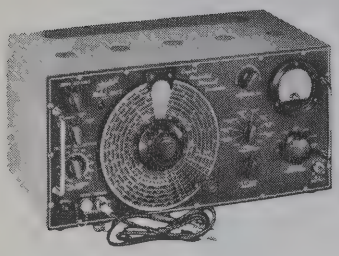
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SIGNAL GENERATORS

HICKOK



MODEL 295X

Microvolt and Crystal Controlled Generator

Provides continuous frequency coverage in 8 bands from 125KC to 175 MC. Calibrated, metered output from 0.1 to 100,000 microvolts. 1% Dial calibration accuracy. Built-in 1MC crystal standard. Precision step attenuator, direct reading, vernier tuning. 105-125v, 50-400 cycles, 90 watts in steel case 19" x 12½" x 9". Complete with 1MC crystal, 48-inch output cable with 2 connectors. Shipping weight, 47 lbs.

Model 295X Microvolt and Crystal Controlled Generator—Net Each $655.00



MODEL 725

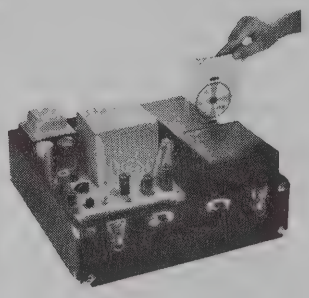
Stereo Standard FM Multiplex Generator

Generates complete composite FM Multiplex signal to FCC specifications. Can be externally modulated with a stereo mike, tape player or record player to demonstrate FM Stereo. 16¼" x 13¼" x 7". Shipping weight, 27 lbs.

Model 725 Stereo Standard FM Multiplex Generator—Net Each $495.00

MODEL 760

Video Scanner



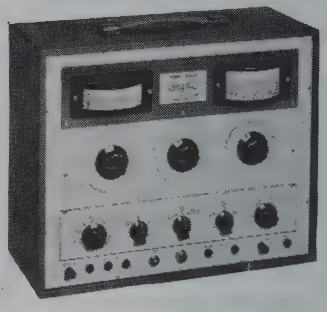
Generates and scans at the 525 line, 60 field 30 frame system. Produces slide pictures for closed circuit television systems. Uses high definition, flying spot scanning method, providing 450 line resolution (5MC band width).

Choice of video or RF output. Crystal-controlled Sync Generator. Complete with output cable, pattern slides. 17" x 18¾" x 8½". Shipping weight, 51 lbs.

Model 760 Video Scanner—Net Each $455.00

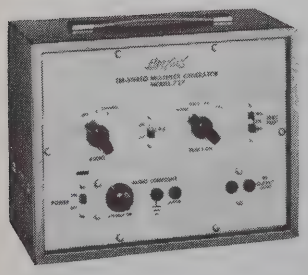
MODEL 727

FM Stereo Multiplex Generator



Composite audio output includes main channel (L+R) and sub-channel (L-R). Basic audio source is 1000 cycle oscillator switchable to left or right channel. Crystal-controlled 19KC pilot carrier included. RF output at 100MC, adjustable to ±200 KC. Level fixed at 500 microvolts. Separate 38KC signal available for filter and band-pass alignment. 67KC signal for adjusting SCA trap and filter. Separation of 35db or better. Fully transistorized, choice of portable battery operation or optional AC power supply, 105-125v, 50-60 cycles, ½ watt. Furnished with leads and instruction book, less battery in steel case, 11" x 8½" x 5". Shipping weight, 7 lbs.

Model 727 FM Stereo Multiplex Generator—Net Each $199.95

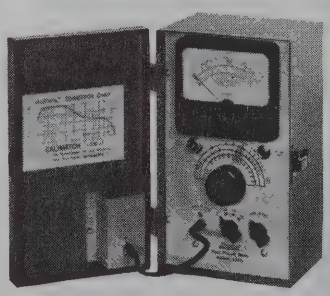


MODEL 288AX

Crystal Controlled AM-FM Sweep and Marker Generator

A complete alignment instrument with built-in decibel meter and crystal frequency standard (100KC and 1000KC). Covers 35KC to 110MC in 8 bands frequency modulated and 35KC to 160MC in 8 bands amplitude modulated. *Includes new ultrasonic range* from 35KC to 125KC. Supplied with 100KC/1000KC crystal, cable assembly and meter leads. Case size, 16" x 7" x 13". Shipping weight, 33 lbs.

Model 288AX Crystal Controlled AM-FM Sweep and Marker Generator—Net Each $315.00



MODEL 235A

UHF/VHF Field Strength Meter

Reads directly in absolute field strength in microvolts from channel 2 through 83. Range 10 to 100,000 microvolts VHF, 30 to 50,000 microvolts UHF. Choice of 75 or 300 ohm input. Headphone jack for audio monitoring. Battery operated and completely portable. Shipped less batteries and headphone. In case, 10½" x 6¼" x 6". Shipping weight, 10 lbs.

Model 235A UHF/VHF Field Strength Meter—Net Each $229.50

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J-B-T
27TH Year

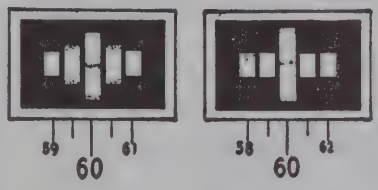
VIBRATING REED FREQUENCY METERS

J-B-T INSTRUMENTS, INC.

• **USES** — J-B-T Vibrating Reed Frequency Meters are used extensively in radio, telephone, and television service, on engine generator sets, in laboratories, in many types of electronic equipment, on panel and control boards, in inspection set-ups—wherever constant or known frequency is important to efficient operation of equipment. More than 25 years of continuous experience covering many thousands of these instruments are your assurance of quality for both commercial and defense applications.

• **OPERATING PRINCIPLE** — The patented, simplified design used in the J-B-T meter operates on AC or interrupted DC. Each reed is adjusted to respond by resonance to but one frequency. As the current excites the driving coil, the reed "in tune" with the frequency in the coil will respond by vibrating rapidly because of permanent magnet polarization and induced magnetism from the coil. The instrument is adapted to specified operating voltage by a series resistor. To determine frequency, simply read the reed.

• **RESPONSE PATTERNS** — These patterns differ with the increments of frequency between reeds. For example, at 60 cycles, half-cycle steps give the broad response shown below at left, whereas full cycle steps bring the sharp response at right. In general, the lower the frequency the greater the amplitude, the higher the frequency the less the amplitude. Thus a 12 cycle reed normally will have substantially greater amplitude than a 1000 cycle reed.



• **ADVANTAGES** — Guaranteed accuracy at reference temperatures of 77°F is ±0.3% or better of the AC frequency being measured, unless otherwise stated. Accuracy on interrupted DC may be somewhat less. High fatigue safety factor for continuous operation. Temperature compensations are not required as temperature coefficient of reeds is only approximately 75 parts per million per degree F., negative.

• **STABILITY** — All meters are permanently calibrated at the factory and do not require subsequent adjustment. J-B-T reeds have relatively high Q characteristics, an especially desirable factor in electronic circuits. Wave form or external fields do not ordinarily have an adverse effect. Built with no pivoted parts and with lock washers at every critical point, these rugged meters can take rougher treatment than many instruments.

• **TRUST THE METER** — If a meter plugged in on a 60-cycle AC power line does not indicate exactly 60 cycles, trust the meter! Power supply may momentarily be off-frequency due to changing load conditions. All J-B-T Frequency Meters are meticulously calibrated at the factory, entirely independent of frequency of power supply. Production and inspection equipment are checked regularly against National Bureau of Standards frequency signals.

5 OR 7 REEDS

Used on standby power equipment. Handy for accurately measuring frequency of power source. 5 reeds (as illustrated), 58-62 cycles, or 7 reeds, 57-63 cycles, 100-130 volts. Other characteristics and accuracy same as Model 30-F. See Table of Dimensions, lines 4 and 5.

31-F, (illustrated) 58-62 cy., 5 reeds, 3-1/4" metal case **$26.65**

31-FX, 58-62 cy., 5 reeds, 3-1/2" Molded case, MIL-M-6B mtg.. **$23.65**

31-FX-7, 57-63 cy., 7 reeds, 3-1/2" Molded case, MIL-M-6B mtg.. **$25.85**

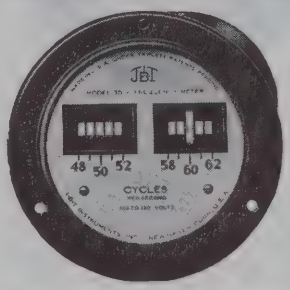


3" SQUARE-CASED FREQUENCY METERS

The meters described above are also available with square black molded cases designated as **FS series** per print SK-59, Rev. E For example, 30-FS is same as 30-FX except for the case.

REVISED DIAL APPEARANCE

Certain shipments during the life of this catalog will contain different dials from those pictured on pages 2, 3, & 4. Dials are being modified to show the revised J-B-T trademark adopted during the Silver Anniversary Year. At the same time, some 3½" frequency meters may also carry the phrase Series A after the model number (as in **34-FX** below) to denote improved ruggedness and sensitivity. Such instruments are completely interchangeable as to mounting dimensions and circuit requirements with the meters in this publication.



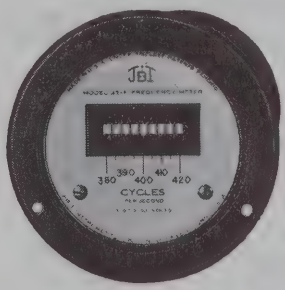
(Meter operating at 60 cycles)

10 REEDS

Range: 48-52 and 58-62 cycles. Double window for ease of reading either range. Often specified for export. 100-130 volts; 130 ohms per volt; 1 watt power consumption. Other voltages available on special order. Accuracy ±0.3% at reference temperature. Flush panel mounting. See Table of Dimensions, lines 4 and 5.

30-F, (illustrated), 48-52 and 58-62 cy., 3¼" Metal Case..... **$30.50**

30-FX, 48-52 and 58-62 cy., 3½" Molded Case, MIL-M-6B mtg..... **$27.50**

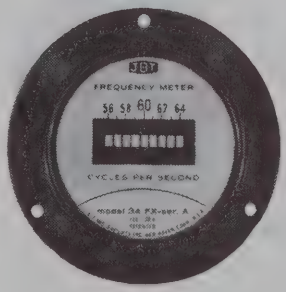


9 REEDS — 400 CY.

Used for measuring frequency of high-cycle power sources, particularly aircraft. Accuracy ±0.3% at reference temperature. Nine reeds, 380-420 cycle range. 100-130 volts; 90 ohms per volt; 1.5 watts power consumption. Other voltages available on special order. Flush panel mounting. See Table of Dimensions, lines 4 and 5.

33-F, (illustrated). 380-420 cy., 3¼" Metal Case **$37.10**

33-FX, 380-420 cy., 3½" Molded Case, MIL-M-6B mtg. **$34.10**



9 REEDS — 60 CY.

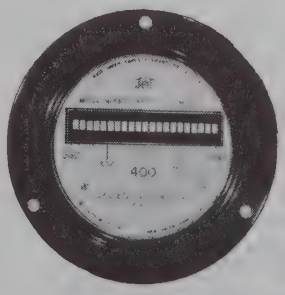
Covers a broad frequency band. Nine reeds, 56-64 cycles, or in half-cycle steps (accuracy ±0.2%) 58-62 cycles. 100-130 volts; 110 ohms per volt; 1 watt power consumption. Flush panel mounting. See Table of Dimensions, lines 4 and 5.

34-F, 56-64 cy., 3¼" Metal Case 1-cycle steps. **$30.25**

34-FX, (illustrated). 56-64 cy., 3½" Molded Case, MIL-M-6B mtg. **$27.25**

34-F-Z, 58-62 cy., 3¼" Metal Case, ½-cycle steps. **$31.90**

34-FX-Z, 58-62 cy., 3½" Molded Case, MIL-M-6B mtg. **$28.90**



18 OR 21 REEDS

Advanced design offers 21 reeds as an interchangeable 3½" panel meter with 2-cycle intervals for close reading over the band of 380 to 420 cycles per second. Accuracy ±0.3% at reference temperature. The reed flag size is necessarily smaller than in a 9-reed 400-cycle meter, such as the model 33-FX, but the 21 reeds are located in an enlarged window 2" wide with flags 3/32" high x 1/16" wide to give maximum readability. A patented internal construction for mounting the reeds in one clamp assures ruggedness. These instruments and their variations are particularly useful where unusually close indication of frequency throughout the band is desirable. See Table of Dimensions, line 5. All have 3½" Molded Case, MIL-M-6B mounting.

36-FX-21, (as illustrated). 380-420 cycles, 21 reeds, 28 volts operation, 3½" Molded Case; 18 ohms per volt; 1.6 watts power consumption. **$43.75**

36-FX-21-115, 380-420 cycles, 21 reeds, 100-130 volts; 90 ohms per volt; 1.5 watts power consumption **$45.00**

30-FX-18, (not illustrated). 46-54 and 56-64 cycles, 18 reeds in one window with two groupings, 100-130 volts; 320 ohms per volt; 0.35 watts power consumption **$47.50**

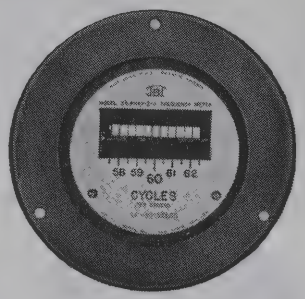
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VIBRATING REED FREQUENCY METERS

J-B-T INSTRUMENTS, INC.

J-B-T 27TH Year

3½" SEALED FREQUENCY METERS



FHXX TYPE Sealed meters, glass-to-metal construction, with solder terminals and detachable flange, supersede the former FHX sealed meters. While JAN-I-6, MIL-M-6B, and MIL-M-10304B (Type MR36) do not refer specifically to frequency indicators, the FHXX series uses the front mounting dimensions of these specifications, and meets or exceeds the sealing and electrical requirements including 3000 volt breakdown. Electrical characteristics and accuracy are the same as for corresponding F models without the HXX designation. Every meter is tested in water where the absolute pressure of the air above the water is reduced to 2.5 inches of mercury (approx. 57,000 ft. altitude) and is maintained for one minute. For dimensions, see Table, Line 8, and Print SK-51 Rev. E. Standard voltage is 100-130.

30-FHXX, 10 reeds, 48-52 cy. and 58-62 cy. **$34.30**
31-FHXX, 5 reeds, 58-62 cy. **30.45**
33-FHXX, 9 reeds, 380-420 cy. **40.90**
34-FHXX, 9 reeds 56-64 cy. **34.05**
34-FHXX-11, 11 reeds, 55-65 cy. **36.25**
34-FHXX-Z-11, illustrated, 11 reeds, 57.5-62.5 cy. **37.90**
36-FHXX-21, 21 reeds, 380-420 cy., 28 volts **50.55**
36-FHXX-21-115, 21 reeds, 380-420 cy., 100-130 volts **51.80**

2½" SEALED METERS

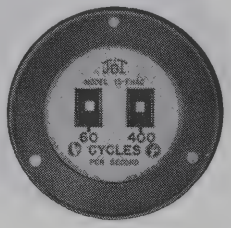
J-B-T manufactures 2½" sealed frequency meters which are similar to the 3½" sealed above, except with dimensions per Line 3 of Table.

21-FHXX, 5 reeds, 58-62 cy., 100-130 volts **$34.85**
23-FHXX, 5 reeds, 380-420 cy., 100-130 volts (normally stocked) **$39.80**

1½" SEALED METERS

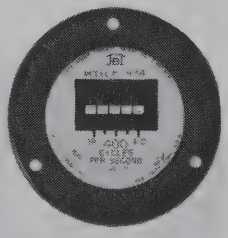
MODEL 15-FHAC. Widely used as the frequency standard on audio-oscillators, the model illustrated operates 2 reeds, 60 and 400 cycles, at approximately 8-10 volts on 0.04 watts for a cathode follower circuit. Accuracy ±0.5% at 77°F. Steel case has telephone black finish, solder terminals. Barrel is 1½" diameter; 2-3/32" detachable flange FL-4 covers glass-to-metal seal. See Table of Dimensions, line 1

15-FHAC **$20.30**



15-FH-5 METERS (lower photo) also use the 1½" black metal case with 2-3/32" detachable flange and glass-to-metal seal. The 15-FH-5 series features 5 reeds in a row for 100-130 volt operation. Specified where size and weight are important. Same 100% inspection for approx. 57,000 ft. altitude as FHXX types. Standard meters, but not regularly stocked. See Table of Dimensions, line 1.

15-FH-54, 5 reeds, 390-410 cycles, 1.25 watts power consumption **$25.85**
15-FH-56, 5 reeds, 58-62 cycles, 0.25 watts power consumption **$21.45**
15-FH-400, 5 reeds, 380-420 cy., 1.25 watts power consumption **$25.85**



RUGGEDIZED AND ILLUMINATED METERS

Model with "RUG"—Sealed vibrating reed frequency meters and sealed elapsed time meters are available, when so ordered, to the intent of MIL-M-10304B, which covers ruggedization of other kinds of meters. This feature usually is specified only for extra-severe shock and vibration.

LL Construction—Requirements for lighted meter dials have led to illuminating the 3½" FHXX Series of sealed meters. Light from a source behind the panel is admitted through a sealed window built into the meter case. Inquiries are invited.

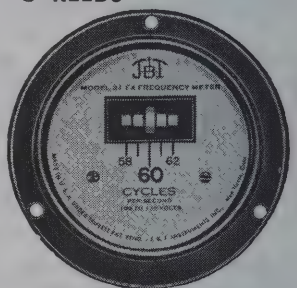
400 CYCLES, IN 1 CYCLE STEPS; 800 CYCLES

Among the variations which J-B-T produces on special order, are 21-reed, 390-410 cycles in 3½" case; and 11-reed, 780-820 cycles with 4-cycle increments. Quotations on request.

NOTE ON METER VOLTAGE

J-B-T Vibrating Reed Frequency Meters of all sizes normally are made with two studs and are designed to be connected across one phase of a multi-phase line. The single phase voltage where the meter will be used thus becomes the voltage to be specified for the meter. Special meters with extra studs are made for the purpose of using at two or more voltages, not additional phases.

2½" METERS — 5 REEDS

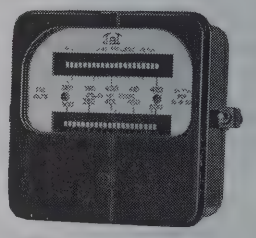


MODEL 21-FX, 23-FX. Matches other 2½" panel instruments. Meets ASA C39.1-1951 and MIL-M-6B (Type MR 24 or MR 25) in depth of case and mounting dimensions. Weighs only 4½ ozs.; 5 reeds, 58-62 cycles, 100-130 volts, 600 ohms per volt, 0.25 watt power consumption. At 400 cycles, 120 ohms per volt, 0.7 watts power consumption. Flush panel mounting; see print MD-20, Rev. B, also Table of Dimensions, Line 2.

21-FX, 58-62 cy.; 2-11/16" Molded Case, 1 cy. steps **$22.55**
23-FX-54, 390-410 cy., 2-11/16" Molded Case, 5 cy. steps **$27.50**
23-FX, 380-420 cy., 2-11/16" Molded Case, 10 cy. steps **$27.50**

(Operating at 60 cycles)

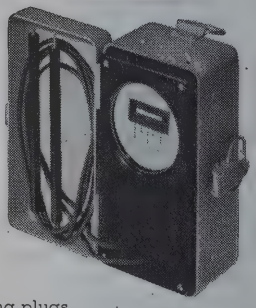
400 CYCLE BROAD AND VERNIER INDICATORS



MODEL 41-FX-42 (supersedes Model 41-FX) Widely used in commercial and military testing, this model provides two windows: for 300-500 cycles, 21 reeds in 10-cycle steps, and, for a vernier effect, 380-420 cycles with 21 reeds in 2-cycle steps. Black molded case, flush front is 4 3/64" high x 4 3/64" wide x 2 17/32" deep behind panel over studs. 100-130 volts is standard; also made with 4 studs for 200-240, 115 and 30 volts, 4.5 watts at 115 volts, 7.7 watts at 200 volts, 2 watts at 30 volts. For mounting, see Print MD-38-11.

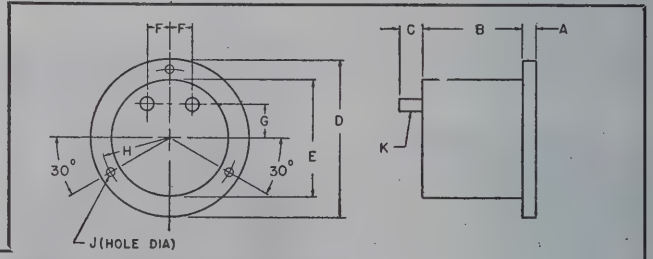
41-FX-42, 100-130 volts **$125.00**
41-FX-42, 3 voltages, without switch **140.00**

PORTABLE FREQ. TESTERS



FP SERIES, METAL OR MOLDED CASE. Accuracy of ±0.3% meets the exacting test requirements of aviation, signal, and communication equipment. **M-Types** use anodized gray aluminum case, 6 3/8" long x 4" wide x 3-9/32" deep. Leads permanently attached. See Print SK-63-10. With pertinent name plate, **33-FP-9M** is known as **TS-328 A/U. L-Types,** sturdy molded case within top grain leather carrying case 6-3/32" x 4 1/4" x 2 3/4"; 4' leads with 5" test picks and banana plugs.

33-FP-9M, (illustrated) 380-420 cy., 9 reeds, 100-130 volts, 70 ohms per volt, 1.5 watts power consumption; com. quality and packing **$49.25**
34-FP-9M, 56-64 cy., 9 reeds, 100-130 volts, 130 ohms per volt, 1 watt power consumption, com. quality and packing **$42.35**
33-FP-9L, 380-420 cy., 9 reeds, 100-130 volts **$47.60**
34-FP-9L, 56-64 cy., 9 reeds, 100-130 volts **$40.70**



FREQUENCY METERS AND FREQUENCY — TIME METERS, TABLE OF DIMENSIONS, INCHES

	MODEL	MIL-M-6B* MOUNTING	A	B	C	D	E	F	G	H	J	K	TERMINAL DESCRIPTION
Line 1	15-FH Series	—	1/16+	1 3/16	3/8	2 3/32	1 1/2	3/8	3/8	0.875	0.125		Solder, 1/16" dia. hole
Line 2	21-FX and 23-FX Series	MR24, MR25	13/64	1 3/8	2 3/32	2 11/16	2 5/32	7/16	7/16	1.220	0.116		10-32 NF-2A studs
Line 3	21-FHXX, 23-FHXX Series	MR26**	3/32+	1 27/32	1 1/16	2 11/16	2 1/8	1/2	1/2	1.220	0.125		Solder, 3/32 dia. hole
Line 4	30-F to 34-F Series	—	7/64	2 3/32	2 3/32	3 1/4	2 7/16	7/16	7/8	1.453	0.150		10-32 NF-2A studs
Line 5	30-FX to 36-FX Series	MR34, MR35	13/64	2	2 3/32	3 1/2	2 11/16	7/16	7/8	1.580	0.150		10-32 NF-2A studs
Line 6	31-FE Series	—	7/64	3 7/8	2 3/32	3 1/4	2 7/16	7/16	7/8	1.453	0.150		10-32 NF-2A studs
Line 7	31-FEX-1 Series	MR34, MR35	5/32	3 7/8	2 3/32	3 1/2	2 7/16	7/16	7/8	1.580	1.150		10-32 NF-2A studs
Line 8	30-FHXX to 36-FHXX Series	MR36**	3/32+	2 1/4	5/8	3 1/2	2 11/16	1/2	3/4	1.580	0.150		Solder, 3/32 dia. hole

*Also JAN-I-6 and ASA C39.1-1951 Mounting **Also MIL-M-10304B Mounting †Without gasket

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J-B-T 27TH Year

ELAPSED TIME METERS AND REED RELAYS

J-B-T INSTRUMENTS, INC.

ELAPSED TIME METERS; FREQUENCY-TIME METERS; REED RELAYS AND OSCILLATOR CONTROLS

• USES AND ADVANTAGES OF ELAPSED (OR RUNNING) TIME METERS

To record operating time of AC electrical and electronic equipment, these self-starting synchronous instruments normally register in 1/10th hour steps to 9,999.9 or 99,999.9 hours, then automatically reset. They are widely used for tube life, TV equipment, punch presses, conveyors, oil burners, ground support equipment, maintenance schedules, etc. J-B-T engineers recommend the AC type of elapsed time meter for superior accuracy, especially where voltage or ambient temperature vary widely.

6-Digit WIDE-NUMERAL ELAPSED TIME METERS



MODEL 31-EXW. Newest most easily-read, and most versatile of J-B-T elapsed time meters is Model 31-EXW, illustrated. Easily-read, wide 6-digit numerals register to 99,999.9 hours then automatically reset. Distinctive contemporary dial shows tenths in black on white, and units in white on black. The 3½" black molded case is interchangeable with Model 31-EX and FX types of frequency meters. Print SK-125 gives mounting information.

Model 31-EXW, 6-digits, 0-99,999.9 hours, 60 cy., 110-125 volts **$16.95**

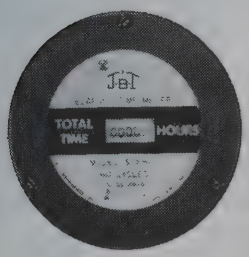
SQUARE-CASED ELAPSED TIME METERS

MODEL 31-ES. A square black molded case, matching other 3" x 3" meters, differentiates this model from the round 31-EX. Ask for Print SK-110, Rev. F showing standard rear mounting 2¼" bet. centers of molded-in studs, new rugged case with overall depth 3-11/32" behind flange, and electrical studs on center line. Variations can be made for 99,999 hours (suffix U), 230 volts, minutes, matte finish, or 50 cycles.



31-ES, 60 cy., 110-125 volts, 0-9,999.9 hours. **$17.50**

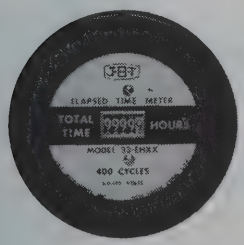
3½" SEALED ELAPSED TIME METERS — 60 Cycles



MODEL 31-EHXX. Where rugged requirements make a completely sealed elapsed time meter desirable, this glass-to-metal construction with flat glass front and 3½" diameter separable flange, often is specified. Heavy-duty solder terminals are supplied. Every instrument is checked in a vacuum chamber. Overall dimensions and appearances match the FHXX series sealed frequency meters. Maximum voltage between terminals and case, 1,000 volts, R.M.S. The meter registers in 1/10 hour steps to 9,999.9 hours, then automatically resets. Tenths indicator is red on white, all others in white on black. Mount according to SK-85, Rev. C.

31-EHXX, 60 cy., 110-125 volts **$19.75**

3½" SEALED ELAPSED TIME METERS — 400 Cycles



MODEL 33-EHXX. This stable, self-starting 400-cycle elapsed time meter is extensively used for preventive maintenance and for reliability testing and checking in a wide variety of equipment. The instrument is entirely enclosed in a 3½" flanged case, glass-to-metal sealed construction with separable flange; heavy-duty solder terminals; flat glass front. 1/10 hours are shown in red on white, all other numerals white on black. The external appearance matches FHXX frequency meter series. For dimensional details see SK-61, Rev. B.

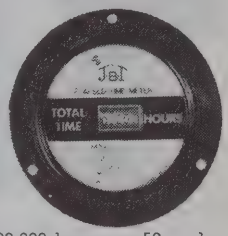
33-EHXX, 400 cy., 0-9,999.9 hours, 1/10 hour steps, 110-125 volts **$58.00**

2½" SEALED ELAPSED TIME METERS

MODEL 21-EHXX. A full size counter reading 9,999.9 hours in 1/10 hour steps and a rugged self-starting synchronous motor are built into this 2½" sealed meter. Its front mounting dimensions are the same as Type MR26 electrical indicating instruments in MIL-M-6B. Glass-to-metal seal makes the instrument completely tamper-proof. Ask for Print SK-68, Rev. G. (2½" 400-cycle meter, **Model 23-EHXX** also is made on special order.)

21-EHXX, 60 cy., 110-125 volts **$26.00**

5-Digit BASIC 3½" ELAPSED TIME METERS



MODEL 31-EX. This self-starting instrument registers to 9,999.9 hours in 1/10 hour steps before automatically resetting. Red numerals on white are used for tenths, all others are white on black. Black molded case matches FX series 3½" frequency meters and completely encloses all parts. This case, with centered terminals, meets type MR34 or MR35 mounting dimensions of MIL-M-6B, also JAN-I-6. Referring to line 5 of the Table of Dimensions on the preceding page, barrel depth (B) is 2½", stud height above center (G) is zero, dimension (F) is ½", and all other measurements are as shown. Types for 99,999 hours, or 50 cycles, or special voltages are available on special order. Mount according to SK-80, Rev. E.

31-EX, 60 cy., 110-125 volts **$16.75**

31-EX-200, 60 cy., 230 volts (not regularly stocked) **$17.50**

ELAPSED TIME METERS — Tenths of Minutes

MODEL 31-EXM, 60 cycles, 110-125 volts, reading 0-9,999.9 **minutes;** for short-run applications or readings at closer intervals than 31-EX. Tenths of minutes in red on white, minutes in white on black numerals, otherwise identical with 31-EX **$16.25**

CLEAR-PLASTIC ELAPSED TIME METERS

EPL TYPE. The modern clear-plastic front gathers light from every side and is compatible with many other instruments. A sturdy metal case with solder terminals is used behind the panel. The 2½" size is 2-19/32" wide x 2⅜" high with 2⅛" diam. meter barrel, per print SK-102, Rev. C. The 3½" is per print SK-108, Rev. C.



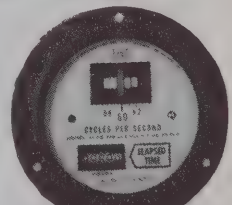
21-EPL, 2½" size (illus.), 60 cy., 110-125 v., 0-9,999.9 hrs. **$25.75**

31-EPL, 3½" size (not illus.), 60 cy., 110-125 v., 0-9,999.9 hrs. **$23.75**

RUGGEDIZED METERS TO MIL-M-7793C

This specialized specification at present omits the popular 3½" sealed sizes. J-B-T 2½" and 3½" round sealed and ruggedized types can be certified as to various test conditions under present MIL-M-7793C and General Meter Specification MIL-M-10304B. Inquiries are invited on smaller sizes to MIL-M-7793C and subsequent revisions as they are released.

ELAPSED TIME — FREQUENCY METERS



31-FE SERIES. To conserve panel space and centralize information, this panel instrument combines elapsed time or running time meter with frequency reeds. It is used on motor generator sets and on electrical equipment where maintenance routine calls for periodic servicing. The J-B-T design, proved by years of field experience, uses a separate exciting coil for the reeds to achieve close control of reed amplitude and frequency. Reads 0-9,999.9 hours and 58-62 cy. with 5 reeds, for 100-130 volt operation; self starting. Tenths shown in red on white, all other numerals in white on black. Black metal case with front mounting per Table of Dimensions, line 6. Power consumption is 4.7 watts. For variations having 7, 9, or 11 reeds, not regularly stocked, such as Model 34-FE, see print SK-45. Rev. D.

31-FE, 3¼" metal case 4-19/32" deep, ... **$33.00**

31-FEX-1, (per print SK-44 Rev. F—not regularly stocked) like Model 31-FE, except with 3½" metal flange permanently attached for MIL-M-6B front mounting per line 7, Table of Dimensions **$34.10**

RESONANT — REED RELAYS (Decoders) AND OSCILLATOR CONTROLS (Encoders)



Typical Frequency Sensitive Relays RR-A11A-136.5

Typical Sealed Oscillator Control RO-B10B-188.0



For technical description of J-B-T frequency-sensitive electromechanical control devices, see Bulletins 162R and D664; for representative models and prices, see Section 5100 of this book.

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TEMPERATURE TESTERS AND ACCESSORIES

J-B-T INSTRUMENTS, INC.

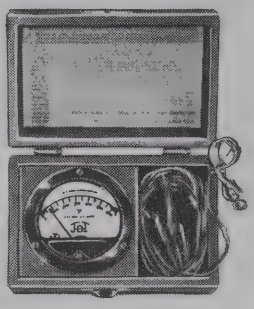
J-B-T 27TH Year ®

TEMPERATURE TESTERS AND ACCESSORIES FOR APPLIANCE SERVICING, QUALITY INSPECTION, AND LABORATORY SET-UPS

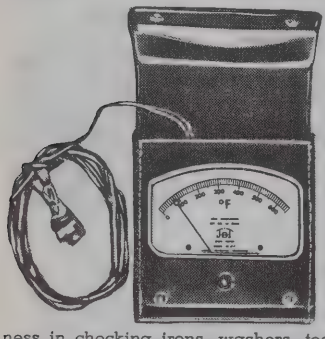


OVEN OR HEAT CHAMBER TESTERS

MODEL 23-JP-1. This popular portable indicating pyrometer saves time and furnishes reliable information in testing and setting thermostats on electric or gas ranges and other appliances by showing oven temperatures as they change. Standard size dial, 0-650°F., with 2⅜" scale arc reading, is used but covered by clear-plastic instrument front. The indicator is mounted on a black metal panel affixed inside a pocket-sized, black top-grain leather case 4½" x 2⅞" x 4¼" over hardware. Characteristic of more expensive pyrometers, the 23-JP-1 is automatically compensated for ambient temperature. Thus the tester eliminates calculations, avoids likelihood of serious error as temperature changes inside the instrument itself, and gives reliable direct readings. Supplied with attached SA-116, 5½' calibrated thermocouple, clip, and convection shield **$26.00**

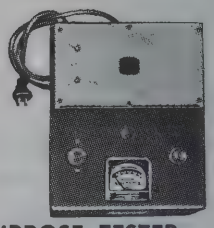


MODEL 32-JP-3. This time-tested model uses a rigid outer carrying case 6"x3⅞"x3¾". The glass-covered indicator shows 0-650°F. range in 10° divisions readable to 2½° on a 2⅜" scale arc. Exceptionally fast, continuous response. Automatic compensation for ambient temperature is a valuable feature whether the tester is used for service work, sales demonstrations, or inspection. Attached SA-116, 5½' thermocouple, clip for affixing to grill and convection shield included **$28.00**



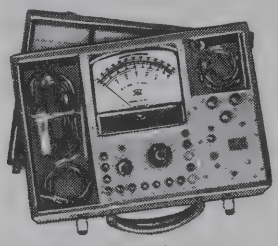
NEWEST MODEL 32-JP-7. Most versatile, and easiest to read of J-B-T temperature testers, Model 32-JP-7 offers a 650°F scale more than 4" long. Automatic compensation for ambient temperature is included, so that temperatures are read directly and without calculations. The 32-JP-7 also provides color-coded external binding posts. These permit quick attachment or interchanging of various J-B-T thermocouples placed in one or more of the heat zones to be checked. An SA-116 5½' thermocouple with attachment clip and convection shield is supplied and is left attached when the tester is carried. For maximum usefulness in checking irons, washers, toasters, clothes dryers, etc., use appropriate accessory thermocouples. Tester price includes stitched Ever-ready case, 5" wide x 5½" high x 2¾" deep, of sturdy, scuff resistant black vinyl. **$29.50**

IRON TESTER



MODEL 32-JIT. Self-contained bench-type tester; checks all makes of irons; measures thermostat temperatures; shows open or short circuits. Automatically compensated for room temperature. Also indicates operating temperature of the sole plate (working surface) on non-electric or cordless irons. Black metal base; overall size 10" x 12" x 5½", scale 0-650°F, 15 amp fuse, 6' cord, 110 volt, 50-60 cycles. **$34.50**

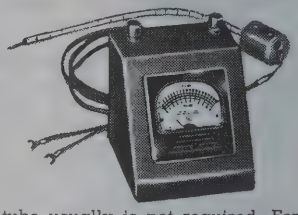
MULTI-PURPOSE TESTER



MODEL 61-JRT. A 9-in-1 tester to speed accurate temperature adjustment and electrical analysis of ranges, refrigerators, test apparatus, etc. Rapidly reads four cold zones —100°F, +80°F. up to 14' distant; two heat zones 0-600°F. up to 5½' distant; one voltage range 0-300 AC; and, with transformer, two current ranges, 0-30 and 0-60 amps, AC. Sturdy, polished walnut case, 15½" x 10-3/16" x 4¾". Two color etched metal panel. Separate switches protect bulb and ammeter circuits. Requires one standard flashlight cell, replaceable in the field. Temperature accuracy ±2% of full scale; rectified AC readings ±5%. Accessories as listed may be added for testing appliances. Includes two SA-162 resistance bulbs, two SA-116 thermocouples, electrical leads, and AS-TR-2 built-in transformer. **$124.00**

MODEL 61-JRT (LESS TRANSFORMER). Same unit, same scales except no reading in amperes; AS-TR-2 transformer omitted. **$110.00**

HEAT INDICATORS



MODEL 32-J PYROMETER IN SN-7 STAND. Mounted in sloping front black metal stand, 4¼" high x 4⅜" deep x 4⅛" wide. Compensated for ambient temperature. Medium resistance system, damped for quick reading on 2⅜" scale, assures ruggedness and pointer stability. For ±2% accuracy, use only the type and resistance of thermocouple and lead provided; if extra length—coil it—to maintain calibration. A protection tube usually is not required. For convenience keep an extra thermocouple and lead on hand.

MODEL 32-J IN SN-7 STAND (Supersedes SN-3 Stand)
0° — 650°F-350°C, includes SA-91 thermocouple, SA-84 lead, and CB-1 connector block **$33.50**
0°-1200°F-650°C, includes SA-87, SA-82, and CB-1 ..... **33.50**
0°-2000°F-1100°C, includes SA-87, SA-82, and CB-1 ..... **33.50**

MODEL 32-J IN SN-8 STAND (not illustrated). With 3 binding posts to accommodate flexible extra lead and thermocouple for hard-to-reach locations. 0°-650°F including SA-91 thermocouple, SA-84 lead, CB-1 connector block, and SA-86 flexible leads and thermocouple. **$37.50**

TEMPERATURE TESTER ACCESSORIES

Model No.	Range F°	CONDUCTORS Length	Wire Gage Size	Positive	Negative	Use With	Construction	Price
LEAD WIRES†								
SA-82	194°	6′	14 Ga. Stranded	Red-Copper	Yellow-Const.	32-J in SN-7; 60-JP; 60-JPS	Compensating Lead for use with chromel-alumel thermocouples; flexible duplex with moisture and flameproof outer braid.	$1.70
SA-83	194°	26′	14 Ga. Stranded	Red-Copper	Yellow-Const.	70-J		5.35
SA-84	392°	6′	14 Ga. Stranded	White-Iron*	Red-Const.	32-J in SN-7; 32-J in SN-8	Extension lead for use with iron-constantan thermocouples; flexible duplex with moisture and flame-proof outer braid.	1.70
SA-85	392°	26′	14 Ga. Stranded	White-Iron*	Red-Const.	70-J		5.35
THERMOCOUPLES†								
AS-TH-1	0-1200	30″	20 Ga. Solid	Iron-Black*	Const.-Yellow	31-JPP; 31-JPP-C	Welded inside seamless steel tube ¼" O.D. for immersion in molten metal.	On Appl.
IT-1	0-650	—	—	—	—	32-JP-7; 61-JRT	Accessory Iron Tester, same as 32-JIT except there is no meter.	18.00
SA-86	0-650	7′	20 Solid	Iron-Black*	Const.-Yellow	32-J in SN-8; 60-JP; 60-JPS	General purpose combination thermocouple and lead.	2.05
SA-87	0-1200, 0-2000	12″	14 Solid	Chromel	Alumel	32-J in SN-7	For high temperatures, insulated and protected with 2-hole ceramic beads; fits ¾" hole.	3.40
SA-88	0-1200, 0-2000	24″	14 Solid	Chromel	Alumel	60-JP; 60-JPS		4.25
SA-91	0-650, 0-1200	12″	14 Solid	Iron-Black*	Const.-Yellow	32-J in SN-7; 32-J in SN-8	For intermediate temperatures, insulated and protected with 2-hole ceramic beads; fits ¾" hole.	2.90
SA-92	0-650, 0-1200	24″	14 Solid	Iron-Black*	Const.-Yellow	70-J		3.75
SA-113	0-650	35′	20 Ga. Solid	Iron-Black*	Const.-Yellow	Former Model 32-J	Disc-type junction for attachment flush to surface.	5.75
SA-114	0-650	35′	20 Ga. Solid	Iron-Black*	Const.-Yellow	Former Model 32-J	Needle-type junction for soft material or crevices.	5.75
SA-115	0-650	35′	20 Ga. Solid	Iron-Black*	Const.-Yellow	Former Model 32-J	Ball-type, all-purpose junction.	5.50
SA-116	0-650	5½′	22 Ga. Solid	Iron-Black*	Const.-Yellow		Connection shield & clip for attachment. (asbestos-insulated twisted pair)	2.00
SA-175	0-650	5½′	22 Ga. Solid	Iron-Black*	Const.-Yellow	23-JP-1;	Ball-type tip, for roasters, waffle irons, etc.	1.60
SA-176	0-650	5½′	22 Ga. Solid	Iron-Black*	Const.-Yellow	32-JP-3; 32-JP-7	Disc-type tip, for toasters, etc.	3.00
SA-188	0-650	5½′	22 Ga. Solid	Iron-Black*	Const.-Yellow	60-JRT; 61-JRT	Copper tube enclosed tip, for automatic washers, etc.	4.50
SA-199	0-650	5½′	22 Ga. Solid	Iron-Black*	Const.-Yellow		Shield and clip, duplex nonfraying glass braid, for frequent use above 400°F.	2.65
SA-300	0-650	5′	22 Ga. Solid	Iron-Black*	Const.-Yellow		Spring type in transite tip with handle, for rapid reading of surfaces.	8.00
SA-304	0-650	25′	20 Ga. Solid	Iron-Black*	Const.-Yellow	32-JD in SN-7	Disc-type junction for attachment flush to surface. (asbestos-insulated twisted pair)	5.25
SA-305	0-650	25′	20 Ga. Solid	Iron-Black*	Const.-Yellow	32-JD in SN-7	Needle-type junction for soft material or crevices.	5.25
SA-306	0-650	25′	20 Ga. Solid	Iron-Black*	Const.-Yellow	32-JD in SN-7	Ball-type, all-purpose junction.	5.00
RESISTANCE BULBS								
SA-142	—100 to +160	14′	Polyethylene Ribbon Lead	No Polarity		60-JRT only	Thin, flat, copper clad bulb 3x13/32x¼"; with polyethylene ribbon lead. Doors of appliances may be closed without damaging it.	6.50
SA-162	—100 to +160	14′				61-JRT		6.50
SA-190**	—100 to +160	8′				Custom		6.50
SA-308	—100 to +160	8′				Custom		5.25
SA-309	—100 to +160	8′				Custom	Thin, fast-responding, plastic-sheathed bulb.	4.50
CONNECTOR BLOCKS								
CB-1	0-2000	1½"lg. x 1⅜" Dia.	—	As marked	As marked	All ceramic bead type thermocouples	Lava block, includes heavy brass connectors for low contact resistance.	1.85

NOTES: *Iron constantan is RP1080 calibration †For best results thermocouples and leads should be as stated on instrument dials.
**Has plug terminals; all other accessories have spade terminals.

PRICES NET, F.O.B., New Haven, Conn. Individually Boxed, Domestic Packed, Effective September 1, 1965

J-B-T INSTRUMENTS, INC. Electrical Instruments, Testers, Switches and Other Components

For other J-B-T Products, see Sec. 5100

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RCA TEST EQUIPMENT

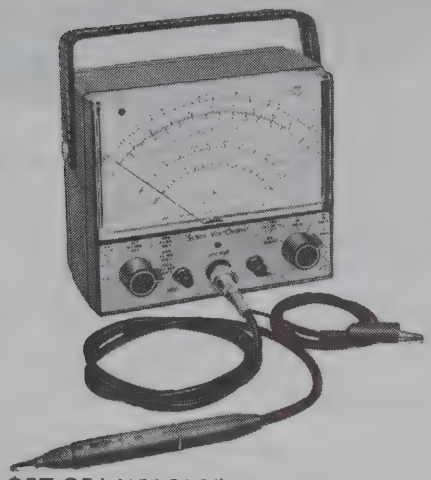
FOR SERVICE, INDUSTRY, SCHOOLS, LABORATORIES

WV-98C Senior VoltOhmyst® (Kit or Wired)

Application: provides direct reading of peak-to-peak voltages of complex waveforms found in video, sync and deflection circuits. Includes an improved circuit providing ±3% accuracy full scale on both ac and dc measurements with less than 1% tracking error. Separate color-coded, peak-to-peak and rms-voltage scales in two distinctive colors simplify readings. Features die-cast aluminum case; high input resistance; electronic protection against burnout; rugged 200-microampere meter movement; precision multiplier resistors with accuracy of ±1% and 0.5-volt full-scale dc range for checking transistor circuits.

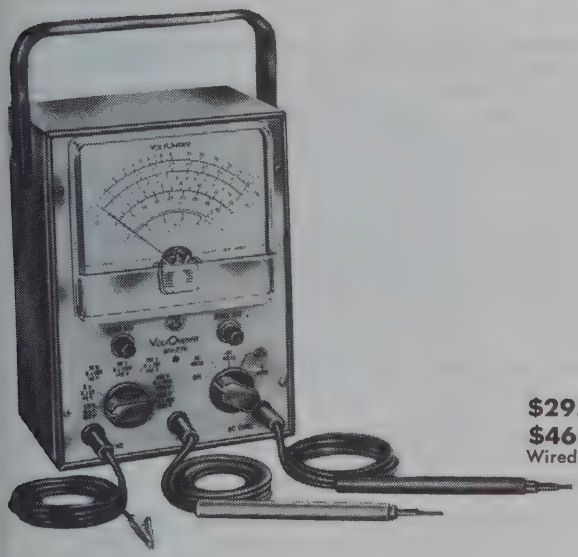
- **Large 6½" easy-to-read, full vision meter (26 sq. in.).**
- **Measures complex waveforms directly from 0.2 volt to 4200 volts peak-to-peak in 7 overlapping ranges.**
- **Measures rms values of sine waves from 0.1 volt to 1500 volts in 7 overlapping ranges.**
- **Measures from 0.02 volt to 1500 volts dc on two scales in 7 overlapping "3-to-1" ranges.**
- **INPUT RESISTANCE — 11 megohms on all dc ranges.**
- **Measures resistance from 0.2 ohm to 1000 megohms on single scale, with 7 overlapping ranges.**
- **FREQUENCY RESPONSE — 30 cps to 250 Mc with WG-301A Crystal-Diode Accessory Probe.**
- **Compact design: 7" wide, 3¾" deep, 6½" high.**

Kit features pre-assembled DC/AC-OHMS Probe



$57.95* WV-98C(k) Senior VoltOhmyst Kit.
$79.50* WV-98C Senior VoltOhmyst (Factory Wired).

WV-77E VoltOhmyst® (Kit or Wired)



The WV-77E features flat frequency response ±5% from 40 cps to 5 Mc on the 1.5, 5, and 15-volt rms ranges and the 4, 14, and 40-volt peak-to-peak ranges. The WV-77E measures dc from 0.02 volt to 1500 volts, rms ac from 0.1 volt to 1500 volts, peak-to-peak ac from 0.2 volt to 4000 volts, and resistance from 0.2 ohm to 1000 megohms—all in seven overlapping ranges! Full-scale accuracy is ±3% on dc and ±5% on ac. Meter is electronically protected against burnout. Separate scales are provided for low ac measurements. Input resistance is standard 11 megohms. Width 5⅝", Height 7¾", Depth 4¾", Weight 5 lbs.

- **Fuse in ohms circuit prevents accidental burnout**
- **Circuit minimizes effect of residual gas in bridge tube**
- **Color-coded scales for easier, faster readings**
- **Ultra-slim probes and extra-flexible cables**

$29.95* WV-77E(K) VoltOhmyst Kit
$46.95* WV-77E VoltOhmyst (Factory-Wired)

(Prices for WV-77E(K) and WV-77E include dc probe and cable, ac/ohms probe and cable, ground lead and clip, and instruction booklet. Assembly instruction sheet is provided with the WV-77E(K) VoltOhmyst Kit.)

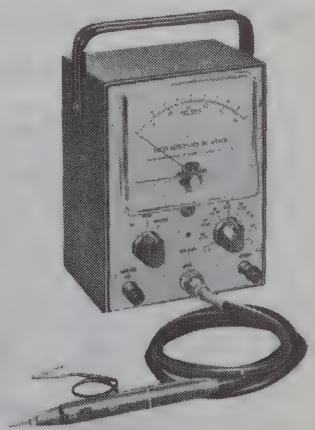
WV-76A HIGH-SENSITIVITY AC VACUUM-TUBE VOLTMETER

(Kit or Wired)

This RCA high-sensitivity AC Vacuum-Tube Voltmeter is designed for audio application in industry, laboratories and schools. It is also useful in broadcast, design and development, production, and servicing applications. Typical uses include frequency response test of pre-amplifiers, power amplifiers and tone-control circuits; feedback circuit design, signal tracing, audio-level and power-level measurements, gain measurements, amplifier balancing application and general audio voltage measurements.

- **Nine overlapping AC voltage ranges — from 10 millivolts to 100 volts full scale. When the WG-300B input probe is set in the "Low-Cap" position, up to 500 volts or +56 db may be measured.**
- **Frequency response is flat from 10 cps to 500 Kc with "Low-Cap" probe, 10 cps to 1.5 Mc with "Direct" probe.**
- **May be used as preamplifier: 38 db maximum gain on 10-millivolt range**
- **High input impedance—permits measurements in circuits sensitive to loading**
- **Probe and cable shielded throughout its length—eliminates pick-up from stray fields**
- **Feedback loop from metering circuit provides additional stability and linearity**
- **Heavy filtering in power-supply section keeps hum to extremely low level**

EQUIPMENT SUPPLIED:
The RCA WG-300B shielded direct/low capacitance probe and cable is supplied with the WV-76A. A switch in the probe housing provides for switching from direct to low-capacitance input. In "DIRECT" position, probe measures up to 100 volts; in "LOW-CAP" position, probe can be used to measure up to 500 volts or +56 db.



$79.95* factory wired and calibrated.
$57.95* Kit

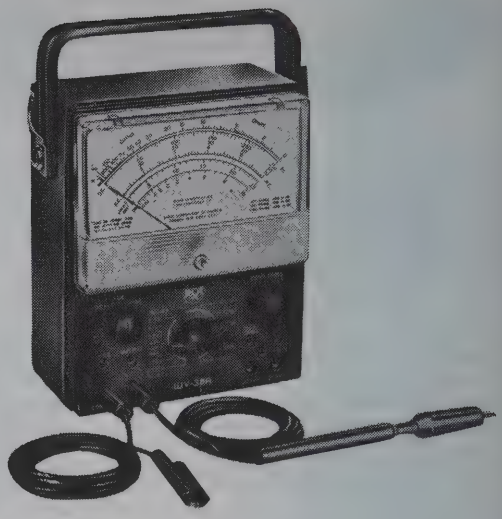
**Optional distributor resale price. All prices subject to change without notice. Prices may be slightly higher in Alaska, Hawaii and the West.*

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RCA TEST EQUIPMENT

FOR SERVICE, INDUSTRY, SCHOOLS, LABORATORIES

WV-38A V-O-M (KIT or WIRED)



NEW FEATURES:

- **Meter movement protected against burnout**
- **New 2-color front panel**

Ohms-divider network fuse-protected. Easier-to-read scales on extra-large 5¼ inch meter. Polarity reversal switch. Full-wave bridge rectifier. Less circuit loading. Standard dbm ranges.

Extra 1-volt and 0.25-volt (250 mv) ranges.

Handle clips accommodate probes and test leads for extra carrying convenience.

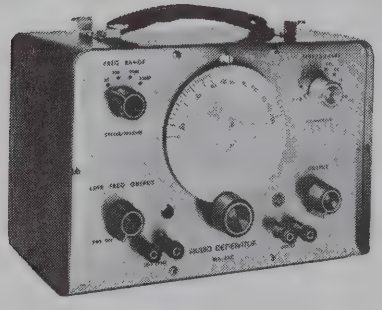
The WV-38A VOM has an input resistance of 20,000 ohms-per-volt on dc and 5,000 ohms-per-volt on ac and an accuracy of ±3% of full scale on dc, ±5% of full scale on ac. Regular scales: 2.5, 10, 50, 250, 1000, 5000 volts, ac and dc; 50 μamp, 1, 10, 100, 500 ma, 10 amps (dc); plus extra scales of 250 mv and 1-volt (dc)! Frequency response (ac), flat from 10 cps to 50 Kc with usable response at 500 Kc. Ohms—3 ranges—R x 1 (0-2,000 ohms), R x 100 (0-200,000 ohms), R x 10,000 (0-20,-000,000 ohms). Dimensions: W 5¼" x H 6⅞" x D 3⅜".

$29.95* WV-38A(K) VOM Kit

$47.95* WV-38A VOM (factory wired and calibrated)

WG-270A Accessory Carrying Case for WV-38A VOM **$4.95***

WA-44C AUDIO SIGNAL GENERATOR SINE/SQUARE WAVE OUTPUT



$98.50* Complete with 20 page instruction booklet.

The Compact WA-44C is ac operated from a 50-to-60 cycle, 105-125 volt source, and covers in four bands a range from 20 cps to 200,000 cps. Can be used for a wide variety of applications, including the measurement of frequency response characteristics of audio amplifiers, and the testing of loudspeakers and enclosures or finding the impedance of LC combinations. Width 10$^{11}/_{16}$", Height 7", Depth 6⅛".

The circuit of the sine-wave function consists of a "Bridged-T" oscillator with a cathode follower output stage. The square-wave output is developed by using the sine-wave oscillator output to drive a clipping and shaping circuit. Produces a stable signal with an amplitude variation of not more than ±1.5 db. Total harmonic distortion is limited to 0.25% over the range of 30 cps to 15 kc.

- Switch selection for sinewave or squarewave output
- Simple one-scale dial
- Separate 60 cps output for intermodulation distortion measurements
- Wide frequency range, 20 cps to 200,000 cps.
- Less than ¼ of 1% distortion over the audio-frequency range

WR-64B COLOR-BAR/DOT/CROSSHATCH GENERATOR



$189.50*

Complete with RF output cable, cable-carrying bracket attachment and instruction booklet.

NEW FEATURES:

- **Crystal-controlled RF oscillator for stable picture carrier**
- **Convenient front-panel gun killing switches.**

For checking over-all operation of Color-TV receivers. A "must" for adjusting and trouble-shooting color phasing and matrixing circuits. Generates signals for producing ten bars of different colors simultaneously. Also provides extremely stable fine-line crosshatch and dot patterns free from "jitter" and "crawl". Fixed number of bars and dots facilitate adjustment of over-scan (height and width) and linearity in both color and black-and-white sets.

The Color-Bar and Dot/Crosshatch generating functions require no external sync connections. All three patterns are RF outputs, factory set to channel 3 (can be set to channel 4). A sound carrier is provided to permit accurate adjustment of the fine-tuning control on the receiver.

The WR-64B features a chroma control helpful in checking color sync lock and color AFC alignment. The color sub-carrier frequency, the horizontal sync-pulse frequency, and the "bar" frequency are all crystal controlled. A shielded output cable is provided with the instrument. Width 13½", Height 10", Depth 7½". Weight only 13 pounds.

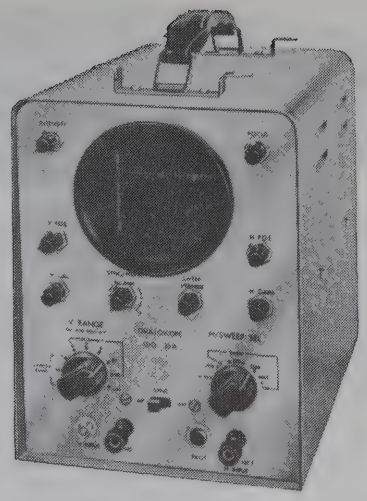
**Optional distributor resale price. All prices subject to change without notice. Prices may be slightly higher in Alaska, Hawaii and the West.*

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RCA TEST EQUIPMENT

FOR SERVICE, INDUSTRY, SCHOOLS, LABORATORIES

WO-33A OSCILLOSCOPE (Kit or Wired)



The WO-33A 3-inch Oscilloscope is the "all purpose" scope! All the bandwidth you need for servicing color-TV, video broadcast monitors and cameras; and for square-wave testing of audio and ultrasonic equipment! All the gain you need for low-level audio work — servicing pickups, microphones, preamps; plus signal-tracing radios, amplifiers—trouble shooting communications signaling systems, ham radio and hi-fi equipment, industrial electronics machinery and other applications.
With vertical amplifier in narrow-band position, sensitivity is 3 rms millivolts/inch; bandwidth within —3 db, 20 cps to 150 Kc. Wide band position: sensitivity 100 rms millivolts/inch; bandwidth within —3 db, 5.5 cps to 5.5 Mc. Sweep circuit: Sawtooth range from 15 cps to 75 Kc; sync — external, ± internal; line sweep — 160° adjustable phase; sync range—to 4.5 Mc.

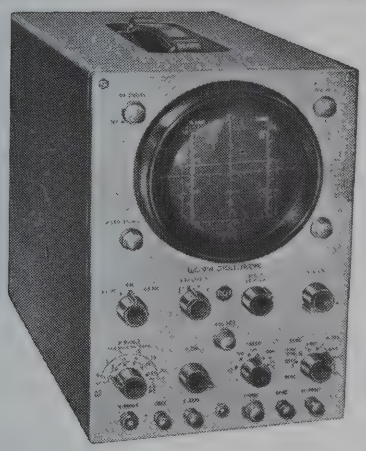
- **for accuracy—voltage-calibrated frequency-compensated, 3-to-1 step attenuator**
- **for measurements—scaled graph screen and calibrating voltage source allows direct reading of peak-to-peak voltages**
- **for stability—"plus-minus" internal sync . . . holds sync to 4.5 Mc**
- **for completeness—shielded input cable with low-capacitance probe included**
- **for portability—compact size—W 6½" x H 8¾" x D 10¼"—weight only 14 lbs. Plus built-in brackets to hold power cord and cables**

$79.95* —WO-33A(K) Oscilloscope Kit

$129.95* —WO-33A Oscilloscope

(Prices for the WO-33A(K) and WO-33A include Direct Low-Cap probe and cable, and instruction booklet.

WO-91B 5" OSCILLOSCOPE



$249.50* complete with WG-300B two-way Direct/Low-Capacitance Probe and Cable, alligator clip and insulator, ground cable; green graph screen. Instruction booklet.

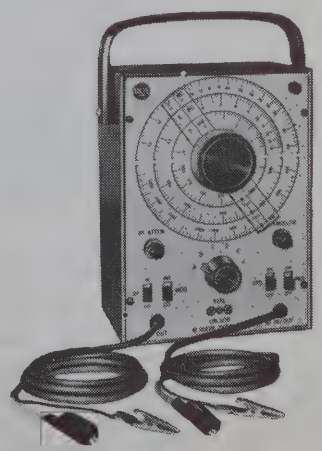
NEW FEATURE:

- **Provision for connecting signals directly to the vertical deflection plates of the CRT**

Application: for production and servicing both black-and-white and color TV receivers. Used to measure color burst signals and for trouble-shooting wide-band color circuits, signal tracing and aligning wide-band video amplifiers, and chrominance circuits. A multi-scale graph screen makes peak-to-peak voltage measurements as simple as with a VTVM. Response: Wide-band within ±1 db from 10 cps to 4.5 Mc; High sensitivity within —1 db from 10 cps to 0.5 Mc: within —6 db to 1.5 Mc. Sensitivity: 0.05 volt peak-to-peak per inch (0.018 volts rms) in high-sensitivity position; 0.15 volt peak-to-peak per inch (0.053 rms volts in wide-band position).

- **Voltage - calibrated, frequency - compensated, 3-to-1 step attenuator for "V" amplifier.**
- **Shielded vertical-input connector and shielded cable minimize hum, stray field pickup.**
- **Input Resistance—1 megohm shunted by 40$\mu\mu$f. Low capacitance position—10 megohm shunted by 11 $\mu\mu$f.**
- **Z-Axis input 12 volts for blanking.**
- **Preset "V" and "H" sweep positions.**
- **"Plus" or "Minus" internal-sync selector.**
- **Positive-lock internal sync.**
- **Sweep Frequency: 10 cps to 100 Kc.**
- **Maximum ac input: 600 volts peak-to-peak.**
- **Weight: 30 lbs. Size 13½" x 16½" x 9".**

WR-50A RF SIGNAL GENERATOR



The RCA WR-50A RF Signal Generator is a highly versatile, readily portable instrument designed for use in the shop, laboratory or classroom for general television and radio servicing and other applications requiring a continuous wave or modulated RF sine-wave signal in the range from 85 Kc to 40 Mc. The unit is particularly well suited for such applications as alignment and signal tracing of AM, FM, High-Fidelity and Citizens' Band Receivers, and signal tracing and trouble-shooting in television receivers.

- **Easy-to-read dial scale and pointer for variable oscillator**
- **Convenient switch and control locations on front panel**
- **Output cables permanently attached**
- **Built-in DC blocking capacitors**
- **Calibrating oscillator circuit with front panel socket for crystal**
- **400-cycle oscillator for internal modulation of AF output**
- **Shielded cables for RF and AF output**
- **Height 7¾", Width 5⅜", Depth 4¾", Weight 5 lbs.**

$39.95* —WR-50A(K)
RF-Signal Gen. Kit

$59.95* —WR-50A
RF Signal Generator

Optional distributor resale price. All prices subject to change without notice. Prices may be slightly higher in Alaska, Hawaii and the West.

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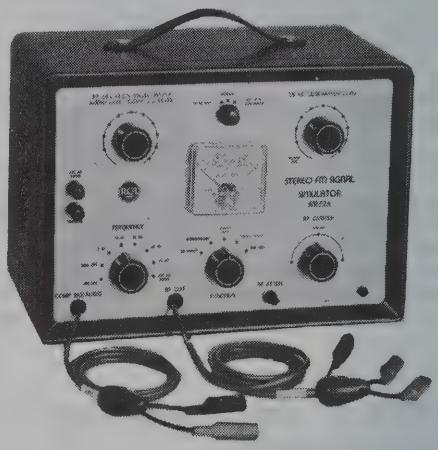
RCA TEST EQUIPMENT

FOR SERVICE, INDUSTRY, SCHOOLS, LABORATORIES

WR-52A — STEREO FM SIGNAL SIMULATOR

The RCA WR-52A Stereo FM Signal Simulator is a compact, lightweight instrument designed to generate the signals necessary for complete service and maintenance of stereo multiplex FM receivers and adaptors.

- **COMPOSITE STEREO OUTPUT** — for direct connection to multiplex circuit
  - Choice of left stereo and right stereo signals
- **RF OUTPUT** — for connection to receiver antenna terminals
  - 100 Mc carrier, tuneable
  - Choice of FM signals — left stereo, right stereo, monaural FM, internal test and 60 cycle FM sweep
  - FM stereo deviation adjustable from 0-100%
  - 100 Mc sweep signal adjustable from 0 to more than 750 Kc at a 60 cps rate
  - RF output attenuator
- **CRYSTAL-CONTROLLED 19 Kc SUBCARRIER** (±.01%)
- **SINE WAVE FREQUENCIES**
  - Three low distortion frequencies — 400 cps, 1 Kc, 5 Kc
  - Two crystal-controlled frequencies — 19 and 38 Kc
  - Additional frequencies — 67 and 72 Kc for trap alignment
- **READILY PORTABLE** — weighs only 12¾ pounds, measures 13¼" by 10" by 8"
- **COMPLETE WITH CONNECTING CABLES**

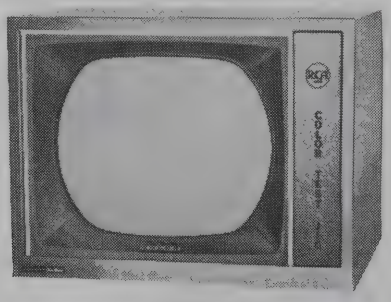


$250.00*

11A1015 COLOR TEST JIG

A "must" for any serviceman now servicing or planning to service Color TV receivers, the RCA Color Test Jig makes a one man service call out of costly two man cabinet pulling jobs. Eliminates necessity of removing picture tube from cabinet and of reconverging tube when chassis is returned. Convergence control panel provides dynamic as well as state convergence.

- Versatile — Can be used with CTC-4, 5, 7, 9, 10, 11 and 12 chassis.
- Safe — Supplied with factory-installed safety glass and kine mask.



$135.00*

Includes kit with all necessary components, hardware and instructions for installation of an RCA Tri-Color Kinescope (Kine not included).

SERVICE ACCESSORIES AVAILABLE FOR USE WITH RCA COLOR TEST JIG:

13A-100 High Voltage Extension Cable
13A-101 High Voltage Extension Cable
205-W1 Degaussing Coil
220-X1 Kinescope Socket Extension Cable
221-X1 Deflection Yoke Extension Cable
222-X1 Convergence Magnet Extension Cable
223-X1 High Voltage Extension Cable
224-X1 Convergence Magnet Extension Cable
225-X1 High Voltage Extension Cable
226-X1 Grid Shunt Switch & Cable
238-X1 Deflection Yoke Extension Cable
237-X1 Color Equalizer Magnet Kit

**Optional distributor resale price. All prices subject to change without notice. Prices may be slightly higher in Alaska, Hawaii and the West.*

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RCA TEST EQUIPMENT

FOR SERVICE, INDUSTRY, SCHOOLS, LABORATORIES

WR-99A CRYSTAL-CALIBRATED MARKER GENERATOR

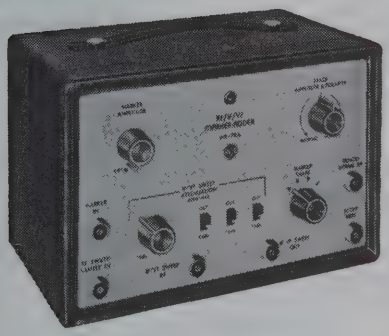


Application: supplies a fundamental frequency rf carrier of crystal accuracy for use in aligning and trouble-shooting TV (color and black-and-white) and FM receivers, and other electronic equipment operating in the range of 19 to 260 Mc. Built-in crystal calibrator, heterodyne detector, amplifier and speaker provides calibrating beats at 1 Mc or 10 Mc intervals throughout entire tuning range which is covered by 8 bands. A built-in 4.5 Mc crystal provides necessary accuracy for alignment of intercarrier-if amplifiers and discriminators.

- **At least 0.1 volt output, into 95 ohms terminated.**
- **Provides signals for adjusting vertical or horizontal linearity.**
- **Precision matched impedance/resistance pad attenuator, 0-60 db in 5 db steps.**
- **Special modulation input available for re-transmission.**
- **Provision for use as Heterodyne Frequency Meter.**
- **Provides dual markers for band-width checks and rf alignment.**
- **Triple markers for sound-if alignment and band-width checks.**
- **Adjustable dial pointer for accurate registration with crystal-calibration check points.**

$256.50* complete with rf output cable, instruction booklet.

WR-70A RF/IF/VF MARKER ADDER



$74.50* complete with four coaxial cables and instruction booklet.

Application: for rf, if and video sweep alignment of both color and black-and-white TV receivers. Provides sharp, easy-to-read markers for alignment. A choice of four different marker shapes is available, permitting use of marker type best suited to the response curve. Designed for use with conventional marker and sweep generators, such as the RCA WR-39 and WR-89 series marker generators and the WR-59 and WR-69 series TV sweep generators. With the WR-70A, the marker signal is added to the sweep-response curve after the sweep signal is taken out of the receiver under test.

- **Eliminates or reduces distortion of sweep curve by the marker.**
- **Permits trap alignment without marker "suckout."**
- **Hi-Q markers — high in amplitude, narrow in width.**
- **Four marker choices — positive peak, negative peak, positive and negative peaks (wide band), positive and negative peaks (narrow band).**
- **Voltage stabilized for rock-steady trace display.**

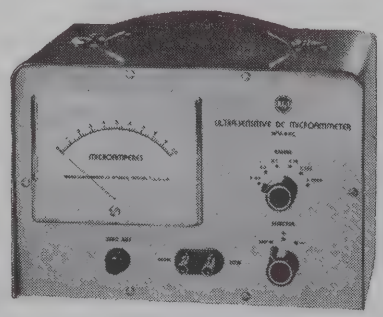
SPECIFICATIONS

IF/VF sweep input — 50 Kc to 50 Mc. RF input — 50 Mc to 250 Mc.

MINIMUM INPUT VOLTAGES — IF/VF — 0.1 volts rms. RF Sweep sample input—0.005 volts rms. Marker input—0.1 volts rms. Maximum demodulator signal input—8 volts peak-to-peak.

MAXIMUM SIGNAL OUTPUT — Marker signal — 2.5 volts rms. Demodulator signal — 10 volts peak-to-peak. Input and output impedances all 100 ohms except demodulator signal input of 0.5 megohm.
Weight: 8 lbs. Size: 7½" x 10½" x 6¼".

WV-84C ULTRA-SENSITIVE DC MICROAMMETER



$110.00* includes 50- and 950-megohm multiplier resistors, instruction booklet. (less batteries)

Application: a battery-operated vacuum tube microammeter designed for measuring minute direct currents, for making current and voltage measurements in electrolysis and corrosion investigations, and for checking currents in light meters, ultra-violet and infrared detectors, and spectrophotometric devices. Self-contained batteries permit use almost anywhere. Low-drain tubes extend battery life and protect the delicate meter against burnout due to accidental overloads. When used as a voltmeter, it is especially suited to measurements in circuits where loading is a critical factor. Can also be used as an ohmmeter to measure extremely high resistances, such as leakage and insulation resistance.

- **Six direct-current ranges for measuring currents from 0.0002 to 1000 microamperes.**
- **Can be used as ohmmeter to measure resistance in the order of billions of ohms.**
- **Voltage drop for full-scale deflection only 0.5 volts.**
- **Input resistance of 100 megohms for measurement of voltages from 0.1 to 1 volt; 1000 megohms input resistance for voltages from 1 to 10 volts, 1005 megohms for voltages from 1 to 100 volts.**
- **Over-all microammeter accuracy on .01 range ±5% or better; accuracy on all other ranges ±4% or better.**
- **Size 7½" x 10½" x 6¼". Weight: 10 lbs. including batteries.**

**Optional distributor resale prices. All prices subject to change without notice. Prices may be slightly higher in Alaska, Hawaii and the West.*

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RCA TEST EQUIPMENT

FOR SERVICE, INDUSTRY, SCHOOLS, LABORATORIES

WT-115A COLOR PICTURE TUBE TESTER



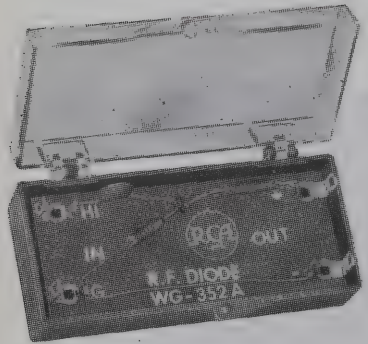
The RCA WT-115A Color Picture Tube Tester is designed specifically for the testing of color picture tubes, including types 21AXP22, 21AXP22A, 21CYP22, 21CYP22A, 21FBP22, 21FKP22, and 21FJP22. The RCA WT-115A offers a quick, reliable means of testing each gun of the color picture tube for emission quality (including warm-up performance), interelectrode leakage, and shorted elements. Readily portable, the WT-115A provides distributors and dealers with an accurate instrument for the testing of color picture tubes in the customer's home or in the store.

- **Designed specifically for testing TV color picture tubes**
- **Tests each gun for emission quality, interelectrode leakage, and shorts**
- **Large, 3-color, sensitive meter with two scales:**
  - **Red/green "quality" scale, with reference marks from 0 to 10**
  - **Separate yellow scale to indicate interelectrode leakage**
- **Sensitive meter and cut-off adjustment control for evaluating the true emission of each gun**
- **Neon shorts indicator**
- **AC line-voltage adjustment for accurate measurements**
- **Test procedure includes 2-minute and 4-minute tests for determining warm-up performance of tube**
- **Tests color picture tube in-set or out-of-set**
- **Built-in cable and socket assembly**

$89.50* Complete with sturdy laminated vinyl case with convenient cable storage compartment.

***User Price (Optional)**

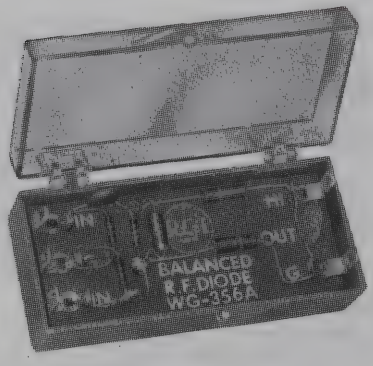
WG-352A
RF DIODE



The RCA WG-352A RF Diode is designed for use with the RCA WV-38A or WV-38A(K) Volt-Ohm-Milliammeter in rf applications from approximately 100 kc to 100 Mc. When the WG-352A is connected in a high frequency circuit, it will provide rectified output which can be read directly from the meter scales of the WV-38A.

$2.95*

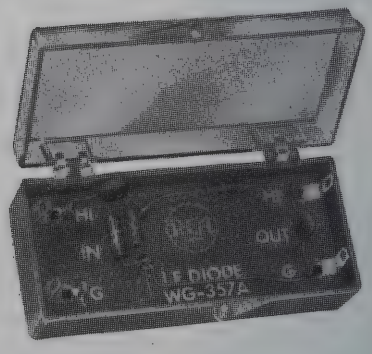
WG-356A
BALANCED RF DIODE



The RCA WG-356A Balanced RF Diode is designed for use with an oscilloscope, such as the RCA WO-33A or WO-91A, in measuring the voltage output of sweep-frequency generators having balanced, 300-ohm output circuits, and for checking the bandpass and gain characteristics of VHF TV rf preamplifiers and antenna distribution amplifiers. The diode is useful through the video/if/rf frequency range up to approximately 250 Mc.

$3.95*

WG-357A
IF DIODE



The RCA WG-357A IF Diode is an unbalanced detector-demodulator designed primarily for use with an oscilloscope, such as the RCA WO-33A or WO-91A, in displaying the sweep output from an if/video sweep generator having an unbalanced output circuit. The WG-357A, which is usable up to approximately 100 Mc, can also be used to observe the rf/if response of individual amplifier stages. It has a maximum input signal rating of 20 rms volts, and a maximum dc voltage rating of 250 volts.

$3.95*

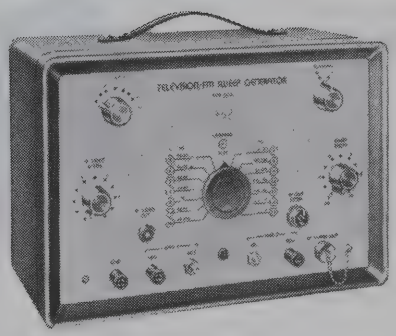
**Optional distributor resale price. All prices subject to change without notice. Prices may be slightly higher in Alaska, Hawaii and the West.*

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RCA TEST EQUIPMENT

FOR SERVICE, INDUSTRY, SCHOOLS, LABORATORIES

WR-69A
TELEVISION/FM SWEEP GENERATOR

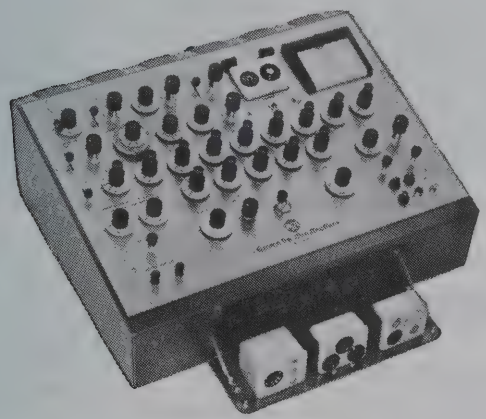


Tops for visual alignment of both TV and FM receivers, the WR-69A has preset switch positions for all VHF TV channels, the FM broadcast band, and TV video, chrominance, and if frequencies. VHF output is on fundamental frequencies only; no beat notes or harmonics are used. Exceptionally good linearity is provided by a precision vibrator capacitor. Continuously adjustable sweep width and flat output make for accurate sweep response portrayals. The WR-69A is especially suited to alignment of color receivers. Special sample-voltage terminal on panel permits use with marker-adder units in alignment. Dual-piston attenuator provides smooth even attenuation over 60 db range. Width 13⅜", Height 10", Depth 7".

- **IF/Video output frequency continuously tunable from 50 Kc to 50 Mc.**
- **Sweep-frequency bandwidth continuously adjustable from 50 Kc to 20 Mc on if/video and fm - 12 Mc max. on TV channels.**
- **Return trace blanking.**
- **Two adjustable bias voltages available on front panel.**

$295.00*

(complete with RF Output cable, IF/Video Output cable and instruction booklet.)



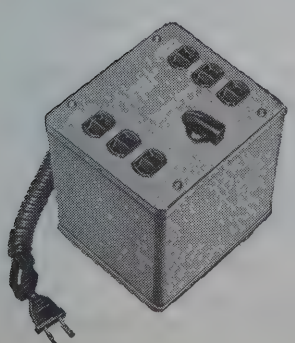
WT-100A Electron-Tube MicroMhoMeter

A precision laboratory measuring instrument which tests tubes under typical operating conditions as specified in the tube manufacturers' technical data manuals. It is particularly useful in production line testing, design and development work, pre-selecting for critical applications, quality control programs, and preventive maintenance. MEASUREMENTS PERFORMED: ac heater current from 0.02 ampere to 5 amperes • dc filament current up to 250 ma • voltage drop across rectifier tubes and semiconductor diodes • transconductance from 10 micromhos to 100,000 micromhos. Within the range of its facilities it will test: vacuum tubes—diodes, triodes, tetrodes, pentodes, heptodes, spetodes, octodes, and multi-unit types; gas tubes—thyratrons, voltage regulators, cold-cathode and hot cathode rectifiers; in these bases and envelopes—bases with 4, 5, and 6 pins, lock-in, miniature, sub-miniature, pencil and lighthouse; and semi-conductor diodes—small dry-disc rectifiers, germanium and silicon diode types. Size: W 23½" x H 8" x D 18½". Weight: 50 lbs.

$989.00* Electron-Tube MicroMhoMeter

(complete with 4 multiple-socket plug-in units, instruction booklet.)

- **measures transconductance to an accuracy of *better* than ± 3%**
- **accurate measurement of "hybrid" auto receiver tube types under actual operating conditions**
- **built-in shorts test for any combination of tube elements**
- **measures transconductance up to 100,000 micromhos in six ranges**
- **measures both control-grid-to-plate and suppressor-grid-to-plate transconductance**
- **built-in calibrating circuit—no null meters or extra devices required**
- **meter completely burnout-proof**
- **regulated power supplies for dc plate and screen test voltages**



WP-25A
TV ISOTAP

Speeds up servicing, prevents damage to test equipment, minimizes shock hazard, cuts down costly returns. The WP-25A may be used as a high-medium-low voltage isolation transformer or as an autotransformer for testing radio and TV receivers at various settings of line voltage. Supplies outputs of 130, 115, and 105 volts at maximum load and is tapped to match line voltages from 105 to 130 volts in six steps **$22.00***

WG-304B
RF MODULATOR



An accessory used to check the over-all frequency response of TV receivers from antenna to picture tube grid. The unit permits modulation of an rf marker signal from a marker generator (such as WR-89A or WR-99A) by a signal from a video sweep generator (such as WR-59C or WR-69A).

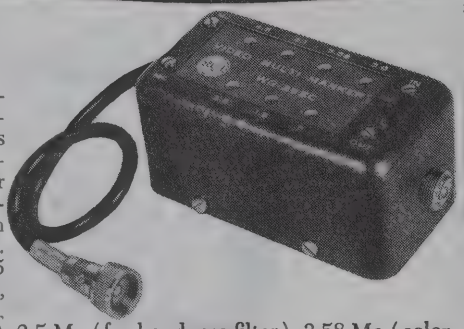
$16.50*

**Optional distributor resale prices. All prices subject to change without notice. Prices may be slightly higher in Alaska, Hawaii and the West.*

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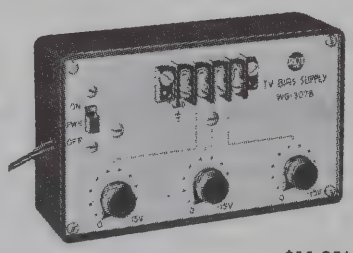
RCA TEST EQUIPMENT ACCESSORIES

WG-295C VIDEO MULTIMARKER



Provides seven simultaneous absorption-type markers at accurately preset frequencies for marking video response curves in color receivers. Markers are at 0.5 Mc (For Q, R-Y, B-Y, G-Y filters), 1.5 Mc (for J filter), 2.5 Mc (for bandpass filter), 3.58 Mc (color subcarrier frequency), 3 and 4.1 Mc (video and bandpass amplifiers), and 4.5 Mc (sound-trap frequency). Each marker is identified simply by touching a corresponding contact on the WG-295C case. This reduces the amplitude of the particular marker. The WG-295C connects between the IF/VF output on the sweep generator and the video output cable. Equipped with shorting switch. With instruction booklet **$32.50***

WG-307B(K) TV BIAS SUPPLY KIT



Three separate dc output voltages each adjustable from 0 to −15 V. Panel isolated from all circuits. Measures 6⅛" x 3¾" x 2". Weight: 22 ounces. **$11.95***

WG-301A CRYSTAL-DIODE PROBE



"Slip-on" type for use with the WG-299A, B or C DC/AC Ohms Probe and Cable extending the frequency range of VoltOhmysts® to 250 Mc. **$7.75***

WG-299D DC/AC OHMS PROBE AND CABLE

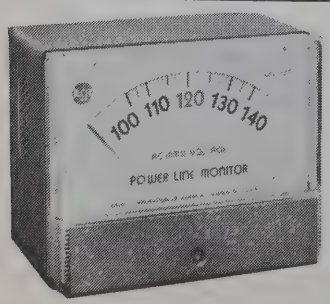


The WG-299D is a single-unit probe for use with Volt Ohmysts® except WV-77E. Switch provides instant selection of dc or ac/ohms operation. The WG-299D replaces the WG-299A, WG-299B and WG-299C. **$7.95***

WG-300B DIRECT/LOW CAPACITANCE PROBE AND CABLE



Designed for use with the RCA Scopes. Cable is 48" long, completely shielded from microphone connector to probe tip to minimize hum and stray field pick-up. Built-in switch provides instant selection of direct or low-capacitance operation. Input characteristics: 10 megohms resistance, less than 12.5 μμf capacitance in low capacitance position. Includes ground lead and clip. **$9.95***

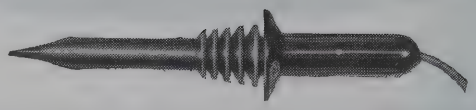


WV-120A POWER LINE MONITOR

For constant indication of power line voltage

Features: ● expanded scale 100 to 140 volts indicates true rms values ● accuracy ±2% at 120 volts, ±3% at 100 and 140 volts ● readable from 10 feet or more ● plugs in to power line outlet ● wide frequency range, 25 to 400 cps.

H 3 15/16", W 5", D 3 1/16"; Weight: 1½ lbs. $14.95*



WG-289, WG-297 HIGH-VOLTAGE PROBES

The WG-289 extends the dc-voltage range of the WV-77A, WV-77B, WV-77C, WV-87A, WV-87B, WV-97A, WV-98A and WV-98B VoltOhmysts to 50,000 volts. The WG-297 extends the range of the WV-77E VoltOhmyst® and WV-38A volt-ohms-milliammeter to 50,000 volts dc.

The WG-289 is provided with a microphone-type connector, and the WG-297 is provided with banana-plugs for use with appropriate VoltOhmysts and other VTVM's, VOM's.

A choice of three multiplier resistors is available, enabling these probes to be used with many popular electronic and non-electronic volt-ohm-meters!

WG-206—1090-megohm multiplier resistor for VTVM's having 11-megohm input (multiplying factor 100).

WG-210—900-megohm resistor multiplies 5000-volt dc range of 20,000-ohms-per-volt VOM's by a factor of 10.

WG-211—495-megohm resistor multiplies 250-volt dc range of 20,000-ohms-per-volt VOM's by a factor of 100.

WG-289 or WG-297, Probe Only **$11.95***

WG-206, WG-210, or WG-211, Multiplier Resistor Only (each) **$ 3.50***

*User Price (Optional)

WG-349A DIRECT/LOW-CAPACITANCE PROBE



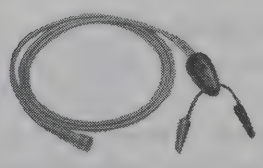
A 48-inch, small diameter, extremely flexible shielded cable designed for use with the WO-33A Oscilloscope. The probe consists of three short leads with alligator clips for ground, direct, and low-capacitance connections. For convenient use, the WG-394A eliminates the need for switching. It connects to the oscilloscope by means of a miniature-type microphone connector. Input characteristics: 10 megohms, 12 uuf capacitance, when used with the WO-33A and WO-33A(K). **$5.95***

WG-302A RF/IF/VF SIGNAL TRACING PROBE



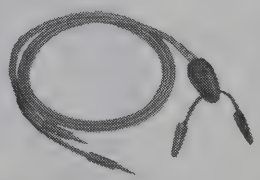
"Slip-on" type high-frequency probe designed for use with the WG-300A and B probe and cable to permit visual signal tracing for rapid isolation of trouble in radio receivers and in television if and video stages..... **$8.50***

WG-350A DEMODULATOR PROBE



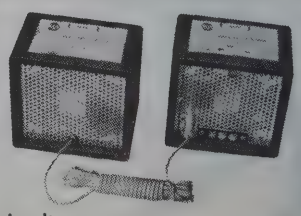
For use with the WO-33A Super-Portable Oscilloscope for demodulation and signal tracing of radio/TV rf and if signals. **$4.95***

WG-351A CRYSTAL DIODE PROBE



For extending the rf measuring capability of the WV-77E VoltOhmyst, and WV-77E(K) VoltOhmyst Kit, to over 100 Mc. **$4.95***

WG-360A PHASE CHECKER



Used for a dynamic check of phasing in any audio system from input to the output of the speakers.

Features:

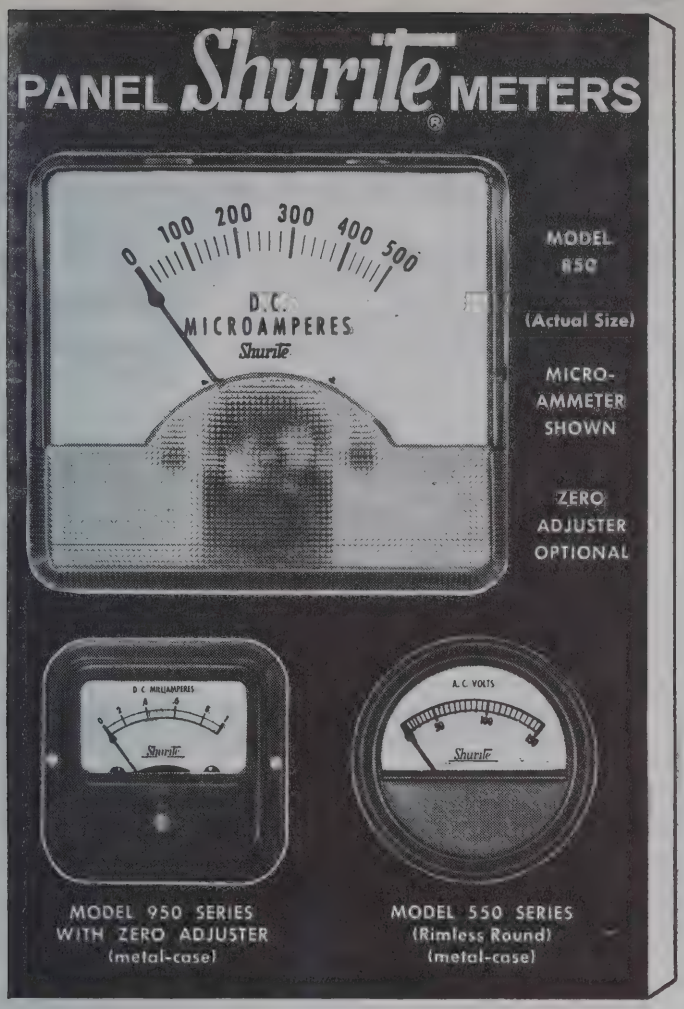
● sound powered; requires no external voltage source

● any VOM, VTVM, or oscilloscope may be used as the indicator

$14.95*

**Optional distributor resale prices. All prices subject to change without notice. Prices may be slightly higher in Alaska, Hawaii and the West.*

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• **SHURITE** makes attractive, rugged, dependable instruments with accuracy well within ±5%, and the ability to duplicate readings. DC meters are polarized-vane solenoid type (moving-magnet or bridge-type construction where indicated): AC meters are double-vane repulsion type with jeweled bearing. The jewel construction costs more to build, but it pays off in continuing accuracy during a longer useful life. Models 550 and 950 fit 2-5/32" hole; Model 850 fits 2-5/32" to 2-1/32" hole. All are guaranteed.

FEATURES

GUARANTEE: Meters are guaranteed to users against defective workmanship and material, and will be repaired or replaced if sent to the factory postpaid with 50¢ handling charge within one year after purchase . . . **ALL METAL DIALS**—age and moisture resistant, lithographed in black on white for high visibility . . . **STURDY DESIGN**—with husky coil frames designed to prevent breakage, rigidly mounted in cases with anti-turning square head studs . . . **VISCOSITY DAMPING**—careful application of new silicone compound on bearing surfaces damps pointer overtravel . . . **WIDE SELECTION**—Shurite offers the broadest line of standard meters in the economy-priced field. Distributor stocks are backed by an extensive factory inventory.

CLEAR PLASTIC INSTRUMENTS

. . . The 850 snap-on front of crystal-clear high temperature polystyrene 2-17/32" wide by 2-5/16" high, admits light from all sides and accentuates the appearance of the dial which has the longest scale arc in its field. The case back is black, but of similar high-temperature, high-impact material.

TYPICAL USES

Amateur radio rigs . . . Citizens Band equipment . . . battery eliminators . . . battery chargers . . . volt-ohm-milliammeters and kits . . . model train equipment . . . tuning circuits for stereo and tape recorders . . . burglar, fire alarm, or emergency lighting systems . . . transistor testers . . . plating equipment . . . voltage regulators . . . detergent strength analyzers . . . demonstrators . . . many other applications.

*** **NEW PRODUCTS — More sensitive** meters without sacrifice of ruggedness, include: *A) three 0-500 DC Microammeters with 1000 ohms int. res.; *B) a 0-1 DC Milliammeter, Stock No. 8334, 800 ohms int. res., with Bridge-Type design to minimize effect of external magnetic forces; and *C) a Field Strength Meter, Stock No. 8903Z. Not cataloged but produced in quantity at extra cost are expanded scale meters, such as 10-12.5 DC Volts, accuracy ±.125 Volt. A handy new Cold Zone Tester is announced on the next page.

DC MICROAMMETERS

RANGE Ua.	RESIST. Approx. Ohms	Model 550* Stock No.	Model 950* Stock No.	Model 950* Net Each	Model 850* Stock No.	Model 850* Net Each
0-500**	1000	5902	9902	$4.10	8902	$4.30

* For zero adjuster, add 35c to price and Z to stock number
** Sensitive type, note internal resista ce. DC bridge-type construction.

DC MILLIAMMETERS

RANGE Ma.	RESIST. Approx. Ohms	MODEL 550* Stock No.	MODEL 950* Stock No.	MODEL 950* Net Each	MODEL 850* Stock No.	MODEL 850* Net Each
0-1**	1000	5300Z	9300Z	$4.00	8300Z	$4.15
0-1#	800	—	—	—	8334	3.95
0-3L**	500	5332Z	9332Z	4.00	8332Z	4.15
0-3	4500	5301	9301	3.10	8301	3.25
0-5	3650	5302	9302	2.85	8302	3.00
0-10	920	5303	9303	2.60	8303	2.75
0-15	485	5304	9304	2.40	8304	2.55
0-25	172	5305	9305	2.40	8305	2.55
0-50	46	5306	9306	2.40	8306	2.55
0-100	10.4	5307	9307	2.40	8307	2.55
0-150	4.7	5308	9308	2.40	8308	2.55
0-200	2.8	5309	9309	2.40	8309	2.55
0-300	1.5	5310	9310	2.40	8310	2.55
0-400	.46	5311	9311	2.40	8311	2.55
0-500	.30	5312	9312	2.40	8312	2.55

* For zero adjuster, add 35¢ to price and Z to stock number.
**Sensitive type, moving-magnet construction, zero adjuster built-in.
Bridge-type construction; internal magnet design minimizes effects of external magnetic forces. Price does not include zero adjuster.

AC MILLIAMMETERS

RANGE Ma.	RESIST. Approx. Ohms	MODEL 550 Stock No.	MODEL 950 Stock No.	MODEL 950 Net Each	MODEL 850* Stock No.	MODEL 850* Net Each
0-10	4800	5607	9607	$3.75	8607	$3.90
0-25	750	5601	9601	3.60	8601	3.75
0-50	150	5602	9602	3.60	8602	3.75
0-100	37	5603	9603	3.60	8603	3.75
0-250	5.4	5604	9604	3.60	8604	3.75
0-500	1.34	5605	9605	3.60	8605	3.75

NO ZERO ADJUSTER ON AC METERS, EXCEPT ON MODEL 850.
* For zero adjuster add 35c to price and Z to stock number.

DC AMMETERS

RANGE Amps.	RESIST. Approx. Ohms	MODEL 550* Stock No.	MODEL 950* Stock No.	MODEL 950* Net Each	MODEL 850* Stock No.	MODEL 850* Net Each
0-1	.105	5201	9201	$2.40	8201	$2.55
0-3	.02 Max.	5202	9202	2.40	8202	2.55
0-5	.02 Max.	5203	9203	2.40	8203	2.55
0-8	.02 Max.	5204	9204	2.40	—	—
0-10	.02 Max.	5205	9205	2.40	8205	2.55
0-15	.02 Max.	5206	9206	2.40	8206	2.55
0-25	.02 Max.	5207	9207	2.85	8207	3.00
0-50	.02 Max.	5208	9208	2.85	8208	3.00
3-0-3	.02 Max.	5210	9210	2.50	—	—
5-0-5	.022 Max.	5211	9211	2.50	—	—
6-0-6	.02 Max.	5212	9212	2.50	—	—
10-0-10	.02 Max.	5213	9213	2.85	8213	3.00
20-0-20	.02 Max.	5214	9214	2.85	8214	3.00
30-0-30	.02 Max.	5215	9215	2.85	8215	3.00
50-0-50	.02 Max.	5216	9216	3.00	8216	3.15

* For zero adjuster, add 35c to price and Z to stock number.

AC AMMETERS

RANGE Amps	RESIST. Approx. Ohms	MODEL 550 Stock No.	MODEL 950 Stock No.	MODEL 950 Net Each	MODEL 850* Stock No.	MODEL 850* Net Each
0-1	.42 Max.	5501	9501	$3.50	8501	$3.65
0-3	.072 Max.	5502	9502	3.50	8502	3.65
0-5	.041 Max.	5503	9503	3.50	8503	3.65
0-10	.02 Max.	5504	9504	3.50	8504	3.65
0-15	.02 Max.	5508	9508	3.50	8508	3.65
0-30	.02 Max.	5505	9505	3.60	8505	3.75
0-50	.02 Max.	5506	9506	4.00	8506	4.15
0-80	.02 Max.	—	—	—	8507	4.35

NO ZERO ADJUSTER ON AC METERS, EXCEPT ON MODEL 850.
* For zero adjuster add 35c to price and Z to stock number.

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DC VOLTMETERS

RANGE Volts	RESIST. Approx. Ohms	MODEL 550* Stock No.	MODEL 950* Stock No.	MODEL 950* Net Each	MODEL 850* Stock No.	MODEL 850* Net Each
0-1	10	5101	9101	$2.40	—	—
0-3	93	5102	9102	2.40	8102	$2.55
3-0-3	250	5103	9103	2.40	—	—
0-5	300	5104	9104	2.40	8104	2.55
0-6	390	5105	9105	2.40	—	—
0-8	600	5106	9106	2.40	8106	2.55
0-10	880	5107	9107	2.40	8107	2.55
0-15	2370	5108	9108	2.40	8108	2.55
0-20	3500	5121	9121	2.40	8121	2.55
0-25	1420	5109	9109	2.70	8109	2.85
0-25H**	5000	5110	9110	3.10	8110	3.25
0-50	2920	5122	9122	2.65	8122	2.80
0-50H**	10000	5111	9111	3.35	8111	3.50
0-75	4280	5112	9112	2.70	—	—
0-100	5740	5113	9113	2.70	—	—
0-100H**	20000	5114	9114	3.25	—	—
0-150	8500	5115	9115	2.85	8115	3.00
0-150H**	30000	5116	9116	3.50	8116	3.65
0-300H**†	60000	5117	9117	3.60	8117	3.75
0-500H**†	100000	5118	9118	3.85	8118	4.00
0-750H**†	154000	5119	9119	4.35	—	—

* For zero adjuster add 35c to price and Z to stock number.
** H denotes high resistance.
† Supplied with external resistors.

AC VOLTMETERS

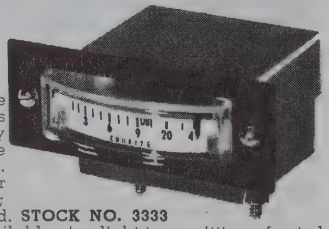
RANGE Volts	RESIST. Approx. Ohms-Volt	MODEL 550 Stock No.	MODEL 950 Stock No.	MODEL 950 Net Each	MODEL 850* Stock No.	MODEL 850* Net Each
0-4	11	5401	9401	$3.65	—	—
0-6	15.8	5402	9402	3.65	—	—
0-10	27	5403	9403	3.65	8403	$3.80
0-15	35	5404	9404	3.65	8404	3.80
0-25	53	5412	9412	3.65	8412	3.80
0-50	96	5405	9405	3.85	8405	4.00
0-150	100	5406	9406	4.05	8406	4.20
0-300**	100	5407	9407	4.60	8407	4.75
0-600**	100	5408	9408	5.15	—	—
0-750**	100	5409	9409	5.75	—	—

NO ZERO ADJUSTER ON AC METERS, EXCEPT ON MODEL 850
*For zero adjuster add 35c to price and Z to stock number.
**Supplied with external resistors.

EDGEWISE

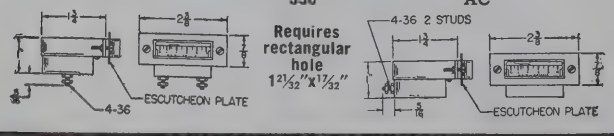
MODEL 350

STOCK NO. 3333



High-temperature crystal polystyrene front adds beauty to panel designs and 1.2" scale length offers easy reading. Uses less than half the panel space of other Shurite meters. Horizontal mounting; weight under 2 ozs.; accuracy well within ±5%; black escutcheon plate supplied. **STOCK NO. 3333** Case back normally black; available in light-transmitting frosted polystyrene on special order.

RANGE	Resistance Approx. Ohms	Stock No.	Net Each
0-1 DC Milliamperes	500	3300	$3.70
0-5 DC Milliamperes	3100	3302	3.45
0-10 DC Milliamperes	700	3303	3.45
0-25 DC Milliamperes	150	3305	3.35
0-50 DC Milliamperes	28	3306	3.35
0-100 DC Milliamperes	7	3307	3.35
0-200 DC Milliamperes	3	3309	3.35
0-300 DC Milliamperes	2	3310	3.35
0-500 DC Milliamperes	1.5	3312	3.35
0-100 AC Milliamperes	32	3603	3.45
0-3 DC Amperes	.02 Max.	3202	3.35
0-5 DC Amperes	.02 Max.	3203	3.35
0-10 DC Amperes	.02 Max.	3205	3.45
10-0-10 DC Amperes	.02 Max.	3213	3.55
0-5 AC Amperes	.04	3503	3.45
0-5 DC Volts	725	3104	3.35
0-10 DC Volts	1200	3107	3.35
0-15 DC Volts	2200	3108	3.35
0-15 AC Volts	728	3404	3.45
0-150 AC Volts	14000	3406	4.10
VU Meter —20 to +3 VU	1400	3801	5.50
S Meter 0—40 db	1000	3333	3.45



POCKET TYPE METERS

Please ask for Catalog 94-E which describes 13 types of battery testers (pocket meters). Their stock numbers begin with the digit 4. Typical is **Stock No. 4151,** 0-7 DC volts, approx. res. 670 ohms. **$3.00**

Shurite®

COLD-ZONE TESTER

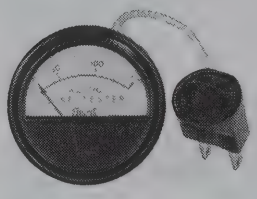
PRICED UNDER $20.00



STOCK NO. 8380-RT—Place the thin, flat resistance bulb inside a refrigerator, deep freezer, air conditioner or other cooling equipment, close the door on the polyethylene ribbon lead, allow the bulb temperature to stabilize, and get a direct reading from —40 to +120°F. Saves time, builds customer confidence. Red pointer; 2⅛" scale arc, readable to ±2°; accuracy well within commercially accepted standards of ±5° (±3%). For further details, ask for Bulletin CT-1. Tester comes in gray vinyl case 5"x5"x4½" complete with 8 ft. detachable bulb and 7½ volt standard battery **$19.50**

Interchangeable 14 ft. extra bulb **6.50**

HANDY AC-DC LINE VOLTAGE TESTER



STOCK NO. 5406-LT—Plug-in to read line voltage, then find (and demonstrate) voltage drop or inadequate wiring by plugging in TV set, iron, toaster, washer, air-conditioner, shop equipment, etc. Features of this tester: (a) attached plug-receptacle permits continuous reading while loads are changed; (b) reads 150 V AC or DC; (c) cord allows convenient angle for reading; (d) jewel bearing construction provides continuing accuracy. Standard package of 6 meters comes with convenient counter display.

Per meter **$4.25**

VU, S, and FIELD STRENGTH METERS

VU METERS — Read volume levels in audio transmission circuits; scale —20 to +3 VU, red and black. AC rectifier type; pointer normally at —20 VU; 1400 ohms ±5% int. res., see Bulletin VUS-61 for application circuitry.

STOCK NO. 8801Z. Model 850, zero adjuster included **$5.85**
STOCK NO. 3801. Edgewise case; zero adjuster not available. **5.50**

S METERS — To measure relative signal strength; black and red scale, basic movement is 0-5 Ma. DC with 1000 ohms int. res. ±5%; for application notes and circuits, see Bulletin VUS-61.

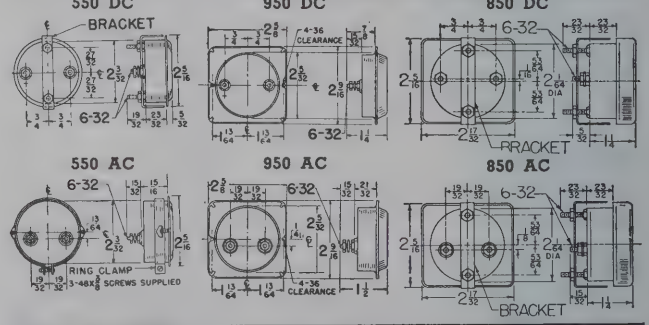
STOCK NO. 3333. Model 350 as illustrated, pointer normally at 40 ..... **$3.45**
STOCK NO. 8333*. 850 Series case, 0-60 db., pointer normally at 60. (Formerly supplied with pointer at zero) **$3.35**
* For zero adjuster, add 35c to price and Z to stock number.

FIELD STRENGTH METER — When this variation of a 0-1 D.C., illiammeter is built into an elementary circuit (supplied on request), antenna systems may be easily checked, tuned, phased, or matched to transmission lines.

STOCK NO. 8903Z. Model 850. Topside marked .1, .5, 1, 2, 3, 4, 5, 7, 10; bottom scale marked 2, 4, 6, 8, 10; zero adjuster included; meter only **$3.95**

3-HOLE MOUNTING ADAPTER

Model 5-A. 2¾" black flange attaches from front, converts Model 550 (round) meter to 3-hole flange type $0.18



RESISTANCE METERS

RANGE Ohms	Volts	MODEL 550* Stock No.	MODEL 950* Stock No.	MODEL 950* Net Each	MODEL 850* Stock No.	MODEL 850* Net Each
10,000	4.5**	5701	9701	$3.00	8701	$3.15

*For zero adjuster add 35c to price and Z to stock number.
**Requires 3 flashlight cells for resistance readings but does not require resistor for voltage readings.

IMPORTANT — HOW TO ORDER

Give (1) Model Number, (2) Range, (3) Stock Number.
ZERO ADJUSTER (Z) 35c extra; see footnotes as to availability.
PANEL CALIBRATION (S) Normally for non-magnetic panels. If steel panel mounting, give thickness and size; add S to stock number.
SEE YOUR DISTRIBUTOR Authorized Shurite distributors carry most models and can obtain your other needs promptly.

Shurite® METERS

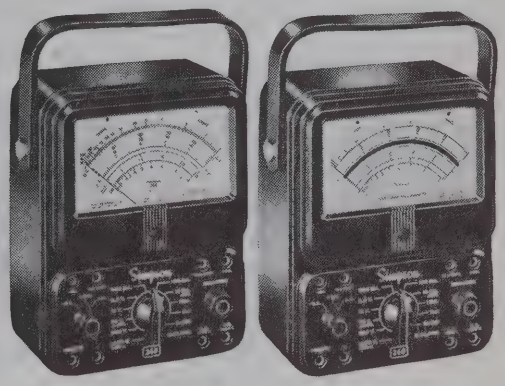
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Simpson VOMs

All Prices Net

World Famous 260® VOM
TWO VERSIONS

- New Diode Overload Protection
- New Self-Shielded Movement
- New Higher Accuracy: 2% DC, 3% AC
- New Ruggedness from Spring-Backed Jewels
- Greater Repeatability
- Increased Linearity and Stability
- Input Protected with Internal 1-amp fuse



Series 5 (Std. Scale) | Series 5M (Mirror Scale)

260® VOM

OTHER FEATURES

- **Converts to 9 Different Testers (See Adapters on next page.)**
- **Over a Million Purchased . . . Recognized Reliability**
- **20,000 opv, DC; 5,000 opv, AC**
- **Adjust-A-Vue Handle**
- **Polarity Reversing Switch**
- **50 Microampere-250 Millivolt Range**
- **Easy-to-Read Scales:** Black and red, spread out for faster reading, less errors.
- **Popular DBM Ranges:** −20 Dbm to +50 DBM, one milliwatt in 600 ohms!
- **Improved Frequency Response in AC Measurements:** 5 to 500,000 cps.
- **Full-Wave Bridge Rectifier System.**

VOLTAGE RANGES

DC: 0-250mv; 0-2.5v; 0-10v; 0-50v; 0-250v; 0-1000v; 0-5000v.
AC: 0-2.5v; 0-10v; 0-50v; 0-250v; 0-1000v; 0-5000v.
AF: 0-2.5v; 0-10v; 0-50v; 0-250v.
DB (1MW—600Ω): −20 to +10 db; −8 to +22 db; +6 to +36 db; +20 to +50 db.

CURRENT RANGES

DC: 0-50ua; 0-1ma; 0-10ma; 0-100ma; 0-500ma; 0-10 amps.

RESISTANCE RANGES

0-2000Ω (12Ω ctr.); 0-200KΩ (1200Ωctr.); 0-20 meg. (120KΩ ctr.)

FREQUENCY RESPONSE

Essentially flat through 50,000 cps.

ACCURACIES

DC Volts ±2% of full scale. DC current ±1.5% of full scale. AC Volts ±3% of full scale. DC resistance ±2% of arc length.

Size: 5¼" x 7" x 3⅛" . . . Net Wt.: 3½ lbs.

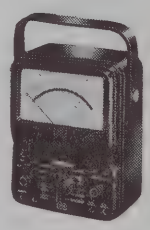
260 (Series 5) with Std. Scale complete with test leads No. 7500 and operator's manual . . . **$49.95** (in roll-top case . . . **$55.95**)

260 (Series 5M) with MIRROR SCALE complete with No. 7500 lead and operator's manual . . . **$51.95** (in roll-top case . . . **$57.95**)

ACCESSORIES

Leads, Probes and Cases	Part No.	Price
Banana plugs and alligator clip	7500	$ 2.10
Banana plugs and test prods	7538	2.50
10,000 VDC High voltage probe	0507	10.20
25,000 VDC High voltage probe	0508	11.50
50,000 VDC High voltage probe	0509	12.50
10,000 VAC High voltage probe	0161	11.75
Leather Carrying Case	1818	8.95
Ever-Redy Carry Case	0805	9.75
Roll-top safety case only for 260, Series 3, 4, 4M, 5, 5M and model 261	0249	9.95

Increased Accuracy
MODEL 261 VOM

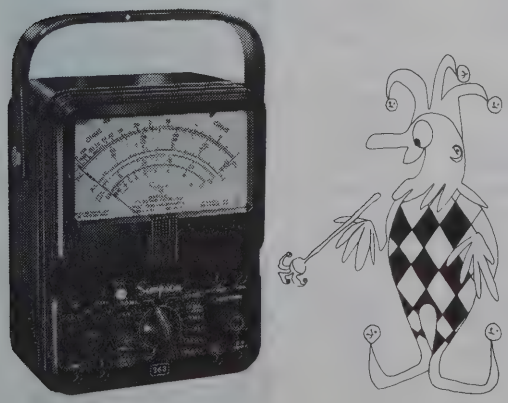


ACCURACY (77°F): DCV, 0-1000 v, ±1½% F.S., 5000 v, ±2½% F.S.: DC MA & AMP, ±1½% F.S.; ACV, ±3%; ohms, ±1½% of linear arc.

OTHER SPECIFICATIONS: See 260 VOM.

PRICE: Complete with leads and manual **$59.95**

GOOF-PROOF VOM Model 260-5P



FOR RANGES: SEE 260 VOM ABOVE

This Simpson Instrument has built-in meter protection approaching 100% which virtually makes this VOM GOOF PROOF. The 260-5P will be of particular value in situations where the instrument may be used by inexperienced people; students, apprentices, and new employees. Technicians, too, will find the instrument ideal for exploring unfamiliar equipment, especially when lack of a schematic diagram poses the hazard of encountering unexpected high voltages when making tests.

Combined protection not found in any other VOM.

1. Reset button pops out to indicate overload.
2. You cannot reset circuits while overload is present.
3. Protective circuit does not require massive overloads which can cause hidden damage to the instrument.
4. All ranges are protected except those not feasible in a portable instrument — 10,000 and 5000 volts DC and AC; 10 Amps DC.

The 260-5P has the same ranges and takes the same accessories as the Simpson 260-5VOM.

Complete with test leads 7500 and operator's manual.

260-5P Protected (GOOF PROOF) **$78.95**
260-5PRT Protected Roll Top **$84.95**

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Simpson VOMs (cont'd)

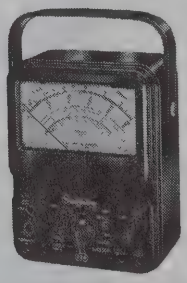
All Prices Net

NEW AND UNUSUAL VOMs

Model 225 $89.95



Model 250 — $56.95



COMBINATION ELECTRICAL AND TEMPERATURE TESTER — MODEL 255

Model 255 is well suited for the servicemen in many fields, such as gas appliance servicing and installation, electrical utilities, and heating service and installation. This tester includes the important VOM functions of the 260 as well as providing a temperature range of +100°F to +1050°F. A low millivolt drop is provided on the direct current ranges. By using the AC clamp-on adapter, AC currents through 250 amperes can be checked without disconnecting the leads or otherwise opening the circuit. ADJUST-A-VUE HANDLE.

Complete with test leads with prods (Cat. No. 0115), 5 Ft. thermocouple lead (0163), and operator's manual.

Model 255 .....**$89.95**

AC Clamp-on Adapter, Cat. No. 0531.....**$29.95**
10,000 VAC High Voltage Probe, Cat. No. 0161.....**$11.75**

NEW...50 MILLIVOLT DROP VOM...MODEL 250

This is Simpson's answer to transistor circuitry testing requiring a VOM with a low millivolt drop on current ranges. Model 250 contains all of the built-in features of the World's Largest Selling VOM, the 260, plus the provision for using the add-a-tester adapters, the 260 high voltage probes and other accessories. ADJUST-A-VUE HANDLE.

Complete with test leads and operator's manual.

Model 250 .....**$56.95**

VOLT-OHM-MILLIAMMETER SPECIFICATIONS
20,000 Ω/V DC • 5,000 Ω/V AC

RANGES:	250	255
DC VOLTS	0-0.050; 0-0.250; 0-2.5; 0-10; 0-50; 0-250; 0-500; 0-1000	0-0.050; 0-0.250; 0-1; 0-2.5; 0-10; 0-50; 0-250; 0-1000
AC VOLTS	0-2.5; 0-10; 0-50; 0-250; 0-500; 0-1000	0-2.5; 0-10; 0-50; 0-250; 0-1000
DC MICROAMPERES	0-50 (Both 50 and 250 MV Drop)	
DC MILLIAMPERES	0-1; 0-10; 0-100; 0-500 (50 MV Drop)	
DC AMPERES	0-10 (50 MV Drop)	NONE
AC AMPERES	NONE	0-250
DB SCALE (1MW-600Ω)	−20 to +10; −8 to +22; +6 to +36; +20 to +50	NONE
OUTPUT RANGES	NONE	NONE
RESISTANCE RANGES	R×1 0-2000Ω (12Ω center) R×100 0-200KΩ (1200Ω center) R×10K 0-20 megΩ (120KΩ center)	
TEMPERATURE RANGE	NONE	+100° F. to +1050° F.
ACCURACIES:		
0-50 MV; 0-250 MV; 0-2.5 to 0-1000 V DC	±2% F.S.	±2% F.S.
0-5000 V DC	—	—
0-50 MICROAMPERES	±1% F.S.	±1% F.S.
0-1 MA to 0-10 A DC	±2% F.S.	±2% F.S.
R×1 R×100, R×10,000	±2.5° of Arc ±2.0° of Arc	±2.5° of Arc ±2.0° of Arc
0-2.5 to 0-1000 V AC	±3% F.S.	±3% F.S.
0-5000	—	—
MOVEMENT TYPE	Self Shielding Annular — Taut Band	
TEMPERATURE COMPENSATED	NO	NO
DIODE PROTECTED	YES	YES
MIRROR SCALE	NO	NO
SCALE LENGTH	4.2 Inches	
DIMENSIONS	5¼" x 7" x 3⅛"	
NET WEIGHT	3½ lbs.	
PRICE	$56.95	$89.95

270 Series 3 — HIGH ACCURACY VOM

- Annular TAUT BAND, Self-Shielded Movement.
- Spring-Backed Jewels
- Diode Overload Protection
- Special Calibration Circuit for Increased Accuracy
- Mirror Scale, Knife-Edge Pointer
- Gold Bonded Diodes for AC
- Excellent Repeatability
- Greater Accuracy Predictable Over a Wide Temperature Range
- DC Accuracy, 1¼%* Full Scale
- AC Accuracy, 2% * Full Scale
- Resistance Accuracy, ±1° of Arc

*At an Ambient Temperature of 77°F

RANGES

DC Voltage (20,000 opv): 0-250 mv; 0-2.5 v; 0-10 v; 0-50 v; 0-250 v; 0-1000 v; 0-5000 v.

AC Voltage (5000 ohms-per-volt): 0-2.5 v; 0-10 v; 0-50 v; 0-250 v; 0-1000 v; 0-5000 v.

AF Output Voltage (With .1 mfd. int. series capacitor): 0-2.5 v; 0-10 v; 0-50 v; 0-250 v.

Volume Level, Decibels (Zero DB equal to 1 mw across a 600 ohm line): −20 to +10 DB; −8 to +22 DB; +6 to +36 DB; +20 to +50 DB.

DC Resistance: 0-2000 ohms (12 ohms center); 0-200,000 ohms (1200 ohms center); 0-20 megohms (120,000 ohms center).

Direct Current: 0-50 mu a; 0-1 ma; 0-10 ma; 0-100 ma; 0-500 ma; 0-10 amp.

270, Series 3, complete with test leads and Operator's Manual **$64.95**

270 RT, in Roll-Top Case **$70.95**

See accessories under 260 VOM on preceding page.

270 SERIES 3 VOM

CONVERTS TO 9 DIFFERENT TESTERS WITH ADAPTERS BELOW



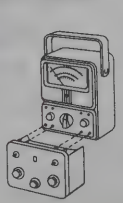
ADJUST-A-VUE HANDLE



PLUG-IN ADAPTERS FOR ALL 260®, 250, 255, 261 AND 270 VOMs ABOVE

Transistor Testers, Model 650 .....**$31.95**
DC VTVM, Model 651 ..... **39.95**
Temperature Tester, Model 652 ..... **39.95**
AC Ammeter, Model 653 ..... **21.95**
Battery Tester, Model 656 ..... **19.95**
Microvolt Attenuator, Model 655 .....**$19.95**
Audio Wattmeter, Model 654 ..... **21.95**
Milliohmmeter, Model 657 ..... **44.95**
DC Ammeter Model 661 ..... **22.95**

See your distributor or write for Bulletin 2070 giving specifications





SIMPSON ELECTRIC CO. •

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Simpson VOLT-OHM-MILLIAMMETERS

All Prices Net

Dual Sensitivity VOM, Model 263

Overlapping ranges offer greater accuracy expressed as a percentage of reading. Diode overload protection (Prevents movement burnout even on 200,000% overload). External battery compartment makes battery replacement easier. Uses 1½ volt alkaline battery.

Complete with test leads No. 0115 and operator's manual

$78.95

RANGES

DC Volts: 0-0.15 / 0-.75 / 0-3 / 0-7.5 / 0-30 / 0-75 / 0-300 / 0-750 / 0-3000 @ 20KΩ/V . . . 0-0.3 / 0-1.5 / 0-6 / 0-15 / 0-60 / 0-150 / 0-600 / 0-1500 / 0-6000 @ 10KΩ/V
AC Volts: 0-2.5 / 0-7.5 / 0-30 / 0-150 / 0-750 @ 10KΩ/V . . . 0-5 / 0-15 / 0-60 / 0-300 / 0-1500 @ 5KΩ/V
DC Microamperes: 0-75 @ 150 MV; 0-150 @ 300 MV
DC Milliamperes: 0-0.75 / 0-7.5 / 0-75 / 0-750 @ 150 MV; 0-1.5 / 0-15 / 0-150 @ 300 MV
DC Amperes: 0-7.5 @ 150 MV; 0-1.5 / 0-15 @ 300 MV
DB Scale (1MW-600): −20 to +75.5 db in 10 ranges
Output Ranges: 0.1 mfd capacitor in series with all AC Voltage ranges through 300 Volts
Resistance Ranges (4.5Ω center): R×1 0-500Ω, R×10 0-5000Ω, R×100 0-50KΩ, R×1K 0-500KΩ, R×10K 0-5 megΩ, R×100K 0-50 megΩ

ACCURACIES

DC Volts: 0-0.15 to 1500 ±1½%; 0-3000 to 6000 ±2½%
AC Volts: ±3%
DC Current: ±1½%
R×1: ±3° of Arc
R×10, R×100K: ±2½° of Arc

ACCESSORIES

High Voltage Probes: 30KV @ 10KΩ/V, 15KV @ 20KΩ/V
Cat. No. 0141 .....**$11.95**

Carrying Cases: Ever-Redy Vinyl Carrying Case
Cat. No. 5262 .....**$ 9.95**

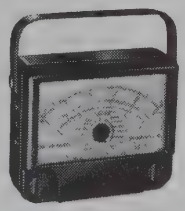


20,000 Ω/VDC
10,000 Ω/VDC
10,000 Ω/VAC
5,000 Ω/VAC

AC/DC VOLT-OHM-MILLIAMMETERS AND TESTERS*



NEW, IMPROVED MODEL 269-2 VOM
100,000 opv



MODEL 267 VOM
20,000 opv



MODEL 268 VOM
20,000 opv



MODEL 262 VOM
20,000 opv



MODEL 355
VOLT-OHMMETER

MODEL 269-2

VOLTAGE RANGES

DC: 1.6v; 8v; 40v; 160v; 400v; 800v; 1600v; 4000v.
AC: 3v; 8v; 40v; 160v; 400v; 800v.
DB: (1MW-600Ω): −12 to +45.5 db in four ranges.

CURRENT RANGES

DC: 0-16ua; 0-160ua; 0-1.6ma; 0-16ma; 0-160ma; 0-1.6 amps; 0-8 amps.

RESISTANCE RANGES (12 Ω Center)

0-200Ω; 0-20KΩ; 0-200KΩ; 0-2 megΩ; 0-20 megΩ; 0-200 megΩ.

ACCURACIES

DC Volts ±2% and ±3% of full scale. **DC Current** ±2%. **AC Volts** ±3% of full scale. **DC Resistance** ±2.5% and ±3% of arc length.

Complete with test leads No. 0115, 4000 V DC probe extension and operator's manual.

$89.95

MODEL 267

DC Volts: 0-.25/2.5/10/50/250/500/1000.
AC Volts: 0-2.5/10/50/250/500/1000.
DC Microamperes: 0-50.
DC Milliamperes: 0-1/10/100/500.
DC Amperes: 0-10.
DB Scale: −20 +10, 1 mw, 600 ohms.
Output Ranges: AC volt ranges to 250 V with .1/mfd condenser in series.

RESISTANCE RANGES

0-2000Ω (12Ω ctr.); 0-200KΩ (1200Ω ctr.); 0-20 meg. (120KΩ ctr.)

FREQUENCY RESPONSE

2.5/10 VAC 20 cps — 500 KC ±5%
50 VAC 20 cps — 150 KC ±5%

ACCURACY

DC V, Milliamperes, Amperes ±3% F.S.; **DC Mics** ±2% F.S.; **AC Volts** ±5% F.S.; **Ohms** ±2.5 and ±3% of linear arc.

Complete with test leads No. 7500 and operator's manual **$59.95**

MODEL 262

VOLTAGE RANGES

DC: 1.6v; 8v; 40v; 160v; 400v; 1600v; 4000v.
AC: 3v; 8v; 40v; 160v; 800v.
AF: 3v; 8v; 40v; 160v.
DB: (1 MW-600Ω): −12 to +45.5 db in four ranges.

CURRENT RANGES

DC: 80ua; 160ua; 1.6 ma; 16 ma; 1.6 amps; 16 amps.

RESISTANCE RANGES

DC: 0-500Ω (4.5Ω ctr.); 0-5KΩ (45Ω ctr.); 0-50KΩ (450Ω ctr.); 0-500KΩ (4,500Ω ctr.); 5 megΩ (45Ω ctr.); 0-50 megΩ (450KΩ ctr.).

FREQUENCY RESPONSE

Essentially flat through 50 kc.

ACCURACIES

DC Volts ±3% of full scale. **AC Volts** ±5% of full scale. **DC Resistance** ±2.5% and ±3% of arc length. Complete with test leads No. 8463, 4000 V DC probe extension and operator's manual.

$69.95

MODEL 268

AC Volts: 0-3/12/60/300/600/1200
DC Volts: 0-3/12/60/300/600/1200
DC Microamperes: 0-60.
DC Milliamperes: 0-1.2/12/120
DC Amperes: 0-12
DB Scale: −12 +11, 1 mw, 600 ohms

OUTPUT RANGES

AC Volt: Ranges to 300 V with .1/mfd condenser in series

RESISTANCE RANGES

0-2000Ω (12Ω ctr.); 0-200KΩ (1200Ω ctr.); 0-20 meg (120KΩ ctr.)

FREQUENCY RESPONSE

2.5/10 VAC 20 cps — 500 kc ±5%; 50 VAC 20 cps — 150 kc ±5%

ACCURACY

DC V, Milliamperes, Amperes ±3% F.S.; **DC Mics** ±2% F.S.; **AC Volts** ±5% F.S.; **Ohms** ±2.5% and ±3% of linear arc.

Complete with test leads No. 7500 and operator's manual

$59.95

MODEL 355, MIDGETESTER®

10,000 Ohms per Volt AC-DC
Size: 2¾" x 4½" x 1"

Complete with test leads and operator's manual

$34.95

*See "ACCESSORIES" Section for carrying cases, etc.

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Simpson INSTRUMENTS

All Prices Net

NEW! Voltage-Current Recorder

MULTICORDER®

RECORDS:
- VOLTS
- AMPS
- MILLIAMPS
- MICROAMPS



FEATURES:

- **A permanent record of range and measured value.**
- **Inkless recording via fast sequential impressions on pressure sensitive strip chart paper (no pen and ink maintenance problems).**
- **A high torque meter movement, with a shock-proof taut band suspension moving coil system.**

SIMPSON **MULTI**CORDER Model 604 contains a unique range marking system that indicates the range being used as the value is being recorded. Compact, rugged design, easy-to-operate and accurate, the **Multi**corder is an indicating instrument with a wide band of ranges and functions for measurements that eliminates the need for a separate recorder for each of the functions and ranges. You get visual readout in addition to the recording action that offers three chart speeds: 1"/3"/12" per hour. This Simpson **Multi**corder is the only multi-function recorder available for less than $200.00.

RANGES:

D. C. Volts: 0-.1/.5/2.5/10/25/100/250/500 @ 20,000 ohms per volt.
A. C. Volts: 0-10/25/100/250/500 @ 5,000 ohms per volt.
Direct Current: 0-50/250 Mics, 1/5/25 Milliamps, .1/.25/1.0 Amps. 350 MV Drop maximum.
Alternating Current: 0-2 Milliamps. 450 MV drop. Complete with test leads (#7500) and two rolls of Chart Paper.

Model 604 Multicorder.....**$199.95**
Additional Chart Paper #02612.....$2.50 ea. (Box of 10).....$19.50
Special Gear Unit 30/60/90 in/hr. Cat. #0683.....$29.95

SPECIFICATIONS

ACCURACY OF INDICATION:	
DC	±1.5% F.S.
AC (45 to 65 cps Sine Wave)	±1.5% F.S.
ACCURACY of RECORDING:	±2.5% F.S.
TEMPERATURE INFLUENCE:	
DC — for 10°C change (18°F)	1 max (% of true value)
AC — for 10°C change (18°F) (Influence is positive from 20°C to 0, (68°F to 32) and negative from 20 to 50°C. (68 to 122°F)	1 max
FREQUENCY INFLUENCE:	
Flat from 15 to 10,000 cps. 2.5% of full scale from 10,000 to 20,000 cps.	

RECORDER: Chart paper and chopper bar action can be driven either by the self-contained synchronous motor or by external driving means.

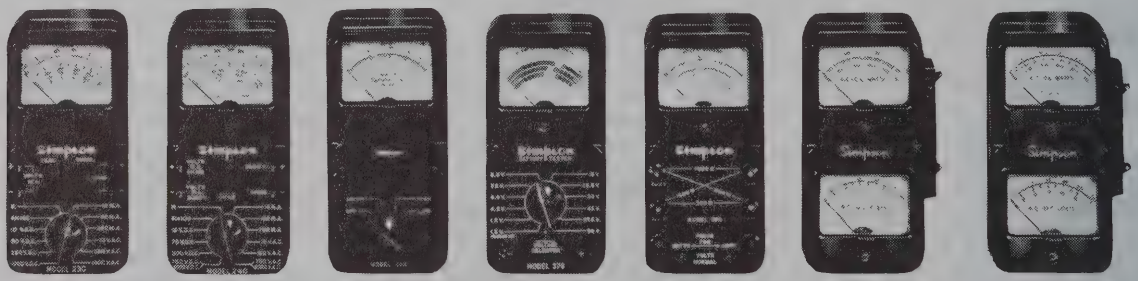
MOTOR DRIVE: Self-starting synchronous motor, 115 volts, 60 cps, contained in recorder. Grounded line cord is provided with recorder.

CHART SPEED: 1/3/12 inch/hour. Chart impressions are made every two seconds.

CHART PAPER: Type — Pressure sensitive paper. Width of recording — 2.3 inches. Length of paper on roll — 50 feet approximately. Divisions — 50.

SIZE: 9¾" x 4¾" x 4". **NET WEIGHT:** 5½ lbs.

HAND-SIZE MICROTESTERS — DIMENSIONS, 3" x 5⅞" x 2½"



AC-DC Volt-Ohm-Milliammeter, Model 240 — 1000 ohms per volt, AC and DC.

AC Volts: 15, 150, 750, 3000.

DC Volts: 15, 75, 300, 750, 3000.

DC Milliamperes: 15, 150, 750.

Ohms: 0-3000 (center scale 30); 0-300,000 (center scale 3000). With Leads.....**$34.95**

AC-DC Volt-Ohm-Milliammeter, Model 230 — AC Volts: 10, 250, 1000 (400 ohms per volt) — DC Volts: 10, 50, 250, 1000 (1000 ohms per volt) — DC Milliamperes: 10, 50, 250 — Ohms: 0-1000, 0-100,000—With Leads..**$33.95**

DC Ammeter, Model 375 — 0-1, 2.5, 5, 10, 25 amps **$24.95**

DC Milliammeter, Model 373 — 0-1, 5, 10, 25, 50, 100, 250, 1000 ma **$24.95**

DC Microammeter, Model 374 — 0-50, 100, 250, 500, 1000 ua **$29.95**

AC Ammeter, Model 370 — 0-1, 0-2.5, 0-5, 0-10, 0-25 amps **$25.95**

AC Milliammeter (Self-contained transformer), Model 378 — 0-5, 25, 100, 250, 1000 ma **$29.95**

DC Voltmeter (Res. 1000 ohms per volt), Model 377 — 0-1, 2.5, 5, 10, 25, 50, 100, 250, 500, 1000 DC volts **$29.95**

Millivoltmeter, Model 387 — 10, 30, 100, 1000 mv; with leads and manual **$29.95**

AC Voltmeter (Rec. Type — 1000 ohms per volt), Model 376 — 0-5, 10, 25, 50, 100, 250, 500, 1000 AC volts **$27.95**

AC Voltmeter, Model 371 — 0-150, 0-300, 0-600 volts **$25.95**

Ohmmeter, Model 372 — 0-500 ohms (5 ohms center); 0-5000 ohms (50 ohms center); 0-50,000 ohms (500 ohms center); 0-500,000 ohms (5,000 ohms center); 0-5 meg. (50,000 ohms center); 0-50 meg. (500,000 ohms center) — with Leads **$32.95**

Low Ohmmeter, Model 362 — 0-5, 0-25 ohms, with Leads and Manual **$27.95**

AC Volt-Amp-Wattmeter, Model 390 — Volts: 0-150, 300 — Amps: 0-0.3, 15 — Watts: 0-300, 600, 1500, 3000 — with break-in plug and Leads **$54.95**

AC-DC Volt-Wattmeter, Model 391 — AC or DC — Volts: 0-130, 0-260 — Watts: 0-1500, 0-3000 — with Cord and Plug **$47.95**

AC-DC Volt-Wattmeter, Model 392 — AC or DC — Volts: 0-130, 0-260 — Watts: 0-1000, 0-5000 — with Cord and Plug **$49.95**

Battery Tester, Model 379 — (Seperate arcs for Radio A Batteries, Hearing Aid A Batteries, and for all B Batteries) — with Leads **$29.95**

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Simpson VTVMs

All Prices Net

NEW...VTVM offers 40% less circuit loading than most conventional VTVMs

INPUT RESISTANCE IS 16 MEGOHMS, NOT THE USUAL 11

This instrujment has a large easy-to-read seven-inch scale and was especially designed to meet today's solid state circuitry requirements with a ½ volt range and improved AC accuracies of ±3% of full scale.

MODEL 312 with AC ohms/DC probe No. 0150 and operator's manual $79.95
R. F. Probe, Cat. No. 0152.....$ 8.75
High Voltage Probe, Cat. No. 0155.....$11.75
Carrying Case, Vinyl with Lead Storage Space, Cat. No. 0577.....$12.95

LINE VOLTAGE

105/125V, 50/60 cps. **Size:** 7¾" x 6¾" x 3¾". **Weight:** 4¾ lbs.

VOLTAGE RANGES

DC: 0-0.5, 1.5, 5, 15, 50, 150, 500, 1500 (16 Megohms input impedance).
AC: (R.M.S.): 0-1.5, 5, 15, 50, 150, 500, 1500 (1 Megohm minimum input impedance).
AC: (Peak to Peak): 0-4, 14, 40, 140, 400, 1400, 4000.

RESISTANCE RANGES

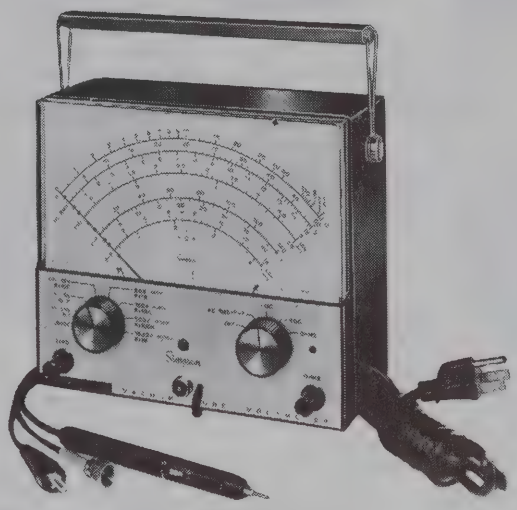
RX1, RX10, RX100, RX1K, RX10K, RX100K, RX1M (10 ohm center).

FREQUENCY RESPONSE

±3% from 15 cps to 3 megacycles per second on all AC voltage ranges through 150 volts.
With R.F. Probe: 10KC to 250 MC ±1 db. R.F. probe usable up to 40 volts rms.

ACCURACIES

DC: ±3% of full scale; **AC:** ±3% of full scale; **Resistance:** ±3° of arc.



AC/DC VTVM — Model 312

$79.95

OTHER SIMPSON VACUUM TUBE VOLT-OHMMETERS*

MODEL 311 VOLTAGE RANGES

DC: 0-1.5v; 5v; 15v; 50v; 150v; 500v; 1500v. (22 megΩ input impedance)
AC: 0-1.5v; 5v; 15v; 50v; 150v; 500v; 1500v; (RMS) (Min. 2.2 megΩ input impedance)
PP: 0-4v; 14v; 40v; 140v; 400v; 1400v; 4000v. (Min. 2.2 megΩ input impedance)
AF: 0-1.5v; 5v; 15v; 50v; 150v; 500v; 1500v. (30 cycles to 100Kc ±5%)
RF: 1.5v; 5v; 15v; 50v; 150v.
with probe (50 cycles to 100mc, 0-150 VRMS)

RESISTANCE RANGES

1KΩ (10Ω center); 10KΩ (100Ω center); 100KΩ (1KΩ center); 1 megΩ (10KΩ center); 10 megΩ (100KΩ center); 100 megΩ (1 megΩ center); 1000 megΩ (10 megΩ center).

FREQUENCY RESPONSE

±5% to 100 kc (with RF probe, usable to 250 mc)

LINE VOLTAGE

105/125 v, 50/60 cycles.

ACCURACIES

DC Volts: ±3% of full scale.
AC Volts: ±5% of full scale.
DC Resistance: ±3% of arc length (resistance).

Model 311 with AC/DC ohms probe No. 0734, ground lead No. 0733 and operator's manual. **$69.95**

MODEL 311 AC-DC



MODEL 303 VOLTAGE RANGES

AC-DC: 1.2v; 12v; 60v; 300v; 1200v.
AF: 1.2v; 12v; 60v.

MODEL 303 AC-DC



RF: 20 volts maximum. (With RF Probe)
DB: −20 to +63 db in five ranges.

RESISTANCE RANGES

1KΩ (10Ω center); 100KΩ (1000Ω center); 1 megΩ (10KΩ center); 10 megΩ (100KΩ center); 1000 megΩ (10 megΩ center).

INPUT IMPEDANCE

10 megohms (all ranges) on DCV; 275K ohms shunted by 210 uuf on ACV.

FREQUENCY RESPONSE

AF: Flat to 100 Kc on the three low AC ranges
RF: 20 Kc to 100 Mc (with RF probe)

LINE VOLTAGE

105/125 v, 50/60 cycles.

ACCURACIES

DC Volts: ±3% of full scale.
AC Volts: ±5% of full scale.
DC Resistance: ±3% of arc length (resistance).

Model 303 with DCV probe No. 0067, ACV-ohm probe No. 0068, ground lead No. 0069 and operator's manual. **$73.95**

Model 303RT (in roll top safety case) **$82.95**

MODEL 715 AC ONLY



MODEL 715 RANGES

Volts: 0-.01/.03/.1/.3/1/3/10 30 100 300 rms.
Decibels: Total Range −52 to +52 DBM.
Zero DBM: 1 millivolt in 600 ohms.
Scale Markings: −12 to +2 DB.

ACCURACY

±5% of full scale.

TESTER SENSITIVITY

10 millivolts full scale on lowest range.

INPUT IMPEDANCE

Minimum 1 meg @ 1 KC shunted by 25 uuf.

INTERNAL MULTIPLIERS

±1% precision resistors.

FREQUENCY RESPONSE

10 cps to 400 KC ±1 DB.

INPUT POWER REQUIREMENTS

110 to 125 VRMS, 50/60 cps @ 10 watts.

Complete with operator's manual and shielded input cable. **$69.95**

*Also See "ACCESSORIES" Section.

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Simpson TEST EQUIPMENT and ACCESSORIES

All Prices Net

TEMPERATURE TESTERS



Model 385-3L



Models 388-3L and 389-3L

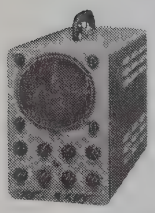
MODEL 385-3L — Accuracy: ±1°F about center scale; ±2°F at either end. For measuring temperatures from +70°F to as low as −50°F. Available in 3 lead model only. Supplied with one No. 0010 15 ft. thermistor probe and operator's manual. **$35.95***

MODEL 388-3L — Therm-O-Meter — Measures Temperatures −50°F to +1000°F. **Accuracy:** +1½ scale divisions. Standard models have combination Fahrenheit and Centigrade scale. Sensing Element: Thermocouple (Iron-Constantan). Supplied with internal battery and one 8" general purpose probe No. 0190, and operator's manual. Order additional probes as required. Model 388-3L: For three probes. **$67.95***

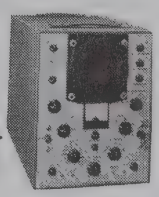
MODEL 389-3L — This dual range instrument provides a means for temperature measurements between −50°F and +100°F and between +100°F and +250°F. Accuracy is ±2°F. Supplied with internal battery and one 15' thermistor type probe (No. 0010). Order additional probes as required. Model 389-3L (for 3 leads). **$62.95***

*See accessories for other types of probe leads.

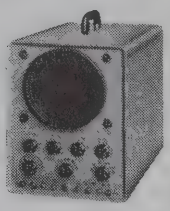
SCOPES, COLOR BAR GENERATOR, CAPACITOR LEAKAGE TESTER



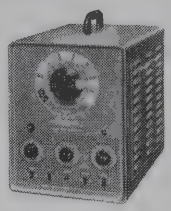
← Model 466 General Purpose Scope



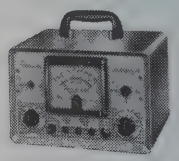
→ Model 2610 Wide Band Scope



← Model 458 Color Scope



→ Model 430 Color Bar Generator



Model 383A Capacitor Leakage Tester

Model 466 GENERAL PURPOSE SCOPE

Freq. Resp. of Vert. Ampl.: From 15 cycles/sec to 100 kc/sec, flat within ±1 db; 6 db down at 250 kc/sec; usable to 1 Mc/sec.
Maximum Vertical Deflection Sensitivity: 30 Millivolts RMS/inch.
Frequency Response of Horizontal Amplifier: From 15 cycles/sec to 20 Kc, flat within ±1 db; 6 db down at 100 Kc/sec.
Maximum Horizontal Deflection Sensitivity: 0.7 volt RMS/inch.
Z-Axis Sensitivity (Voltage Required to Extinguish Beam): 20 volts RMS.
Calibrating Voltage (at 117.5 VAC power source): 1 volt P-P ±10%.
Maximum Input Voltage: 400 volts peak.
Input Resistance: 0.1 Meg (at atten. x 1); 0.5 Meg (at atten. x 100).
Input Capacitance: 40 uuf (at atten. x 1); 35 uuf (at atten. x 100).
Sawtooth Sweep Range: 15 cps to 80 Kc/sec.
Size: 7⅞" x 12¼" x 16⅛". **Net Wt:** 19 lbs.
For use on 110 volts, 60 cycles.
Complete with input cable No. 0100 and operator's manual . . . **$159.95**
Dual Voltage Model for 220/110 volts, 50/60 cycle . . . **$169.95**

Model 2610 WIDE BAND OSCILLOSCOPE

For the 1001 Jobs Where You Don't Need an Expensive Specialized Scope. Vertical sensitivity, 6 mv RMS/in. Vertical calibration accuracy, ±3%. Response (linear position): DC to 5.0 mc/sec, ±0.5 db; DC to 8.0 mc/sec, ±1.5 db. Response (transient position): DC to 3.5 mc/sec, −3 db, and −6 db at 5.0 mc/sec. Triggered and recurrent sweeps. Precalibrated triggered sweep positions of 5, 50, 500, 5000 microseconds. **Size:** 15" x 11½" x 20½". Net Wt. 53 lbs. **Power Requirements:** Approx. 200 watts at 117.5 v., 50/60 cps. Price **$575.00**

WRITE FOR ADDITIONAL SPECIFICATIONS

MODEL 458 COLOR SCOPE

- 7" Cathode Ray Tube.
- Wide band operation, the frequency response is flat within ±1.0 db to 4.5 Mc. Faithfully displays COLOR BURST frequency with a sensitivity greater than 40 Mv rms per inch of vertical deflection.
- Narrow band operation, the frequency response is flat within ±2 db from 10 cycles to 300 Kc with a sensitivity greater than 15 Mv rms per inch.
- Good square wave response provides accurate representation of sync pulses and composite wave-form pattern for trouble-shooting video, sync, and sweep circuits.
- Horizontal sweep, to 250 Kc, for expansion of high frequency wave-form detail and color burst.
- Vernier and Compensated Decimal Step Attenuator for better signal controls.
- Provision for Intensity Modulation of CRT.
- 1 volt peak calibrating voltage.

Line Voltage: 105/125v, 50/60 cycle.
Size: 11" x 16½" x 14½". **Weight:** 29 lbs.
Complete with operator's manual . . . **$249.95**

Model 430 COLOR BAR GENERATOR

- 100% Saturated NTSC Signals • Outputs pictured on a single, master control . . . a color print of the signal output is featured at each position on the master control • Line Voltage 105/125 volts, 60 cycle only.

Outputs—Y; chroma; color bar (8 bars simultaneously); R-Y; B-Y; R-Y and B-Y simultaneously; I; Q; I and Q simultaneously; G-Y at 90°; sync and burst; horizontal sync; high level 3.58 megacycle output; high level modulated rf output; positive or negative videc output. 4.5 Megacycle (crystal controlled marker for proper tuning.

Chroma Level Switch — Zero db for checking older style receivers and some current models; −6 db for video checks of newer receivers using vestigal color sideband alignment; −15 db for checking color sync lock under weak signal conditions. Variable chroma control position for other chroma levels.
Size: 19¼" x 17½" x 14". **Shpg. Wt:** 26 lbs.

Complete with operator's manual and test leads . . . **$395.00**

Model 383A CAPACITOR LEAKAGE TESTER

- Measures the leakage resistance of defective paper, mica, or ceramic capacitors. Indicates directly the capacitance of good paper, mica, or ceramic capacitors over a range of 10.0 mmf to 10.0 mf.

Pulse technique detects many marginal capacitors. All measurements are made under load conditions. No adjusting of a bridge circuit and balancing controls. **Line Voltage:** 105/125 v, 60 cycle only. Complete with test leads and operator's manual . . . **$99.95**

CARRYING CASES FOR SIMPSON TEST EQUIPMENT



For	Cat. No.	Price
250, 255, 260s, 261, 270, 303 — Utility Vinyl	0549	$15.95
0549 Snap-on High Voltage Probe Case	0574	3.95
260, 261, 270 — Leather	1818	8.95
250, 255, 260s, 261, 270, 303 — Ever-Redy Leather	0805	9.95
262, 267, 268, 269, 388-3L, 289-3L — Every-Redy Vinyl	5262	9.95
312 Vinyl	0577	12.95
385-3L — Ever-Redy Leather	8073	8.75
391, 392 — Leatherette-Covered	3413	5.95
355 — Ever-Redy Leather	6355	3.95
All Microtesters — Ever-Redy Leather	4299	7.50
All Microtesters — Leatherette-Covered	3011	5.95
Roll Top Safety Case For 260-2, 9, 10, 880's	6192	9.95
Roll Top Safety Case for 260-3, 261, 270	0249	9.95
Roll Top Safety Case For 303	6379	9.95
1700 Series — Ever-Redy Leather	9808	18.90

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Simpson TEST EQUIPMENT ACCESSORIES and METERS



LEADS

For Models	Cat. No.	Price
260 Series 3, 4, 5, 261, 270 Banana plugs and alligator clip	7500	$2.10
260 Series 3, 267, 268 Banana plugs and test prods	7538	2.50
355 Test prods.	8600	2.10
255 only, thermocouple lead (5 ft.)	0163	3.95
385-3L, 389-3L Free Air Temperature Probe	0789	7.45
385-3L, 389-3L, 15 ft. Thermistor lead	0010	5.50
385-3L, 389-3L, 30 ft. Thermistor lead	0216	6.45
385-3L, 389-3L, 50 ft. Thermistor lead	0415	7.60
385-3L, 389-3L, 100 ft. Thermistor lead	0416	10.40
385-3L, 389-3L, 150 ft. Thermistor Lead	0417	12.90
388-3L Rugged Service Lead (8 ft.)	0496	6.95
388-3L General purpose thermocouple	0190	4.95
388-3L Surface temperature themocouple (300°F. Max.)	0187	8.90
385-3L, 389-3L Surface temperature probe	0790	5.95
650 Test Lead	7545	1.20
651 Ground Lead	7547	1.20
1704 — 0.26Ω leads for Millivolt Standard; spade lugs both ends	0105	2.95
466, 715 Input cable	0100	2.85
Test prods and elbow terminals 230/240/260-2/372	8381	2.50
Test prods and spade terminals — all microtesters	8379	2.50
Alligator clips and elbow terminals — 230/240/260-2/372	8375	1.75
Alligator clips and spade terminals — all microtesters	8376	1.75
Combination test prods with removable alligator clips and elbow terminals 262/269	8463	2.30
263, 269-2 Combination test prods with removable alligator clips and elbow terminals	0115	2.30
"SAFE/GUARD" VOM METER OVERLOAD PROTECTOR	12621	1.95

PROBES (High Voltage Types) & MULTIPLIERS

For Models	Cat. No.	Price
221 (30,000v)	0009	$12.55
260 Series 2 (25,000v)	0007	10.75
260 Series 2 (50,000v)	0179	12.50
260 Series 3, 4, 4M, 5, 5M, 250, 255, 261, 267, 270 (10,000 V DC)	0507	10.20
260 Series 3, 4, 4M, 5, 5M, 250, 255, 261, 267, 270 (25,000 V DC)	0508	$11.50
260 Series 3, 4, 4M, 5, 5M, 250, 255, 261, 267, 270 (50,000 V DC)	0509	12.50
260 Series 3, 4, 4M, 5, 5M, 250, 255, 261, 267, 270 (10,000 V AC)	0161	11.75
262, Series 1 and 2 (16,000v)	0172	11.95
262, Series 1 and 2 (40,000v)	0180	12.50
263, 30 KV at 10K Ω/V and 15 KV at 20 Ω/V	0141	11.95
267 2500 V DC Multiplier	8568	3.60
267 5000 V DC Multiplier	8569	3.60
267 2500 V AC Multiplier	8570	3.60
267 5000 V AC Multiplier	8571	3.60
267 10,000 V DC	0507	10.20
267 25,000 V DC	0508	11.50
267 50,000 V DC	0509	12.50
268 3000 V DC Multiplier	8572	3.60
268 6000 V DC Multiplier	8573	3.60
268 3000 V AC Multiplier	8574	3.60
268 6000 V AC Multiplier	0004	3.60
268 12,000 V DC	0510	12.95
268 30,000 V DC	0511	12.95
269, Series 1 (16,000v)	0173	11.95
269, Series 1 (40,000v)	0181	13.50
269, Series 2 (16,000v)	0119	11.95
269, Series 2 (40,000v)	0120	12.95
270 (10,000v)	0507	10.20
270 (25,000v)	0508	11.50
270 (50,000v)	0509	12.50
303 (30,000v)	0074	11.95

PROBES — Miscellaneous Types

For Models	Cat. No.	Price	For Models	Cat. No.	Price
303 High frequency	0073	$8.75	312 High Frequency	0152	$8.75
303 AC Probe	0068	3.55	312 High Voltage	0155	11.75
303 DC Probe	0067	3.55	2610 Low Capacity	0299	17.55
303 Ground lead	0069	1.00	Voltage Doubler	0740	14.65
311 High Frequency	0731	11.50	Low Capacitance	0741	14.00
311 High voltage	0732	11.75	100:1 Voltage Divider	0742	15.20
311 DC-AC/OHMS	7594	8.50	Direct Resistive Dual Purpose	0743	11.55
311 Ground lead	0738	1.50			
312 DC/AC ohms	0150	8.50			

OSCILLOSCOPE PROBE KIT — Model 739

For use with Model 458 Oscilloscope. Includes *low capacity probe, voltage doubler, detector, 100:1 voltage divider and dual direct—resistive. (isolation)

Complete with 4 probes, plastic roll, and operator's manual.....$45.15

*For Model 458 only.



Model 55ET



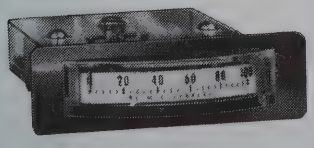
Model 57ET

3½" ELAPSED TIME METERS

These meters use self-starting synchronous clock motors. They indicate up to 99999.9, then recycle and begin again at 00000.0. Molded bakelite case.

Range	Model 55 ET	Model 57 ET
120V-60 cps	$18.85	$18.85
240V-60 cps	19.15	19.15

EDGEWISE METERS



Types: Direct Current and AC Rectifier. **Accuracy:** DC 2% of full scale; AC Rectifier, 3%. **Movement:** Self-shielded.

DC MILLIAMMETERS

Range	Approx. Resistance	Model 1522
0-1	20 ohms	$14.85
0-5	2.5 ohms	14.85
0-10	13.5 ohms	14.85
0-25	5.4 ohms	15.45
0-50	2.7 ohms	15.45
0-100	1.35 ohms	15.45
0-150	.9 ohms	15.45
0-200	.675 ohms	15.45
0-250	.54 ohms	15.45
0-300	.45 ohms	15.45
0-500	.27 ohms	15.45

DC MILLIVOLTMETERS

0-50	10 ohms	$15.75

VOLUME LEVEL INDICATORS—VU Meters

Range	Model 1542
"A" SCALE	$24.75
"B" SCALE	24.75

AC VOLTMETERS—Rectifier Type

Range	Approx. Resistance	Model 1542
0-150	1000 ohms	$19.20
0-300	per volt	19.20

DC VOLTMETERS

Range	Approx. Resistance	Model 1522
0-10	1000 ohms per volt	$15.00
0-15	1000 ohms per volt	15.00
0-25	1000 ohms per volt	15.00
0-50	1000 ohms per volt	15.00
0-150	1000 ohms per volt	15.00
0-300	1000 ohms per volt	15.00
0-500	2000 ohms per volt	15.15

DC AMMETERS

0-1	.050 ohms	$15.75
0-5	.010 ohms	15.75
0-10	.005 ohms	15.75
0-15	.0033 ohms	15.75
0-25	.002 ohms	15.75
0-50	.001 ohms	15.75

DC MICROAMMETERS

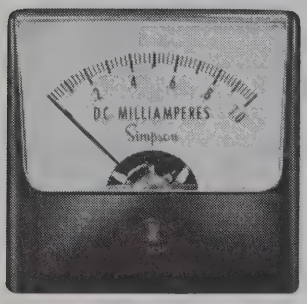
0-25	3150 ohms	$22.20
0-50	1800 ohms	19.50
0-100	1100 ohms	17.40
0-200	290 ohms	15.75
0-500	90 ohms	15.30

481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351

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Simpson 1½", 2½", 3½", 4½" WIDE-VUE PANEL METERS

All Prices Net



WIDE-VUE SPECIFICATIONS

Size	Model No.	Accuracy	Scale Length
1½"	1212	±2% of full scale	1.5" @ 90° Arc (38.1 mm)
	1214	±3% F. S. @ 25°C. & 60 cy. Sine Wave	
2½"	1227 1257	±2% of full scale	2.5" (63.8 mm)
3½"	1327 1337	±2% of full scale	3.04" (77.2 mm)
	1347	±3% F. S. @ 25°C. & 60 cy. Sine Wave	
	1357	±2% of full scale	
4½"	1329 1339	±2% of full scale	3.93" (100 mm)
	1349	±3% F. S. @ 25°C. & 60 cy. Sine Wave	
	1359	±2% of full scale	

CALIBRATION AND DIALS — All DC Wide-Vue meters listed below have the Simpson self-shielded movement (Calibration not affected by stray magnetic fields or magnetic mounting). All AC Wide-Vue meters have the Simpson Iron-vane type movement. AC Milliammeters and Ammeters, except 0-10 amps, are calibrated for use on 25 through 800 cps; 0-10 AC Ammeters and all AC Voltmeters are calibrated for use on 25 through 125 cps. For other specified frequencies up to 800 cps add $1.65 to the list price.

DC VOLTMETERS — Self-Shielded Movement

Range	Resistance	1½" Model 1212	2½" Model 1227	3½" Model 1327	4½" Model 1329
0-5		$12.75	$13.80	$14.25	$15.75
0-8		—	—	14.25	15.75
0-10		12.75	13.80	14.25	15.75
0-15		12.75	13.80	14.25	15.75
0-25	1000	12.75	13.80	14.25	15.75
0-30	ohms	12.75	13.80	14.25	15.75
0-50	Per	12.75	13.80	14.25	15.75
0-100	volt	12.75	13.80	14.25	15.75
0-150		12.75	13.80	14.25	15.75
0-200		—	13.80	14.25	15.75
0-250		—	13.80	14.25	15.75
0-300		—	13.80	14.25	15.75
0-300	2000	12.75	—	—	—
0-500	ohms	16.05	14.25	15.00	16.20
0-750	per	—	17.55	15.00	16.20
0-1000	volt	—	17.85	18.60	19.80

External Multipliers, Model 183 on 1½" DC meters 500 volts or higher; on 2½" DC meters 750 volts or higher; and on 3½" and 4½" DC meters 1000 volts or higher. All others are self contained.

DC AMMETERS — Self-Shielded Movement

0-1	.050	$12.75	$13.05	$13.65	$15.00
0-1.5	.033	—	13.05	13.65	15.00
0-2	.025	12.75	13.05	13.65	15.00
0-3	.0166	12.75	13.05	13.65	15.00
0-5	.010	12.75	13.05	13.65	15.00
0-10	.005	12.75	13.05	13.65	15.00
0-15	.0033	12.75	13.05	13.65	15.00
0-25	.0020	12.75	13.05	13.65	15.00
0-30	.0017	—	13.05	13.65	15.00
0-50	.001	12.75	13.05	13.65	15.00
0-100	10.0	—	13.05	13.65	15.00
0-150	10.0	—	13.05	13.65	15.00
0-200	10.0	—	13.05	13.65	15.00
0-300	10.0	—	13.05	13.65	15.00
0-500	10.0	—	—	13.65	15.00
15-0-15	.0033	—	—	14.55	—
30-0-30	.0017	—	—	14.55	—
50-0-50	.001	—	—	14.55	—

1½" DC Ammeters are self contained through 10 amps. 15 Amps and higher are supplied as 50 MV meters to be used with external shunts. 2½", 3½" and 4½" DC ammeters are self contained through 50 amps. Higher range DC ammeters are 50 MV meters to be used with external shunts.

DC MILLIAMMETERS — Self-Shielded Movement

0-1	46	$12.30	$12.90	$13.50	$14.25
0-3	46	—	12.90	13.50	14.25
0-5	23	12.30	12.90	13.50	14.25
0-10	2.2	12.30	12.90	13.50	14.25
0-15	2.2	12.30	12.90	13.50	14.25
0-20	2.2	—	12.90	13.50	14.25
0-25	6.0	12.75	13.20	13.80	15.00
0-50	3.0	12.75	13.20	13.80	15.00
0-100	1.5	12.75	13.20	13.80	15.00
0-150	1.0	12.75	13.20	13.80	15.00

DC MILLIAMMETERS (Continued)

Range	(ohms) Approx. Resistance	1½" Model 1212	2½" Model 1227	3½" Model 1327	4½" Model 1329
0-200	.75	12.75	13.20	13.80	15.00
0-250	.60	12.75	13.20	13.80	15.00
0-300	.50	12.75	13.20	13.80	15.00
0-500	.30	12.90	13.20	13.80	15.00
0-750	.20	—	—	13.80	15.00
0-1000	.05	—	13.20	13.80	15.00

DC MICROAMMETERS Self-Shielded Movement

0-15	4500	—	—	$22.50	$24.60
0-25	2200	—	$19.20	20.10	22.20
0-50‡	2000	$16.20	16.65	17.10	18.45
0-100	2000	14.40	15.00	15.60	17.40
0-200	1000	13.05	13.65	14.25	15.75
0-500	200	12.80	13.50	13.95	15.15
25-0-25	2000	16.35	—	17.25	18.60
50-0-50	2000	14.55	15.15	15.75	17.55
100-0-100	1000	13.20	13.80	14.40	15.90
500-0-500	46	12.45	13.05	13.65	14.40

DC MILLIVOLTMETERS Self-Shielded Movement

0-50	10	$12.75	$13.05	$13.65	$15.00
50-0-50	10	—	—	13.65	15.00

Simpson VU meters meet all the Electrical and Ballistic specifications established by Bell Laboratories and American Standards Association as required by broadcasting, communication and sound engineers. They are available with either type A or B scales. Type A scale stresses the level in VU for monitoring wire lines. Type B scale stresses per cent use of transmitter output and is the standard for broadcast service.

VOLUME LEVEL INDICATORS; DECIBEL METERS

Zero Power Level—6 MW. 500 Ohm Line—Core Magnet Type Movement

Range	1½" Model 1214	2½" Model 1247	3½" Model 1347	4½" Model 1349
General-Purpose 5000 ohms	—	$18.35	$19.60	$20.25

VOLUME LEVEL INDICATORS—V. U. METERS

Reference Level—1 MW. 600 Ohms Line. External Magnet Type Movement except Model 1214C which is core magnet type movement.

Range	1½" Model 1214	2½" Model 1247	3½" Model 1347	4½" Model 1349
A—Scale	$19.80	$21.90	$22.50	$23.70
B—Scale	—	—	22.50	23.70

DC GALVANOMETERS Self-Shielded Movement

Scale	Sensitivity Micro-Amperes	Resistance (ohms)	1½" Model 1212C	2½" Model 1227C	3½" Model 1327C	4½" Model 1329C
50-0-50	500-0-500	46	$12.45	$12.90	$13.65	$14.40
50-0-50	75-0-75	2000	13.20	13.95	15.15	16.65

RF AMMETERS — Self-Shielded Movement

Range Amperes	(ohms) Approx. Resistance	1½" Model 1212	2½" Model 1237	3½" Model 1337	4½" Model 1339
0-1	.343	—	—	$15.90	$18.15
0-1.5	.200	—	—	15.90	18.15
0-2	.120	—	—	15.90	18.15

RF AMMETERS (Continued)

0-2.5	.10	—	—	15.90	18.15
0-3	.08	—	—	15.90	18.15
0-5	.045	—	—	15.90	18.15
0-8	.031	—	—	15.90	18.15
0-10	.023	—	—	15.90	18.15

RF MILLIAMMETERS

0-500	.63	—	—	$18.75	$21.15

AC VOLTMETERS—Iron Vane Type Movement

Range	(ohms) Approx. Resistance	2½" Model 1257	3½" Model 1357	4½" Model 1359
0-5	33	—	$12.60	$14.40
0-10	133	$12.30	12.60	14.40
0-15	300	12.30	12.60	14.40
0-25	833	12.45	13.05	14.40
0-50	3,333	12.45	13.05	14.40
0-100	16,666	12.75	13.65	14.40
0-150	25,000	13.05	13.95	15.00
0-250	41,166	13.05	13.95	15.00
0-300	50,000	13.05	13.95	15.00
0-500	83,333	16.65	17.85	19.05

External Multipliers, Model 183 (Featured on back page) are furnished on AC meters having a range of 500 volts or higher. All others are self contained.

AC AMMETERS—Iron Vane Type Movement

0-1	.287	$11.70	$12.45	$14.55
0-1.5	.185	11.70	12.45	14.55
0-2	.115	—	12.45	14.55
0-3	.027	11.70	12.45	14.55
0-5	.012	11.70	12.45	14.55
0-10	.0031	11.70	12.45	14.55
0-15	.0022	11.70	12.45	14.55
0-25	.0003	12.30	12.90	15.00
0-30	.0003	12.30	12.90	15.00
0-50	.0006	12.30	12.90	15.00
0-75	.012	—	13.95	16.05
0-100	.012	11.70	12.45	14.55
0-150	.012	11.70	12.45	14.55
0-200	.012	11.70	12.45	14.55
0-300	.012	11.70	12.45	14.55

2½" AC ammeters are self contained through 50 amps. 3½" and 4½" AC ammeters self contained through 75 amps. Higher range AC ammeters are 5 amp meters to be used with external current transformer.

AC MILLIAMMETERS — Iron Vane Movement

0-10	2,000	$11.70	$12.45	$14.55
0-50	80	11.70	12.45	14.55
0-100	20	11.70	12.45	14.55
0-250	5	11.70	12.45	14.55
0-500	.9	11.70	12.45	14.55

AC VOLTMETERS—RECTIFIER TYPE

Self-Shielded Movement

Range Volts	Resistance	1½" Model 1214	2½" Model 1247	3½" Model 1347	4½" Model 1349
0-5		$17.70	$16.50	$18.30	$20.10
0-10	2000	17.70	16.50	18.30	20.10
0-15	ohms	—	—	18.30	20.10
0-50	per	—	—	18.30	20.10
0-150	volt	17.70	16.50	18.30	20.10
0-300		17.70	16.50	18.30	20.10

(continued on next page)

Ranges listed without prices (—) are available on special order only. †1½" DC Milliammeters all self contained. Voltage drop 150 MV or less. ‡Resistance of Model 1212 0-50 MIC Meter is 5300 ohms.

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Simpson METERS and METER RELAYS

All Prices Net

WIDE-VUE METERS—TAUT BAND and WATTMETERS



TAUT BAND — DC MICROAMMETERS
Self-Shielded TAUT BAND Movement

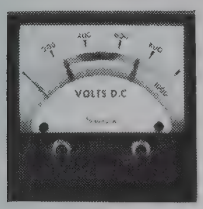
Range	Resistance	1½" Model 1212T	2½" Model 1227T	3½" Model 1327T	4½" Model 1329T
10	4900	—	$30.00	$31.20	$33.60
15	1960	—	27.30	28.20	30.60
25	1960	—	23.40	24.30	26.40
50	960	—	20.55	21.00	22.65
100	503	—	18.90	19.50	21.30

NOTE: Wattmeters calibrated for either magnetic or nonmagnetic panels and for frequency range of 25-125 cycles.

WATTMETERS, Dynamometer Type, Single Phase

Watts	Range Volts	Max. Amps	2½" Model 1277	3½" Model 1377	4½" Model 1379
0-75	150	1.0	—	—	$34.92
0-150	150	2.0	—	—	34.92
0-300	150	4.0	—	—	34.92
0-750	150	10.0	—	—	34.92
0-600	300	4.0	—	—	37.47
0-1500	300	10.0	—	—	37.47
0-3000	300	20.0	—	—	37.47
Compensated Wattmeters					
0-10	300	0.175	—	—	46.75
0-20	300	0.400	—	—	46.75
0-30	300	0.650	—	—	46.75

CONTACTLESS METER RELAYS—Self-Contained, 3½"



RUGGED SEAL CONSTRUCTION

Set points are adjusted thru external, front-adjusted gear drive. Set point is indicated by separate lance pointers. Sensing is accomplished thru an infinite life lamp and photoconductors. A solid state switching circuit and D.P.D.T. slave relay are provided (internally) for each control point. Slave relays will switch 10 amperes @ 115 volts A.C.

ELECTRICAL SPECIFICATIONS

Calibration Accuracy: ±2% of full scale.

Control Point Adjustment: Control points are externally adjustable over 95% of the scale arc. Control point indication is within 2% of actual switching.

Control Point Differential: Difference between "on" and "off" is within .5% of full scale.

Power Requirements: 115 Volts A.C.; 50-500 CPS.

Output: D.P.D.T. relay contacts for each control point. Contacts rated @ 10 amperes, 115 volts A.C. resistive.

Meter Indication: Continuous, unaffected by control point setting.

Control Circuitry: Fail-safe. Both slave relays "open" in event of power failure.

CONTACTLESS TYPE — MODEL 3324XA

Range	SINGLE CONTROL Resist. Approx. Ohms	SINGLE CONTROL Price	DOUBLE CONTROL Price
0-50	3000	$90.00	$123.90
0-100	1300	87.30	121.50
0-200	570	87.30	121.20
0-500	220	87.30	121.20
0-1	80	86.40	120.30
0-50	10	86.70	120.75

4½ METER RELAY—FRONT ADJUSTABLE—MODEL 29XA



General: Model 29XA Relays are of the D'Arsonval Type. Externally adjusted limit setting contacts are non-locking and intended for circuits with external locking provisions or for light duty non-locking applications.

Calibration: Accuracies ±2% of full scale.

Contacts: Platinum Alloy. For use @ 15 volts DC @ 10 milliamperes maximum on resistive or diode protected inductive loads.

Contact Adjustment: Contacts are externally adjustable over 95° of 100° scale arc, and within 5° of each other. The pointer will indicate the contact make position within 2° of actual contact intercept.

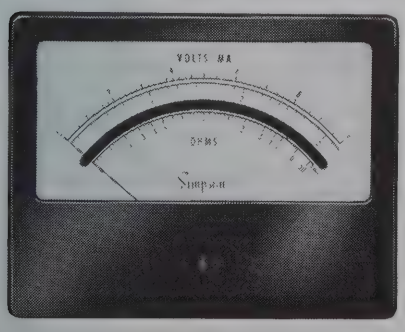
Contact Differential: Normally, contacts will close within 2% of full scale value and break within 10% of full scale value.

Insulation: Breakdown 300 volts AC from Relay contacts to meter circuit. 3 KV AC from Relay terminals to mounting panel. (All Tests at 60 cycles.)

Range	Description	Approx. Resistance (ohms)	Price
0-50	DC Microammeter	2500	$44.10
0-100	DC Microammeter	1800	42.15
0-200	DC Microammeter	1000	39.60
0-500	DC Microammeter	280	39.00
0-1	DC Milliammeter	140	38.10
0-50	DC Millivoltmeter	10	38.25

1% AND 2% PANEL METERS—6" SIZE

Red knife-edge pointers; ¼-28 studs; front surface glass mirrors on 1% meters; molded black phenolic case; scale length, 4.6" (114.8 mm).



6 INCH RECTANGULAR PANEL METERS — 1% & 2% tolerance

Range	Approx. Resist.	DC Voltmeters[1] Model 1150E, 2%	DC Millivoltmeters[1] Model 1150E, Resist. (ohms)	DC Millivoltmeters[1] Model 1150E, 2%	DC Ammeters[1] Model 1150E, Resist. (ohms)	DC Ammeters[1] Model 1150E, 2%
0-1		—	—	—	.050	$19.65
0-5		—	—	—	.010	19.65
0-10		$18.90	—	—	.005	19.65
0-15		—	—	—	.0033	19.65
0-25	1000	18.90	—	—	.0020	19.65
0-30	OHMS	—	—	—	.0016	19.65
0-50	PER	18.90	10	$19.65	.001	19.65
0-100	VOLT	18.90	—	—	—	—
0-150		18.90	—	—	—	—
0-200		—	—	—	—	—
0-300		18.90	—	—	—	—
0-500	2000 Ω/V	19.50	—	—	—	—

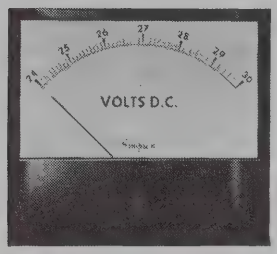
Range	Approx. Resist.	DC Milliammeters[1] Model 1150E, 2%	DC Milliammeters[1] Model 1150E-1, 1%	Resist. (ohms)	DC Microammeters[2] Model 1150H, 2%	DC Microammeters[2] Model 1150H-1, 1%
0-1	46	$18.90	$23.85	—	—	—
0-10	10	18.90	—	—	—	—
0-15	—	—	—	5500	$29.95	—
0-25	—	—	—	5500	26.85	—
0-50	2.0	18.90	—	5000	24.45	$29.40
0-100	1.0	18.90	23.85	2800	23.40	28.35
0-200	—	—	—	1200	20.40	25.35
0-500	.2	18.90	23.85	200	19.80	24.75

[1]All ranges 1-5/16" shallow core movement.
[2]Ranges 15 through 100 use high flux movements designated as Model 1150H and cannot be calibrated for use on steel panels. Ranges 200 through 500 use 1-5/16" shallow core movement designated as 1150E.
†Supplied as Model 1150E which has 1-5/16" shallow core meter movement. Ranges listed without prices (—) are available on special order only.

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Simpson "RUGGED SEAL" and SEGMENTAL VOLTMETERS

"RUGGED SEAL" METERS—3½", 4½", 4" x 6" (Sq. and Rect.)



Completely sealed and commercially ruggedized. Metal cased and shielded. Not affected by steel panel mounting. DC meters have ±2% F.S. accuracy; AC meters, ±2% F.S. at 25°C and 60-cycle sine wave. Scale lengths: 3½" meter, 2.9" (74 mm); 4½" meter, 3.9" (101 mm); 4" x 6" meter, 4.7" (120 mm).

Movement is external magnet type shielded by metal case. All AC meters are rectifier type, and maintain accuracy from 25 to 2000 cps (except AC ammeter, 50 to 500 cps).

DC VOLTMETERS

Range	Approx. Resist.	3½" Model 3323	4½" Model 3324	4"x6" Model 3326
0-1.5		$17.10	$18.60	$20.40
0-10	(1000	17.10	18.60	20.40
0-15	ohms	17.10	18.60	20.40
0-25	per	17.10	18.60	20.40
0-50	volt)	17.10	18.60	20.40
0-100		17.10	18.60	20.40
0-500		17.10	18.60	20.40

DC AMMETERS

0-5	(int. shunt	$17.40	$18.90	$21.00
0-10	75 mv. max.)	17.40	18.90	21.00

DC MILLIAMMETERS

0-1	80 ohms	$16.50	$18.00	$19.95
0-100	0.5 ohms	17.40	18.90	21.00

DC MICROAMMETERS

0-50	3000 ohms	$22.20	$23.70	$25.95
0-100	3000 ohms	20.10	21.60	24.00

AC VOLTMETERS, RMS SENSING (RECT. TYPE)

Range	Approx. Resist.	3½" Model 3343	4½" Model 3344	4"x6" Model 3346
0-150	(1000 ohms	$20.70	$21.90	$24.00
0-300	per volt)	20.70	21.90	24.00

AC AMMETERS (RECT. TYPE)

0-1	(int. Trans.	$25.80	$27.00	$29.10
0-5	Burden, 0.5 VA Max.)	25.80	27.00	29.10

AC MILLIAMMETERS (Rect. TYPE)

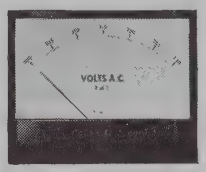
0-1	600 ohms	$20.40	$21.60	$23.40

AC MICROAMMETER (RECT. TYPE)

0-100	400 ohms	$21.60	$22.50	$24.60

SEGMENTAL VOLTMETERS – "Rugged Seal" Construction





The significant portion of the overall voltage scale of these meters is expanded to occupy the full scale length. In addition to the stock expansions and accuracies shown, special segmental voltmeters can be built on order.

Meters are completely sealed and commercially ruggedized; metal cased and shielded; and are not affected by mounting on steel panels. Movement is external magnet type shielded by the metal case.

Accuracies shown are in percent of center scale value.

All of these AC segmental voltmeters are the RMS sensing type which are preferred when working with distorted waveforms.

AC VOLTMETERS, RMS SENSING, RECTIFIER (ROUND)

Center Scale Value — 115 V

Range	Sensitivity	Accuracy	2½" Model 3282	3½" Model 3283	4½" Model 3284
100-130	50 opv	1.0%	$70.00	$64.50	$71.50
105-125	65 opv	0.5%	70.00	64.50	71.50
110-120	80 opv	0.3%	70.00	64.50	71.50

DC VOLTMETERS (ROUND)

Range	Center Scale Value	Accuracy	2½" Model 3222	3½" Model 3223	4½" Model 3224
24-30	27 V	0.5%	$60.00	$54.60	$61.50

FREQUENCY METERS (ROUND)

Range cps	Center Scale cps	Accuracy	.....	.....	3½" Model 3283	4½" Model 3284
57-63	60	0.25%	——		$152.50	$159.50
380-420	400	0.25%	——		152.50	159.50

AC VOLTMETERS, RMS SENSING, RECTIFIER (RECTANGULAR)

Center Scale Value — 115 V

Range	Sensitivity	Accuracy	3½" Model 3383	4½" Model 3384	4"x6" Model 3386
100-130	50 opv	1.0%	$59.00	$65.00	$69.50
105-125	65 opv	0.5%	59.00	65.00	69.50
110-120	80 opv	0.3%	59.00	65.00	69.50

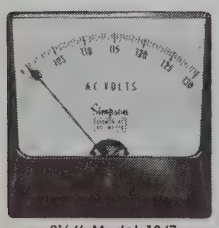
DC VOLTMETERS (RECTANGULAR)

Range	Center Scale Value	Accuracy	3½" Model 3323	4½" Model 3324	4"x6" Mode 3326
24-30	27 V	0.5%	$49.20	$55.20	$59.40

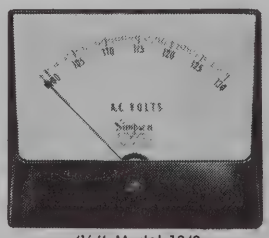
FREQUENCY METERS (RECTANGULAR)

Range cps	Center Scale cps	Accuracy	3½" Model 3383	4½" Model 3384	4"x6" Model 3386
57-63	60	0.25%	$148.25	$153.00	$157.50
380-420	400	0.25%	148.25	153.00	157.50

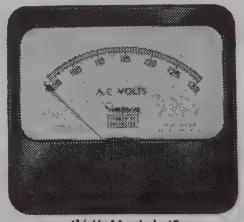
SEGMENTAL VOLTMETERS (Average Sensing) 100-130 AC Volts



3½" Model 1347 Wide-Vue



4½" Model 1349 Wide-Vue



4½" Model 49 Rectangular

	WIDE-VUE (Single Range) Model	Price	(Multi-Range) Model	Price	RECTANGULAR Model (Single Range)	Price
3½"	1347	$40.80	—	—	—	—
4½"	1349	40.95	1349	$50.60	49	$40.50

Simpson Segmental AC Voltmeters improve meter accuracy and readability over most conventional type meters. Used primarily in monitoring line voltage, these segmental Voltmeters increase the efficiency, reliability and life of costly components

MODEL NO.	1347	1349	49
Scale Length	3.14" (79.7 mm)	3.93" (100 mm)	3.5" (89.0 mm)
Operating Frequency Range	20-2000 cps		
Accuracy	±.5% of Center scale value at 25°C and 60 cps sine wave		
Movement Type	Core Magnet Meter Movement		
Frequency Influence	Less than 0.5% of Center scale value for temperature range of ±20° from 25°C.		
Sensitivity	160 to 100 ohms/volt end scale values. Sensitivity decreases as input voltage increases.		
Intermittent Input Voltage (max.)	150 volt RMS for 10 seconds		

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Simpson

2½, 3½, 4½ ROUND AND RECTANGULAR PANEL METERS

All Prices Net

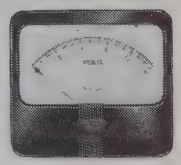
ACCURACY: DC METERS OR AC IRON VANE TYPE METERS ±2% OF FULL SCALE; RECTIFIER TYPE ±3% OF FULL SCALE @ 25°C. AND 60 CYCLE SINE WAVE.



2½" Models 125, 135, 145, 155, 175
3½" Models 25, 35, 45, 55, 75



2½" Models 127, 137, 147, 157, 177
3½" Models 27, 37, 47, 57, 77



4½" Models 29, 39, 49, 59, 79, 142

All meters listed below, except wattmeters, have the Simpson external magnet meter movement, calibrated for non-magnet panel. When ordering these meters for use on steel panels, state panel thickness and add 1.65 to price shown below for re-calibration. Wattmeters listed below have the Simpson dynamometer movement calibrated for either magnetic or non-magnetic panels and for a frequency range of 25—125 cycles.

AC VOLTMETERS—RECTIFIER TYPE

Range	Ohms	2½" Models 145/147	3½" Models 45/47	4½" Model 49
0-1		—	18.75	20.55
0-3		—	18.75	20.55
0-5		—	18.75	20.55
0-10	2000	—	18.75	20.55
0-15	ohms	—	18.75	20.55
0-50	per volt	—	18.75	20.55
0-100		—	18.75	20.55
0-150		—	18.75	20.55
0-300		—	18.75	20.55

AC MILLIAMMETERS—RECTIFIER TYPE

0-1	600	—	18.00	19.50
0-2	400	—	18.00	19.50
0-5	200	—	18.00	19.50

AC MICROAMMETERS—RECTIFIER TYPE

0-100	3400	—	20.55	22.05
0-200	2400	—	18.15	19.80
0-300	1800	—	18.00	19.50
0-500	1200	—	17.70	19.20

AC VOLTMETERS

Range	Approx. Resistance	2½" Models 155/157	3½" Models 55/57	4½" Model 59
0-1.5	3 ohms	$11.70	$12.45	$14.10
0-3	12	11.70	12.45	14.10
0-5	33	11.70	12.45	14.10
0-10	133	11.70	12.45	14.10
0-15	300	11.70	12.45	14.10
0-25	833	12.15	12.75	14.10
0-50	3,333	12.15	12.75	14.10
0-100	16,666	13.20	13.80	14.70
0-150	25,000	12.90	13.65	14.85
0-250	41,166	12.90	13.65	14.85
0-300	50,000	12.90	13.65	14.85
0-500	83,333	17.40	17.70	18.30
0-750	125,000	19.20	19.35	20.10
0-1000	166,666	20.70	20.85	21.75

AC AMMETERS

†0-1	.287	$11.55	$12.15	$14.40
†0-1.5	.185	11.55	12.15	14.40
†0-2	.115	11.55	12.15	14.40
†0-3	.027	11.55	12.15	14.40
†0-5	.012	11.55	12.15	14.40
†0-10	.003	11.55	12.15	14.40
†0-15	.0022	11.55	12.15	14.40
†0-25	.0003	11.85	12.45	15.00
†0-30	.0003	11.85	12.45	15.00
†0-50	.0006	11.85	12.45	15.00
0-75	.0005	—	13.20	14.55
†0-75	.012	11.55	12.15	14.40
0-100	.012	11.55	12.15	14.40
0-150	.012	11.55	12.15	14.40
0-200	.012	11.55	12.15	14.40
0-250	.012	11.55	12.15	14.40
0-300	.012	11.55	12.15	14.40
0-500	.012	11.55	12.15	14.40

AC MILLIAMMETERS

0-10	2,000 ohms	$11.55	$12.15	$14.40
0-15	875	11.55	12.15	14.40
0-25	390	11.55	12.15	14.40
0-50	80	11.55	12.15	14.40
0-100	20	11.55	12.15	14.40
0-250	5	11.55	12.15	14.40
0-500	.9	11.55	12.15	14.40

DC VOLTMETERS

External Magnet Meter Movement

Range	(ohms) Approx. Resistance	2½" Models 125/127	3½" Models 25/27	4½" Model 29
0-1.5	1000	$13.05	$13.50	$14.85
0-3	1000	13.05	13.50	14.85
0-5	1000	13.05	13.50	14.85
0-8	1000	13.05	13.50	14.85
0-10	1000	13.05	13.50	14.85
0-15	1000	13.05	13.50	14.85
0-25	1000	13.05	13.50	14.85
0-30	1000	13.05	13.50	14.85
0-50	1000	13.05	13.50	14.85
0-100	1000	13.05	13.50	14.85
0-150	1000	13.05	13.50	14.85
0-200	1000	13.05	13.50	14.85
0-250	1000	13.05	13.50	14.85
0-300	1000	13.05	13.50	14.85
0-500	2000	13.80	14.10	15.30
0-750	2000	16.65	14.10	15.30
0-1000	2000	16.95	17.55	19.20
0-1500	2000	—	17.85	19.50
0-2000	2000	17.55	18.15	19.80
0-2500	2000	—	18.45	20.10
0-3000	2000	18.15	18.75	20.40
0-4000	2000	—	19.05	20.70
0-5000	2000	—	19.35	21.00

DC MILLIAMETERS

External Magnet Meter Movement

0-1	46	$12.15	$12.75	$13.95
0-1.5	46	12.15	12.75	13.95
0-3	46	12.15	12.75	13.95
0-5	23	12.15	12.75	13.95
0-10	2.2	12.15	12.75	13.95
0-15	2.2	12.15	12.75	13.95
0-20	2.2	12.15	12.75	13.95
0-25	6.0	12.90	13.35	14.85
0-50	3.0	12.90	13.35	14.85
0-75	2.0	12.90	13.35	14.85
0-100	1.5	12.90	13.35	14.85
0-150	1.0	12.90	13.35	14.85
0-200	.75	12.90	13.35	14.85
0-250	.60	12.90	13.35	14.85
0-300	.50	12.90	13.35	14.85
0-500	.30	12.90	13.35	14.85
0-750	.20	12.90	13.35	14.85
0-1000	.05	12.90	13.35	14.85

DC AMMETERS

0-1	.050	$12.90	$13.35	$14.70
0-1.5	.033	12.90	13.35	14.70
0-2	.025	12.90	13.35	14.70
0-3	.0166	12.90	13.35	14.70
0-5	.010	12.90	13.35	14.70
0-10	.005	12.90	13.35	14.70
0-15	.0033	12.90	13.35	14.70
0-25	.0020	12.90	13.35	14.70
0-30	.0017	12.90	13.35	14.70
0-50	.001	12.90	13.35	14.70
0-75	10.0	12.45	12.90	14.40
0-100	10.0	12.45	12.90	14.40
0-150	10.0	12.45	12.90	14.40
0-200	10.0	12.45	12.90	14.40
0-250	10.0	12.45	12.90	14.40
0-300	10.0	12.45	12.90	14.40
0-500	10.0	12.45	12.90	14.40
0-750	10.0	12.45	12.90	14.40
0-1000	10.0	12.45	12.90	14.40
15-0-15	.0033	13.20	13.65	15.15
30-0-30	.0017	13.20	13.65	15.15
50-0-50	.001	13.20	13.65	15.15

DC MICROAMMETERS

0-15*	4500	—	$22.95	$25.05
0-25‡	2200	$19.65	20.55	22.65
0-50	2000	17.10	17.55	18.90
0-100	2000	14.85	15.45	17.25
0-200	1000	13.20	13.95	15.45
0-500	200	12.75	13.35	14.85
25-0-25	2000	17.35	17.70	19.05
50-0-50	2000	15.00	15.60	17.40
100-0-100	1000	12.90	14.10	15.75
500-0-500	46	12.30	12.90	14.10

DC MILLIVOLTMETERS

0-50	10	$12.45	$12.90	$14.40
0-100	20	12.45	12.90	14.40

RF AMMETERS — Internal Thermocouple Type

Range	Approx. Resistance	2½" Model 135/137	3½" Model 35/37	4½" Model 39
0-1	.343 ohms	$14.10	$15.00	$17.25
0-1.5	.200	14.10	15.00	17.25
0-2	.120	14.10	15.00	17.25
0-2.5	.10	14.10	15.00	17.25
0-3	.08	14.10	15.00	17.25
0-5	.045	14.10	15.00	17.25
0-8	.031	14.10	15.00	17.25
0-10	.023	14.10	15.00	17.25

RF MILLIAMMETERS ‡0-100 linear scale

‡0-115	4.0 ohms	—	28.35	29.85
0-150	4.5	—	18.00	20.40
0-250	3.5	—	18.00	20.40
0-500	.63	—	18.00	20.40

VOL. LEVEL INDICATORS — DECIBEL METERS

Zero Power Level — 6 MW 500 Ohm Line

Range	2½" Models 145/147	3½" Models 45/47	4½" Model 49
General Purpose Type —10 to +6 db 5000 ohms	$18.30	$18.45	$20.10
High Speed Type —10 to +6 db 5000 ohms	—	20.40	21.75
Low Speed Type —10 to +6 db 5000 ohms	—	20.25	21.15

VOLUME LEVEL INDICATORS — VU METERS

Reference Level — 1 MW 600 Ohm Line

Range Scale 3900 ohms	2½" Models 145/147	3½" Models 45/47	4½" Model 142
"A" Scale; Not Illuminated	—	$22.35	$24.15
"B" Scale; Not Illuminated	—	22.35	24.15
"A" Scale; Illuminated	—	—	26.70
"B" Scale; Illuminated	—	—	26.70

WATTMETERS — DYNAMOMETER TYPE

Single Phase

Range Watts	Max. Volts	Max. Amps.	2½" Model 175/177	3½" Model 75/77	4½" Model 79
0-70	150	1.0	$26.25	$27.60	$33.90
0-150	150	2.0	26.25	27.60	33.90
0-300	150	4.0	26.25	27.60	33.90
0-750	150	10.0	26.25	27.50	33.90
0-600	300	4.0	28.65	30.00	36.45
0-1500	300	10.0	28.65	30.00	36.45
0-3000	300	20.0	28.65	30.00	36.45

COMPENSATED WATTMETERS — Single Phase

0-10	300	.175	—	44.10	45.75
0-20	300	.400	—	44.10	45.75
0-20	500	.175	—	44.10	45.75
0-30	300	.650	—	44.10	45.75
0-30	500	.300	—	44.10	45.75
0-50	500	1.25	—	44.10	45.75

DC GALVANOMETERS

Scale	Sensitivity Micro-Amperes	Res. Ohms	2½" Models 125/127	3½" Models 25/27	4½" Model 29
50-0-50	75-0-75	2000	13.65	15.00	15.45
50-0-50	500-0-500	46	$12.75	$13.20	$14.85

†AC ammeters are self-contained. Higher range AC ammeters can be supplied with external current transformers and include 2 foot leads. External current transformers should be ordered separately. DC ammeters are self-contained for ranges up to and including 50 amperes. Higher range DC ammeters (50MV) listed above can be supplied with external shunts and include 5 foot leads. *These meters use the Hi Flux magnet and cannot be recalibrated for use on steel panels. ‡The Model 29 meters in this range use the Hi Flux magnet and cannot be recalibrated for use on steel panels.

481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351

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SPRAGUE TEST EQUIPMENT

TO-6 TEL-OHMIKE® CAPACITOR ANALYZER



The TO-6 TEL-OHMIKE capacitor analyzer is a must for checking all capacitors. It is a moderately priced instrument with laboratory quality and accuracy—the highest accuracy of any instrument of its type available to the service trade!

- **LEAKAGE CURRENT** of electrolytics measured directly on meter. Four ranges; .06, .6, 6, and 60mA. Three ranges of DC voltage (continuously variable within each range) permit testing capacitors at exact rated voltage up to 600 volts.
- **POWER FACTOR** of electrolytics, up to 50% measured by Wien Bridge.
- **METER PROTECTOR** of solid-state design allows severe accidental over-loads without burn-outs.
- **MAGIC-EYE TUBE** simplifies bridge balancing for capacitance and power factor measurements. High gain amplifier provides greatly improved sensitivity.
- **PUSH-BUTTONS** color-keyed for instant range selection.
- **MODERN CASE:** Silver-grey hammertone finish, panel is charcoal grey with highly contrasting white designations. Measures 8⅞" high, 14⅝" wide, 6⅛" deep. Weight only 13 pounds.

MODEL TO-6 ..... **115 VAC/50-60 cy** ..... **$ 99.50**
MODEL TO-6S ..... **115-230V/50 cy** **105.75**

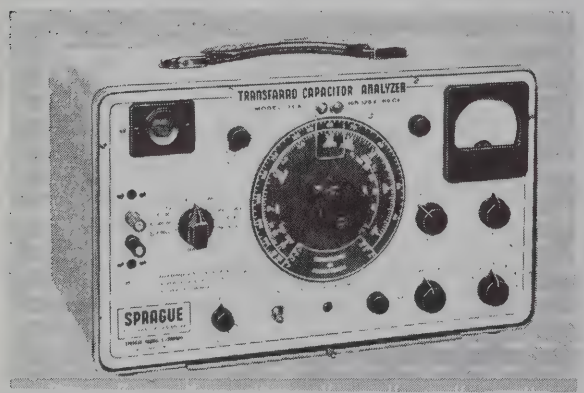
- **CAPACITANCE BRIDGE** measures up to 2000 μF. Five overlapping ranges include exclusive 1 pF to 100 pF range. Special shielded transformer for bridge voltage. Extremely low AC voltage; 1.35 volts for electrolytic capacitors, 2.85 for all others, permits safe testing of all low voltage capacitors.
- **INSULATION RESISTANCE** of papers, ceramics and micas directly read on large meter. No guessing with neon lamps. Dual range—to 10KMΩ@ 30V for low voltage units . . . to 50KMΩ@ 150V for higher voltage components. Fast charge feature speeds testing of high capacitance units.

TEL-OHMIKES FOR RACK MOUNTING

Electrically identical to TO-6 and TO-6S. These models have a standard 19"w. x 10½"h. panel so that it can be mounted in standard relay racks.

MODEL TO-6RM.....**115 VAC/50-60 cy**.....**$109.50**
MODEL TO-6SRM.....**115-230 V/50 cy**..... **115.75**

TCA-1 TRANSFARAD®



The Transfarad is specifically designed to safely test all low-voltage, low-leakage aluminum, tantalum, film, paper, and ceramic capacitors used in transistorized circuits. A must for modern industrial laboratories and electronic service shops.

- **INSULATION RESISTANCE** directly read from 50 megohms to 20,000 megohms. Only 25v d-c is applied, permitting measurements on low voltage ceramic, mica, and film capacitors. IR of ceramics rated below 25v may be calculated from leakage current measurement at exact rated voltage.
- **LEAKAGE CURRENT** measured directly on meter at exact rated d-c voltage of capacitor. Sensitive circuit makes full scale measurements from 0.6 μA to 600μA in seven ranges.
- **POWER FACTOR** measured by Wien bridge from 0 to 50 per cent.
- **MAGIC EYE** null detector in high-gain amplifier has sensitivity control permitting accurate measurement of small capacitors.
- **SHORT-TIME STABILITY** is assured by dual regulation of the power supply. Specially processed etched circuits and complete encapsulation of the critical bridge-null amplifier insure long-time stability.
- **BINDING POSTS** are shielded against strays, assuring greater accuracy during low capacitance measurements.
- **FOR SAFETY** the capacitor under test is automatically discharged after testing. Three wire line cord grounds instrument case.
- **OPERATING PROCEDURES** are clearly shown on convenient pull-out slide.

SAFELY TESTS TRANSISTOR CIRCUIT CAPACITORS INCLUDING TANTALUM TYPES

- The only analyzer which gives the complete story on tantalum and other low leakage current capacitors.
- **CAPACITANCE BRIDGE** measures 1$\mu\mu$F to 2000μF in five overlapping ranges. Only 0.5 volt is applied to the bridge from a continuously adjustable power supply. The voltage across the capacitor is less than this applied voltage, the amplitude depending on the capacitance being measured. No possibility of overheating or deforming any low voltage capacitor during measurements.

MODEL TCA-1 TRANSFARAD 115 VAC/60cy $197.50 net
MODEL TCA-1S TRANSFARAD 115/230 VAC, 50cy $232.50 net

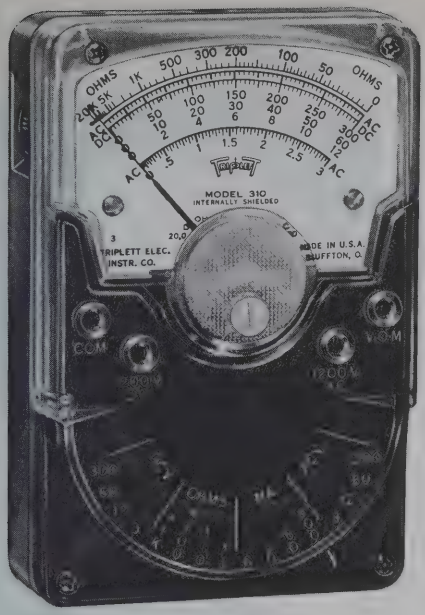
TRANSFARADS FOR RACK MOUNTING

Electrically identical to the above instruments, these models have a standard 19"w. x 10½"h. panel so that they can be mounted in the conventional relay rack.

MODEL TCA-1RM .....**115VAC/60cy**..... **$207.50 net.**
MODEL TCA-1SRM .....**115/230 VAC, 50cy**..... **$242.50 net**

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TRIPLETT TEST EQUIPMENT



MODEL 310

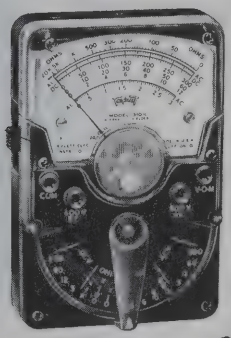
WORLD'S MOST POPULAR MINIATURE V-O-M
MODEL 310

1. One selector switch. **2.** 20,000 ohms per volt DC sensitivity. **3.** Shirt pocket size VOM with provision for attaching AC clamp-on ammeter.
Self-shielded for checking in strong magnetic fields.
Rugged, high torque, bar-ring instrument.
Standard sensitivity 20,000 ohms per volt DC, and 5,000 ohms per volt AC.
Spring-backed instrument jewels for ruggedness.
Accuracy 3% DC, 4% AC.

RANGES

DC Volts: 0-3-12-60-300-1,200 (at 20,000 ohms per volt). **AC Volts:** 0-3-12-60-300-1,200 (at 5,000 ohms per volt). **Ohms:** 0-20,000-200,000. **Megohms:** 0-2-20. **DC Microamperes:** 0-600 at 250 millivolts. **DC Milliamperes:** 0-6-60-600 at 250 millivolts. **Weight:** Approx. 14 oz., complete with batteries.
Case: Molded, fully insulated, 2¾" x 4¼" x $1\frac{5}{16}$".
Complete with leads, battery and instruction manual. Shipping wt. 2 lbs. **$37.50**

MODEL 310-C



SPECIAL INDUSTRIAL HANDSIZE V-O-M
MODEL 310-C

Model 310-C is the same as Model 310, above, (except 600 volt ranges replace 1200 volt ranges of model 310) plus the following features:
1. Fully enclosed lever range switch. **2.** 15,000 Ohms per volt AC (20,000 O/V DC same as 310). **3.** Reversing switch for DC measurements. Handsize and lightweight, but with the features of a full size V-O-M. **$44.50**



MODEL 100

V-O-M AND CLAMP-ON AMMETER SET
MODEL 100

Handsomely packaged set includes: Model 310 V-O-M, Model 10 Clamp-on Ammeter Adapter; Model 101 Line Separator; Model 379 Leather Case; Model 311 Leads. ($67.10 Value Separate Unit Purchase Price.)

MODEL 100, as above, you save **$2.60.** Shipping wt. 7 lbs. **$64.50**

MODEL 100-C Same as above but with Model 310-C. **$71.50**



310-10



369

CLAMP-ON AC AMMETER ADAPTER
MODEL 10

CHECKS LINE LOADS WITH MODEL 310 OR 310-C

(Also can be used with Models 630, 630-A, 630-NA, 631, 630-PL, 630-APL, 630-NS, 630-PLK, 630-L by means of 611 leads.)

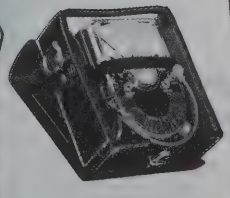
Checks all line loads instantly, accurately, safely —without breaking the circuit or interrupting work. Easy range switching. Model 10 Clamp-On Adapter AC Ammeter ranges: 0-6-12-30-60-120-300. Clips around single wire to read A.C. Amperes direct. Used with Adapter 101 to divide instantly two-conductor cords. A lever securely locks the Model 10 to Model 310 when used in combination. Model 10 can be left attached to Model 310 when the latter tester is used as an AC-DC V-O-M only. The only change is to remove the lead plug from the Model 310 V-O-M jack and insert it in the jack provided in the Model 10 housing.
Case: black molded plastic with engraved white markings. **$15.50**

NO. 311 LEADS

The Model 10 can be separated from the Model 310 (in the same way as above) by using No. 311 lead attachment. This permits readings in difficult locations. **$2.10**



379



369-S



369-T

LEATHER CASES FOR MODELS 310—310-C

Model 369-S leather carrying case for use with Models 310 or 310-C. Has removable leather shoulder strap. The case flap folds back to form a handy stand. Contains a retractable hook for hanging from nails, pipes, etc., freeing both hands. Test leads store in case and remain plugged into tester jacks while flap is closed keeping your 310 or 310-C ready for instant use. Soft shock absorbent lining. **$8.40**

Model 369 Handsome black cowhide leather carrying case for Model 310. Trouser belt slips through loop on back of the case for out-of-the-way carrying. **$3.20**

Model 379 as above, large enough for 310-10 in combination. Has pocket for 101. **$6.00**

Model 369-T Neckstrap Carrying Case for Model 310. **$7.70**

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TRIPLETT TEST EQUIPMENT

POPULAR EASY TO USE BASIC V-O-M
MODEL 630



MODEL 630

1. One selector switch minimizes chance of incorrect settings and burnouts. **2.** 5,000 ohms per volt AC sensitivity; 20,000 DC. **3.** Four resistance ranges to 100 megohms.
Accuracy ±2% DC, ±3% AC.

RANGES

DC Volts: 0-3-12-60-300-1,200-6,000 at 20,000 ohms per volt. **AC Volts:** 0-3-12-60-300-1,200-6,000 at 5,000 ohms per volt. **Ohms:** 0-1,000-10,000. **Megohms:** 0-1-100. **DC Microamperes:** 0-60 at 250 millivolts. **DC Milliamperes:** 0-1.2-12-120 at 250 millivolts. **DC Amperes:** 0-12. **DB:** −20 to +77 (600 ohm line at 1 MW). **Output Volts:** 0-3-12-60-300-1,200; jack with condenser in series with AC ranges. **Usable** with frequencies through 500 Kc.
Case: Molded, fully insulated, 3-7/32" x 5½" x 7½".
Complete with leads, alligator clips, rubber feet, batteries and instruction manual. Shipping wt. 5 lbs. **$49.50**

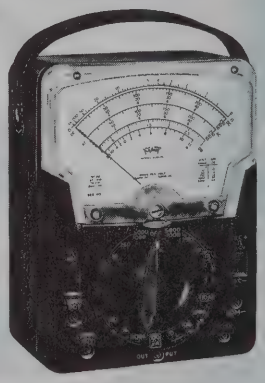
ULTRA-ACCURATE BASIC V-O-M
MODEL 630-A



MODEL 630-A

A laboratory type V-O-M with ½% resistors for greater accuracy.
Long mirror scale to eliminate parallax. Other features as described for Model 630, above. Accuracy 1½% DC, 3% AC. Complete with leads, alligator clips, rubber feet, batteries and instruction manual. Shipping wt. 5 lbs. **$59.50**
Ranges same as Model 630.

FOR THOSE WHO PREFER DIFFERENT RANGES
MODEL 630-PL



MODEL 630-PL

1. One selector switch minimizes chance of incorrect settings and burnouts. **2.** Polarity reversing switch. **3.** Usable with frequencies through 500 Kc. Instant-vision, wider spread scales; streamlined case, handsome modern design.
High Sensitivity: 5,000 ohms per volt AC; 20,000 ohms per volt DC.
Accuracy ±2% DC, ±3% AC.

RANGES

DC Volts: 0-2.5-10-50-250-1,000-5,000—at 20,000 ohms/volt. 0-0.25 at 100 microamperes. **AC Volts:** 0-3-10-50-250-1,000-5,000 — at 5,000 ohms/volt. **Decibels:** −20 to +75; in 6 ranges; "0" DB at 1 MW on 600 ohm line. **DC Microamperes:** 0-100—at 250 millivolts. **DC Milliamperes:** 0-10-100-1,000 — at 250 millivolts. **DC Amperes:** 0-10—at 250 millivolts. **Ohms:** 0-1,000-10,000—(4.4-44 at center scale). **Megohms:** 0-1-100—(4,400-440,000 at center scale). **Output V (AC):** 0-3-10-50-250-1,000—at 5,000 ohms/volt, jack with condenser in series with AC ranges.
Case: Molded, fully insulated, 3-11/32" x 5½" x 7½".
Complete with leads, alligator clips, rubber feet, batteries and instruction manual. Shipping wt. 5 lbs. **$49.50**

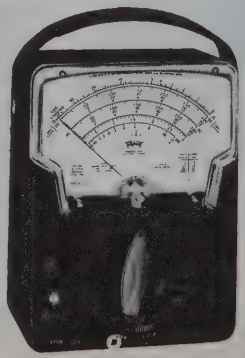
ULTRA-ACCURATE V-O-M
MODEL 630-APL



MODEL 630-APL

Laboratory type V-O-M featuring ½% resistors and more accurate movement for greater accuracy. Long MIRROR scales to eliminate parallax in reading. RANGES and other features same as Model 630-PL above. Accuracy 1½% DC, 3% AC. Complete with leads, alligator clips, rubber feet, batteries and instruction manual. Shipping wt. 5 lbs. **$59.50**

COMBINATION V-O-M AND VTVM
MODEL 631



MODEL 631

1. One selector switch. **2.** Complete V-O-M in combination with battery operated VTVM. **3.** 11 megohm input to VTVM.
Two fundamental units at the price of a single tester; sensitivity of the 1.2 volt (VTVM) range is equal to over nine million ohms per volt. Usable with frequencies through 500 Kc.
Accuracy 3% DC, 4% AC, VTVM 4%.

V-O-M RANGES

DC Volts: 0-3-12-60-300-1,200 (20,000 ohms per volt). **AC Volts:** 0-3-12-60-300-1,200 (5,000 ohms per volt). **Ohms:** 0-1,500-15,000. **Megohms:** 0-1.5-150. **DC Microamperes:** 0-60 at 250 MV. **DC Milliamperes:** 0-1.2-12-120-1,200 at 250 MV. **DC Amperes:** 0-12 at 250 MV. **DB:** −20 to +63. (600 ohm line at 1 MW). **Output Volts:** 0-3-12-60-300-1,200; jack with condenser in series with AC ranges.

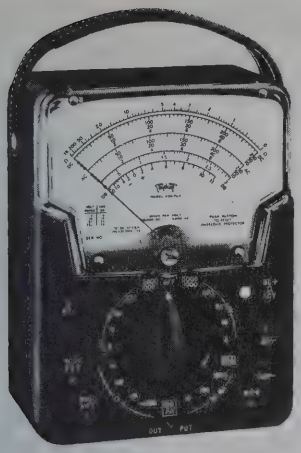
VTVM RANGES

DC Volts: 0-1.2-6-30-120.
Case: Molded, fully insulated, 3-11/32" x 5½" x 7½". **$69.50**

Prices Are Suggested U.S.A. User Net Subject To Change. Specifications Subject To Revision.

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TRIPLETT TEST EQUIPMENT



MODEL 630-PLK

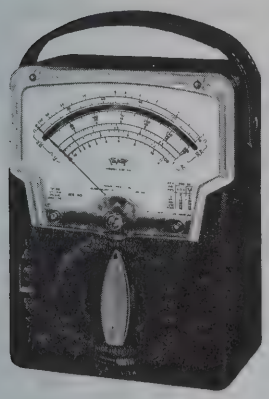
BURN-OUT PROOF V-O-M
MODEL 630-PLK

1. Comprehensive overload protection. **2.** One selector switch minimizes chance of incorrect settings. **3.** Polarity reversing switch.
Transistorized electronic switching circuit (patent pending) guards against accidental burn-outs. Accuracy ±2% on DC, ±3% AC. High sensitivity: 20,000 O/V DC; 5,000 O/V AC. Shipping weight 5 lbs.

RANGES

DC Volts: 0-2.5-10-50-250-1,000-5,000 at 20,000 ohms/volt; 0-0.25 at 100 microamperes. **AC Volts:** 0-3-10-50-250-1,000-5,000 at 5,000 ohms/volt. **Decibels:** −20 to +75; "0" DB at 1 MW on 600 ohm line. **DC Microamperes:** 0-100 at 250 Mv. **DC Milliamperes:** 0-10-100-1,000 at 250 Mv. **DC Amperes:** 0-10 at 250 Mv. **Ohms:** 0-1,000-10,000 (4.4-44 at center scale). **Megohms:** 0-1-100 (4,400-440,000 at center scale). **Output Volts (AC):** 0-3-10-50-250-1,000 at 5,000 ohms/volt; jack with condenser in series with AC ranges.

Case: Molded, fully insulated; 3-11/32" x 5½" x 7½".
Complete with leads, alligator clips, rubber feet, batteries and instruction manual. Shipping wt. 5 lbs. **$79.50**



MODEL 630-NA

WIDEST COVERAGE LABORATORY V-O-M
MODEL 630-NA

1. One selector switch. **2.** 70 ranges: 1½% DC accuracy on meter; with mirror scale and overload protection. **3.** Temperature and frequency compensation.
Meter has special diode protection against the most severe overloads. A fuse affords protection to resistors in the ohmmeter circuit (especially the X1 setting) should too high a voltage be applied. Accuracy 1½% DC, 3% AC.

RANGES

DC Volts: 0-.6-3-12-60-300-1,200-6,000 at 10,000 ohms per volt. 0-.3-1.5-6-30-150-600-3,000 at 20,000 ohms per volt. 0-0.120 at 60 microamperes. **AC Volts:** 0-3-12-60-300-1,200-6,000 at 5,000 ohms per volt. 0-1.5-6-30-150-600-3,000 at 10,000 ohms per volt. **Ohms:** 0-1K-10K-100K. **Megohms:** 0-1-10-100. **DC Microamperes:** 0-120 at 240 millivolts. 0-60-600 at 120 millivolts.
DC Milliamperes: 0-1.2-12-120-1,200 at 240 millivolts. 0-6-60-600 at 120 millivolts. **DC Amperes:** 0-12 at 240 millivolts. 0-6 at 120 millivolts. **DB:** −20 to +77 (600 ohm line at 1 MW). **Output Volts:** 0-3-12-60-300-1,200; jack with condenser in series with AC ranges.

Case: Molded, 3-11/32" x 5½" x 7½". Shipping wt. 5 lbs. **$79.50**



630-M

V-O-M SENSITIVITY EQUAL TO A VTVM
MODEL 630-M

1. 1,000,000 ohms per volt DC for greater accuracy on high resistance circuits. 20,000 ohms per volt AC. **2.** Suspension Meter Movement. No pivots, no bearings, no hairsprings; no rolling friction. Extremely rugged. Greater sensitivity and repeatability. **3.** 62 ranges. Temperature and frequency compensated.
Accuracy 1½% DC, 3% AC.

RANGES

DC Volts: 0.0.6-3-12-60-300 at 500,000 Ohms/Volt. 0-0.3-1.5-6-30-150 at 1,000,000 Ohms/Volt. 0-1200 at 125,000 Ohms/Volt. 0-600 at 250,000 Ohms/Volt. **AC Volts:** 0-3-12-60-300-1200 at 10,000 Ohms/Volt. 0-1.5-6-30-150-600 at 20,000 Ohms/Volt. **DB:** −20 to +63 in 10 ranges. **DC Microamperes:** 0-60-600 at 150 Mv. 0-1-120 at 300 Mv. **DC Milliamperes:** 0-6-60-600 at 150 Mv. 0-1.2-12-120-1200 at 300 Mv. **DC Amperes:** 0-6 at 150 Mv. 0-12 at 300 Mv. **Ohms:** 0-1K-10K-100K (4.4-44-440 at center scale). **Megohms:** 0-1-10-100 (4400-44,000-440,000 Ohms center scale). **Output:** Condenser in series with AC Volt ranges.
Case: Molded, fully insulated, 3-11/32" x 5½" x 7½". Shipping wt. 5 lbs. **$199.50**



630-NS

EXTRA HIGH SENSITIVITY V-O-M
MODEL 630-NS

1. 200,000 ohms per volt DC for greater accuracy on high resistance circuits. 20,000 ohms per volt AC. **2.** Suspension Meter Movement. No pivots, no bearings, no hairsprings; no rolling friction. Extremely rugged. Greater sensitivity and repeatability. **3.** 62 ranges. Temperature and frequency compensated.
Accuracy 1½% DC, 3% AC.

RANGES

DC Volts: 0-0.6-3-12-60-300-1200 at 100,000 Ohms/Volt. 0-0.3-1.5-6-30-150-600 at 200,000 Ohms/Volt. 0-0.150 at 60 microamperes. **AC Volts:** 0-3-12-60-300-1200 at 10,000 Ohms/Volt. 0-1.5-6-30-150-600 at 20,000 Ohms/Volt. **DB:** −20 to +63 in 10 ranges. **DC Microamperes:** 0-60-600 at 150 Mv. 0-5-120 at 300 Mv. **DC Milliamperes:** 0-6-60-600 at 150 Mv. 0-1.2-12-120-1200 at 300 Mv. **DC Amperes:** 0-6 at 150 Mv. 0-12 at 300 Mv. **Ohms:** 0-1K-10K-100K (4.4-44-440 at center scale). **Megohms:** 0-1-10-100 (4400-44,000-440,000 Ohms center scale). **Output:** Condenser in series with AC Volt ranges.

Case: Molded, fully insulated, 3-11/32" x 5½" x 7½". Shipping wt. 5 lbs. **$99.50**

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TRIPLETT TEST EQUIPMENT

ELECTRONIC VOLT-OHMMETER
MODEL 850



1. Long 7" easy-to-read scale. **2.** .5 DCV range for transistor circuits. **3.** High stability — meter connected in cathode circuit of 12AU7. Accurate within ±3% on AC and DC. Ohms-accurate within ±3% of full scale based on DC scale. Line voltage: 115 VAC 50-60 cycles. Ground type plug. Shipping wt. 7 lbs.

RANGES

Eight DC Volts Ranges: 0-.5-1.5-5-15-50-150-500-1500. **Seven AC RMS Volts Ranges:** 0-1.5-5-15-50-150-500-1500. **Seven Peak-to-Peak Volts Ranges:** 0-4-14-40-140-400-1400-4000. **Seven Resistance Ranges:** 0-1000-10,000-100,000-1 Meg-10 Meg-100 Megohms-1000 Megohms. **Frequency Range:** 15 CPS to 3 MC; (Up to 250 MC with accessory diode probe available extra). **Input Impedance:** DC Volts 11 Megohms; AC volts minimum of .83 Megohms. **Case:** Molded black case completely insulated. 7⅝" x 6 7/16" x 3¾". **$79.50**

MODEL 850

EXTRA LONG SCALE LABORATORY V-O-M
MODEL 800



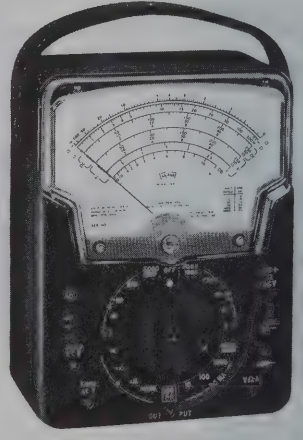
1. 70 ranges with 1½% DC accuracy including DC Polarity Reversing Switch. **2.** Overload protection of meter, used, temperature and frequency compensated. **3.** Long (7") Mirror Scale—easily read. DUAL SENSITIVITY provides extra ranges, DC Volts at 20,000 and 10,000 ohms per volt, AC at 10,000 and 5,000 ohms per volt. 3% AC ACCURACY to 1200 volts; mirror and knife-edge pointer to eliminate parallax. Shipping wt. 7 lbs.

RANGES

DC Volts: 0-0.6-3-12-60-300-1200-6000 at 10,000 Ohms per Volt. 0-0.3-1.5-6-30-150-600-3000 at 20,000 Ohms per Volt. 0-.120 at 60 Microamperes. **AC Volts:** 0-3-12-60-300-1200-6000 at 5,000 Ohms per Volt. 0-1.5-6-30-150-600-3000 at 10,000 Ohms per Volt. **DB:** —30 to +70 in 12 ranges. **DC Microamperes:** 0-60-600 at 120 MV. 0-120 at 240 MV. **DC Milliamperes:** 0-6-60-600 at 120 MV. 0-1.2-12-120-1200 at 240 MV. **DC Amperes:** 0-6 at 120 MV. 0-12 at 240 MV. **Ohms:** 0-1K-10K-100K (4.4-40-440 at center scale). **Megohms:** 0-1-10-100 (4400-44,000-440,000 Ohms center scale). **Output:** Condenser in series with AC volt ranges.
Case: Heavy, molded black case completely insulated, 7½" x 6¼" x 3⅞". **$99.50**

MODEL 800

SUPER SAFE V-O-M FOR TRANSISTOR CIRCUITS
MODEL 630-L



1. 2 low power ohms ranges (X1 and X10). 140 Mv. ohmmeter circuit voltage. Important for semiconductor circuitry. **2.** One selector switch minimizes chance of incorrect settings. **3.** Exclusive shielded Bar-Ring Movement. Mercury battery. Wired circuits. Accuracy ±2% on DC; ±3% on AC. Sensitivity: 20,000 O/V DC, 5,000 O/V AC. Modified full wave bridge circuit for AC measurements. Tester usable with frequencies through 500 Kc. Polarity reversing switch.

RANGES

DC Volts: 0-2.5-10-50-250-1,000-5,000 at 20,000 ohms/volt. **AC Volts:** 0-3-10-50-250-1,000-5,000 at 5,000 ohms per volt. **Decibels:** —20 to +75; "0" DB at 1 Mw on 600 ohm line. **DC Microamperes:** 0-100 at 120 millivolts. **DC Milliamperes:** 0-10-100-1,000 at 120 millivolts. **DC Amperes:** 0-10 at 120 millivolts. **Ohms:** 0-1,000-10,000 (13-130 at center scale). **Megohms:** 0-1-100 (4,400-440,000 at center scale). **Output V (AC):** 0-3-10-50-250-1,000 at 5,000 ohms/volt, jack with condenser in series with AC ranges.
Case: Black molded, fully insulated; 3-11/32" x 5½" x 7½".
Complete with leads, alligator clips, rubber feet, batteries and instruction manual. Shipping. wt. 5 lbs. **$54.50**

MODEL 630-L

RUGGED TOOL BOX V-O-M
MODEL 666-R



1. One selector switch. **2.** Three resistance ranges to 3 megohms. **3.** Five volt ranges to 5,000 AC & DC volts. Hand-size—the ideal tester for electrical maintenance. Recessed range knob enables tester to fit in tool kit. AC rectifier precalibrated unit for easy replacement. Banana jacks at top of panel lessen possibility of leads falling over the meter dial. Accuracy 3% DC, 4% AC.

RANGES

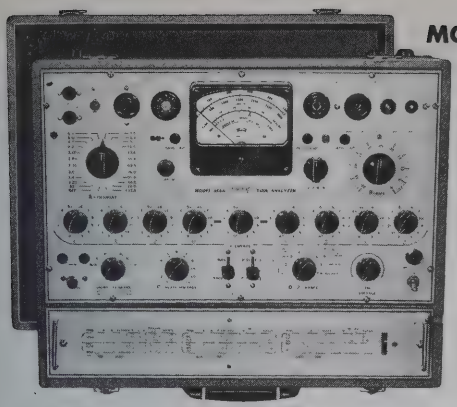
DC Volts: 0-10-50-250-1,000-5,000 at 1,000 ohms per volt. **AC Volts:** 0-10-50-250-1,000-5,000 at 1,000 ohms per volt. **Ohms:** 0-3,000-300,000. **Megohms:** 0-3. **DC Milliamperes:** 0-10-100 at 250 MV. **DC Amperes:** 0-1 at 250 MV.
Case: Black molded, streamlined, completely insulated. Handy pocket size, 3 1/16" x 5⅞" x 2 9/16". Complete with leads, alligator clips, batteries and instruction manual. Shipping wt. 3 lbs. **$34.50**

MODEL 666-R

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MODEL 3444

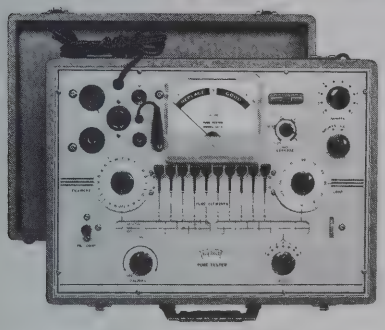


TRIPLETT TEST EQUIPMENT

TRUE DYNAMIC MUTUAL CONDUCTANCE TUBE ANALYZER
MODEL 3444

The only tube tester under $1,000 that is simple and fast to operate and **1.** Will measure tube characteristics at KNOWN readable potentials. **2.** Provides readings to: (a) Plot the tube characteristic curves. (b) Measure grid current at known potentials. (c) Compare cutoff characteristics of dual tubes. **3.** Reads directly in micromhos with a self checking Gm circuit. CHECKS PLATE current cutoff. CHECKS GAS under actual operating conditions (measures to approximately one UA of gas current). CHECKS RECTIFIERS under load. CHECKS THYRATRON firing voltage and grid current. (To 50 ma. anode current.) CHECKS DUAL section tubes with only one lever movement. PROVIDES SHORTS and leakage measurements from 0-10 megohms using a filtered DC supply of 85 volts. PROVIDES cut off measurements on voltage amplifiers. **RECESSED SOCKET SAVERS** (under-the-panel-mounted) are easily removable for replacement.

Case: Wood, gray leatherette covered, $15\frac{3}{16}$" x $18\frac{13}{16}$" x $7\frac{3}{4}$". Shipping wt. 30 lbs. **$349.50**

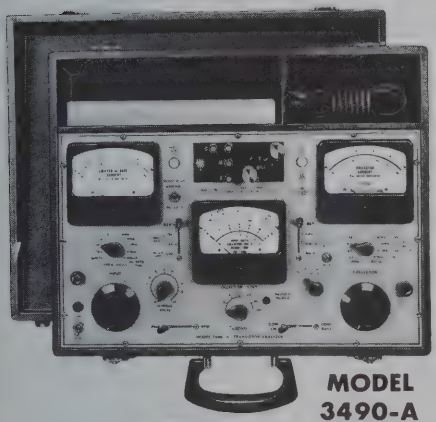


MODEL 3414

FASTER, FLEXIBLE TUBE TESTER
MODEL 3414

1. Rapid easy testing-setups can be made while tube is heating. **2.** Input filament continuity test. **3.** Modified circuit for better correlation on Gm. Rejects burned out tubes instantly without waiting for the filaments to heat. NEON INDICATOR SHORTS TEST, new, fast and accurate. Full range filament voltages—0.65 to 117 in 23 steps. Improved lever switching for complete control of each tube element. Quick-change roll chart. TV picture tube test by means of adapter (available extra, see below) without removing tube from receiver. Large, clearview meter has three-color GOOD-?-BAD scale.

COUNTER-PORTABLE TYPE CASE. Ultra-professional appearance; Wood, dark gray leatherette covered; $15\frac{7}{8}$" x $11\frac{1}{2}$" x $6\frac{1}{2}$". Hinged removable cover. Chrome hardware and feet. Etched panel. Shipping wt. 17 lbs. **$109.50**



MODEL 3490-A

NEW TRANSISTOR ANALYZER FOR COMPLETE TRANSISTOR ANALYSES
MODEL 3490-A

1. Reads leakage current down to 100 **nanoamperes** on a 6ua full scale meter. **2.** Analyzes both power & signal types at specified voltages and currents. **3.** Continuous current—up to 30 amp collector—and voltage control for transistor supply electrodes. Test DC Beta, AC Beta at 1KC, leakages (Ico, Ieo, Iceo), Alpha, Reach Through Voltage, Saturation Voltage, Floating Potential. The 3490-A's flexibility allows plotting of transistor characteristic curves along with setting up nearly any type of transistor test. Input bias reversing switch gives added versatility. THREE INDEPENDENT Power Supplies. Model 3490-A also tests diodes, recifiers, zener diodes, SCR, etc.

RANGES

Input Current (Emitter or Base): 0-100-300 ua, 0-1-3-10-30 Ma, 0-.1-.3-1-3 Amp. **Collector Current:** 0-300 ua, 0-1-3-10-30 Ma, 0-.1-.3-1-3-10-30 Amp. **Iceo, Ico (Icbo):** 0-6 Ma, 0-600 ua, 0-60 ua, 0-6 ua. **Collector Voltage:** 0-120 V, 0-60 V, 0-30 V, 0-12 V, 0-6 V, 0-3 V, 0-1.2 V. **Emitter or Base Voltage:** 0-12 V, 0-1.2 V. **Tetrode:** 0-10 V Calibrated Control. Shipping wt.: 30 lbs. **Case:** Wood, gray leatherette covered, $18\frac{3}{16}$" x $15\frac{7}{16}$" x 8" with removable cover, and sloping etched aluminum panel. **$399.50**



MODEL 2590

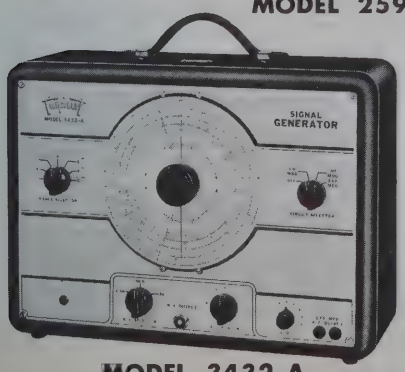
TRANSISTOR TESTER
MODEL 2590

1. Tests Beta amplification, ICBO, ICEO for both power and signal type transistors. Tests for shorts and leakage. Checks leakage and forward currents on diodes. **2.** Simulated operating test conditions. **3.** Simple and straightforward operation. No roll chart or special data needed, always up-to-date.

Case: $11\frac{5}{8}$" x $8\frac{5}{8}$" x $5\frac{1}{8}$".

FIVE SCALES

0-1 MA for Signal Transistor ICEO
0-100 MA for Power Transistor ICEO
0-500 Microamp for Signal Transistor ICBO
0-1 MA for Power Transistor ICBO
5-100 Beta Range; also shows on GOOD—?—BAD scale
Shipping wt. 9 lbs. Power—115 volts, 50-60 cycle AC. **$59.50**



MODEL 3432-A

SIGNAL GENERATOR
MODEL 3432-A

Complete frequency coverage 160 KC to 10 MC fundamental with seven bands (220 MC harmonics). R.F. circuits are double shielded with copper steel shields. Large easily read etched aluminum dial. Cathode follower output provides good stability by acting as a buffer to the oscillator. 400 cycle audio frequency with variable control for 0-100 per cent modulation.

Band	
A	160-370 KC
B	360-735 KC
C	715-1875 KC
D	1825-4950 KC
E	4.85-13 MC
F	12.5-35 MC
G	34-110 MC
G (Harmonics)	68-220 MC

Case: Metal with black baked enamel suede finish, $15\frac{11}{32}$" x $11\frac{1}{32}$" x $6\frac{1}{4}$". Black leather strap handle, rubber feet. Shipping wt. 30 lbs. **$119.50**

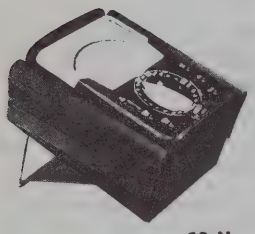
All Prices Are Suggested U.S.A. User Net Subject To Change. Specifications Subject To Revision.

1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625
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TRIPLETT TEST EQUIPMENT

Leather Cases

For Testers 630, 630-A, 630-PL, 630-APL, 630-NA, 630-NS, 631, 630-L, 630-PLK



639-N

MODEL 639-N

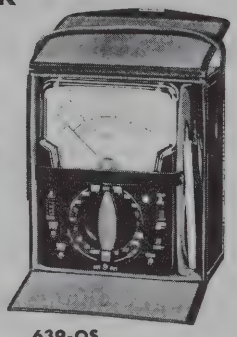
Model 639-N black cowhide leather carrying case. Center-cover flaps snap back allowing full view of scales and permitting complete access to instrument without removal from case. Tester stand is included at no extra cost. **$9.90**



639/639-P

Model 639 black leather case. **$9.90**

Model 639-P black cowhide leather carrying case lined with ⅜" sponge rubber. **$14.90**



639-OS

Model 639-OS — Black leather case, has built-in stand on back. Flaps open to permit use of tester in case. Compartment for accessories. **$12.10**

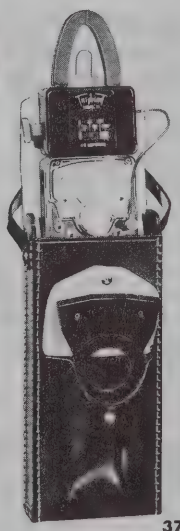
For Models 310-310-C





LEATHER CASE 369-S

Model 369-S leather carrying case for use with Models 310 or 310-C. Has removable leather shoulder strap. The case flap folds back to form a handy stand. Contains a retractable hook for hanging from nails, pipes, etc., freeing both hands. Test leads store in case and remain plugged into tester jacks while flap is closed keeping your 310 or 310-C ready for instant use. Soft shock absorbent lining. **$8.40**



379

Model 379 as above, large enough for 310-10 in combination. Has pocket for 101. **$6.00**

Model 369-T Neckstrap Carrying Case for Model 310. **$7.70**

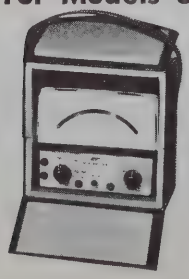


369

369-T

Model 369 — Handsome black cowhide leather carrying case for Model 310. Trouser belt slips through loop on back of the case for out-of-the-way carrying. **$3.20**

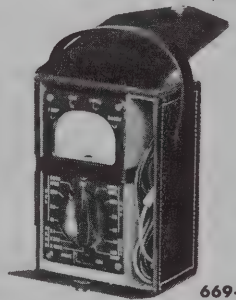
For Models 800 and 850



859-OP

Model 859-OP

Black Leather Carrying Case, lined with sponge rubber. Flaps open to permit use of tester without removal from case. Built-in stand on back. Model 859-OP. **$19.50**



669-OS

For Model 666-R

Model 669 black leather case for 666-R. (Similar to Model 639 above). **$6.90**

Model 669-OS black leather case for Model 666-R. Tester can be used in the case. Built-in stand on back. **$7.40**

ACCESSORIES

EXTERNAL SHUNTS—For 630, 630-A

Pt. T-91-247 30 Amperes (Plug-in) .....$ 9.90
Pt. T-91-248 60 Amperes (Portable) $13.20
Pt. T-91-255 120 Amperes (Portable) $13.20

EXTERNAL SHUNTS FOR 631

Pt. T-91-248 60 Amperes (Portable) $13.20
Pt. T-91-255 120 Amperes (Portable) $13.20

EXTERNAL SHUNTS FOR 630-NA, 630-NA-RM, 800

Pt. T-91-429
0-15-30 Amperes (Plug-in) $13.50
Pt. T-91-430
0-30-60 Amperes (Portable) $18.00
Pt. T-91-431
0-60-120 Amperes (Portable) $18.00

EXTERNAL SHUNTS FOR 666-R, 630-PL, 630-APL, 630-PLK

Pt. T-91-243 25 Amperes (Plug-in) .....$ 9.90
Pt. T-91-244 50 Amperes (Portable) $13.20
Pt. T-91-191 100 Amperes (Portable) $13.20

REPLACEMENT LEADS

LEADS for Models 630, 630-A, 630-PL, 630-APL, 630-PLK, 631, 666-R, 630-NA & 630-NS Rubber (T-79-127). Net **$2.10**

REPLACEMENT LEADS for Models 310, 310-C, T-79A-153. Suggested U. S. A. User Net **$2.10**
REPLACEMENT AC-DC — Ohms probe for Model 850 Pt. #T-79-192, lead assembly. **$6.10**

RF PROBE FOR 631

With this probe and Model 631 RF measurements can be made up to 20 volts at 250 MC. Pt. T-79-145. **$7.70**

HIGH VOLTAGE PROBES

Completely insulated polystyrene test probe with guard-type handle. Probe is 11¾" long, with 48" hi-voltage wire lead with banana plug at tester end.

MODELS 630, 630-A, and 631

Part T-79-70....0-30,000 D.C. Volts $14.50
Part T-79-71....0-30,000 A.C. Volts $14.50
Part T-79-152....0-60,000 A.C. Volts $14.50

Models 630-PL, 630-APL, 630-PLK, 630-L

Part T-79-83....0-10,000 D.C. Volts $14.50
Part T-79-130....0-25,000 D.C. Volts $14.50
Part T-79-166....0-25,000 A.C. Volts $14.50

Models 630-NA, 630-NA-RM & 800

Part T-79-152....0-30,000 D.C. Volts $14.50
Part T-79-71....0-30,000 A.C. Volts $14.50
Part T-79-152....0-60,000 A.C. Volts $14.50

For Model 630-NS

Part T-79-229....0- 6,000 D.C. Volts $14.50
Part T-79-230....0- 6,000 A.C. Volts $14.50
Part T-79-152....0-30,000 A.C. Volts $14.50

TESTER STAND

Metal stand holds Model 630, 630-A, 630-PL, 630-APL, 630-NA, 630-NS, 630-PLK, 631 or 630-L tester in approximately a 45° angle; will enable you to make easier readings.

STAND ONLY—Pt. T-255-A-35
Shipping wt. 1 lb. **$1.00**

PROBES FOR MODELS 310 & 310-C

PROBE EXTENSIONS for 310 & 310-C leads, insulated, 3 inches long. Pt. 11254A (Red) Pt. 11255A (Black) **$1.00**
MINIATURE ALLIGATOR CLIPS for use with 310-310-C Probe extensions. Pt. 2451-57 (black), 2451-58 (red). **$.40**

PROBES FOR MODEL 850

Auxiliary Diode Probe for voltages to 20 volts with frequencies to 250 MC. Pt. T-79-215. **$7.50**
High Voltage Probe for DC Voltages to 50 KV. Pt. 79-196. **$20.50**

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All Prices Are Suggested U.S.A. User Net Subject To Change. Specifications Subject To Revision. (Slightly Higher West of Rockies and in Canada)

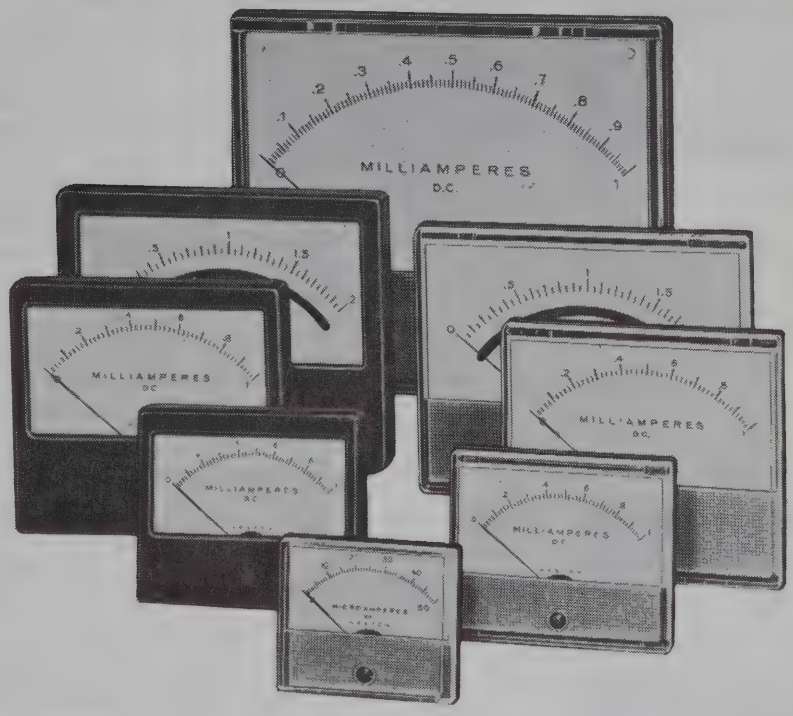
WESTON INSTRUMENTS, INC.

MODEL 1900 PANEL INSTRUMENT SERIES

GENERAL

The 1900 Series is an integrated line of a-c and d-c panel instruments, providing a carefully selected choice of sizes, case styles, accuracies, pointers, scales and ranges. Particular attention has been paid to designing instruments that will present an overall appearance of harmony, even when random sizes are mounted side by side. Mounting bezels provide three types of mounting—recess, flush and conventional.

One of the many features of this new Weston series is the method of construction which provides quick interchangeability of fronts and easy access for adjustment or service, if ever required. From their spring-backed jewels to their unique fastening clips, the 1900 Series incorporate the fine workmanship and quality that has always been associated with Weston.



SPECIFICATIONS

2½" SIZE	Function & Mechanism	Accuracy (Full scale value)	Scale Length (100° arc)	Pointer	Type Scale	Case Front
Model 1921	D-C CORMAG®	2%	2.3"	Lance	Plain	Plastic/Bakelite
Model 1922	A-C Rect. CORMAG®	3%**	2.3"	Lance	Plain	Plastic/Bakelite
Model 1924	A-C Iron Vane	2%	2.3"	Lance	Plain	Plastic/Bakelite
3½" SIZE						
Model 1931	D-C CORMAG®	2%	2.7"	Lance	Plain	Plastic/Bakelite
Model 1932	A-C Rect. CORMAG®	3%**	2.7"	Lance	Plain	Plastic/Bakelite
Model 1934	A-C Iron Vane	2%	2.7"	Lance	Plain	Plastic/Bakelite
Model 1936	D-C Ext. Mag.	2%	2.7"	Lance	Plain	Plastic/Bakelite
4½" SIZE						
Model 1941	D-C CORMAG®	2%*	3.9"	Lance	Plain	Plastic/Bakelite
Mode! 1942	A-C Rect. CORMAG®	2%**	3.9"	Lance	Plain	Plastic/Bakelite
Model 1944	A-C Iron Vane	2%	3.9"	Lance	Plain	Plastic/Bakelite
Model 1946	D-C Ext. Mag.	1%	3.9"	Knife-edge	Mirrored	Plastic/Bakelite
5½" SIZE						
Model 1951	D-C CORMAG®	2%*	4.7"	Lance	Plain	Plastic/Bakelite
Model 1954	A-C Iron Vane	2%	4.7"	Lance	Plain	Plastic/Bakelite
Model 1956	D-C Ext. Mag.	1%	4.7"	Knife-edge	Mirrored	Plastic/Bakelite
7½" SIZE						
Model 1971	D-C CORMAG®	1%†	7.2"	Lance	Plain	Plastic
Model 1976	D-C Ext. Mag.	1%†	7.2"	Lance	Plain	Plastic

*1% when knife-edge pointer and mirrored scale is specified.
**on sine wave 60 cycle source at normal room temperature of 25 C.
†½% with knife-edge pointer and mirrored scale on special order ONLY.

NOTE: If Models 1924, 34, 36, 44, 46, 54, 56 and 76 are used on steel panels, order should specify panel thickness to assure proper adjustment.

PRICE SUBJECT TO CHANGE WITHOUT NOTICE

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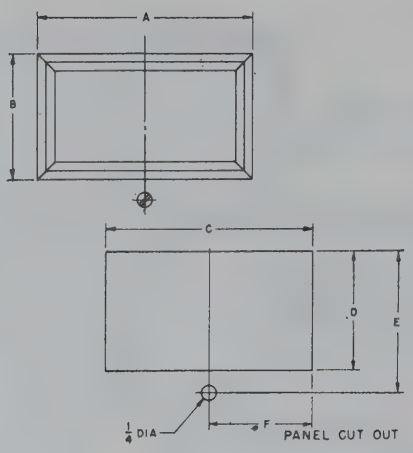
WESTON INSTRUMENTS, INC.

THREE TYPES OF MOUNTINGS

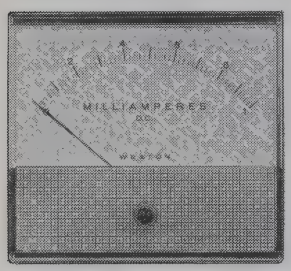


RECESS (Plastic front only)

Only the scale is visible since meter is mounted behind the panel . . . half bezel fits into window.



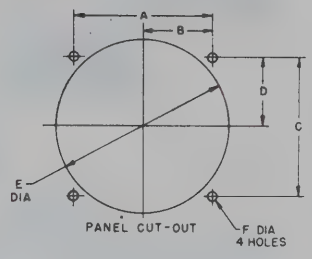
MODEL	A	B	C	D	E	F
1921 1922 1924	3.120	1.720	3.000	$1\frac{19}{32}$	2.070	$1\frac{1}{2}$
1931 1932 1934 1936	3.860	2.265	$3\frac{23}{32}$	$2\frac{5}{32}$	2.550	$1\frac{55}{64}$
1941 1942 1944 1946	4.960	2.900	$4\frac{13}{16}$	$2\frac{3}{4}$	3.290	$2\frac{13}{32}$
1951 1952 1954 1956	6.060	3.300	$5\frac{7}{8}$	$3\frac{5}{32}$	3.950	$2\frac{15}{16}$

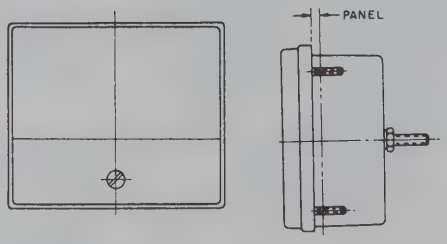




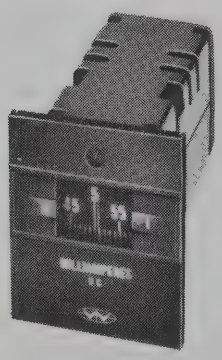
CONVENTIONAL

Use same dimensions, whether you choose a meter with taut band or pivot and jewel movement.





MODEL	A	B	C	D	E	F
1921 1922 1924	1.880	.940	1.880	.940	2.220 DIA	.125 DIA
1931 1932 1934 1936	2.250	1.125	2.250	1.125	2.820 DIA	.125 DIA
1941 1942 1944 1946	4.000	2.000	3.560	2.020	2.820 DIA	.154 DIA
1951 1954 1956	5.250	2.625	3.000	2.150	2.820 DIA	.154 DIA
1971 1972	6.000	3.000	4.500	3.500	3.560 DIA	.156 DIA



Model 1209 Projected Moving Scale Panel Meter

REVOLUTIONARY NEW PANEL METER

- — Puts 8 inches of scale into this little 2½ inch front
- — Retains all the advantages of an 8-inch meter
- — Eliminates parallax
- — Self-illuminated scale
- — Requires only 8 sq. in. panel space
- — Self-shielded mechanism

(See types available from stock listed on following pages)

WESTON 1900 T SERIES WITH TAUT BAND MECHANISMS

Available in Bakelite or static-free clear plastic cases in sizes from 3½" through 7½".

Taut-Band instruments are completely interchangeable with the 1900 Series with conventional pivot and jewel movements.

Taut-Band mechanisms are free from friction and inertia. They offer outstanding sensitivity, reliability and uniformity from zero to full scale.

Your distributor can provide complete information on Weston 1900 T Series with Taut Band Mechanisms listed on the following pages. →

PRICE SUBJECT TO CHANGE WITHOUT NOTICE

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WESTON INSTRUMENTS, INC.

MODEL 1900 STOCK PANEL INSTRUMENT SERIES

D-C (Cormag) MODELS 1921 - 2½"/1931, 1931T - 3½"/1941, 1941T - 4½"/1951*, 1951T - 5½"/1971, 1971T** - 7½"/ Pivot & Jewel; 1209 PMS Taut Band**

	Nominal Resistance Ohms					PRICES						
Ranges	1921 1931	1931T 1%	1941	1941T 1951T 1%	1209	1921	1931	1931T 1%	1941	1941T 1%	1951T 1%	1209
μa												
50	4800	1950	2500	950	5700	$18.60	19.1	$21.00	$20.10	$22.10	—	$61.50
100	1225	538	2500	950	1160	17.40	17.90	19.70	18.80	26.75	$31.80	60.00
200	600	440	850	350	231	16.60	17.10	18.80	18.10	26.30	30.80	58.50
500	240	—	240	40	73	15.60	16.10	—	17.10	24.80	—	57.00
25-0-25	—	—	2500	—	—	—	—	—	20.10	—	—	—
50-0-50	1225	—	2500	—	1160	17.40	17.90	—	18.80	—	—	60.00
100-0-100	600	—	850	—	—	16.60	17.10	—	18.10	—	—	—
500-0-500	88	—	115	—	—	14.60	15.10	—	16.10	—	—	—
ma‡												
1	88	29	115	12.5	21	$14.60	$15.10	$16.60	$16.10	$23.90	$27.80	$55.50
2	45	—	16	4.9	8.6	14.60	15.10	—	16.10	23.90	—	55.50
3	—	—	16	—	—	—	—	—	16.10	—	—	—
5	8.5	3.3	11	3.0	3.96	14.60	15.10	16.60	16.10	23.90	—	55.50
10	2.5	—	2.7	2.4	2.3	14.60	15.10	—	16.10	23.90	27.80	55.50
15	2.3	—	2.7	—	—	14.60	—	—	16.10	—	—	—
20	2.2	—	2.7	2.4	2.2	14.60	15.10	—	16.10	23.90	—	55.50
50	2.0	1.0	2.0	2.0	2.0	14.60	15.10	16.60	16.10	23.90	—	57.00
100	1.0	—	1.0	1.0	—	14.60	15.10	—	16.10	23.90	27.80	—
200	.5	2.5	.5	.5	—	14.60	15.10	16.60	16.10	23.90	—	—
300	.33	—	.33	—	—	14.60	15.10	—	16.10	—	—	—
500	.2	1.0	.2	.2	—	14.60	15.10	16.60	16.10	23.90	—	—
amps†												
1	↓	↓	↓	↓	—	$14.60	$15.10	$16.60	$16.10	$23.90	$28.60	—
2	↓	↓	↓	↓	—	14.60	15.10	16.60	16.10	23.90	—	—
5	↓	↓	↓	↓	—	14.60	15.10	16.60	16.10	23.90	—	—
10	↓	↓	↓	↓	—	14.60	15.10	16.60	16.10	23.90	—	—
20	Approx.	Approx.	Approx.	Approx.	—	14.60	15.10	16.60	16.10	23.90	28.60	—
25	50mv	50mv	50mv	50mv	—	—	15.10	—	16.10	23.90	—	—
30	drop	drop	drop	drop	—	14.60	15.10	16.60	16.10	23.90	—	—
100	↑	↑	↑	↑	—	14.60	15.10	—	16.10	—	—	—
200	↑	↑	↑	↑	—	14.60	15.10	—	16.10	—	—	—
300	↑	↑	↑	↑	—	—	15.10	—	—	—	—	—
500	↑	↑	↑	↑	—	—	15.10	—	—	—	—	—
volts												
50mv	↓	↓	↓	↓	—5Ω—	—	—	—	—	—	—	$57.00
1	↓	↓	↓	↓	↓	—	—	—	—	—	—	58.00
2	↓	↓	↓	↓	↓	$15.40	$15.90	$17.40	$16.90	$24.65	—	58.00
5	↓	↓	↓	↓	↓	15.40	15.90	—	16.90	24.65	$28.60	58.00
10	↓	↓	↓	↓	↓	15.40	15.90	—	16.90	24.65	—	58.00
15	1000	1000	1000	1000	1000	15.40	15.90	17.40	16.90	24.65	28.60	—
20	Ohms	Ohms	Ohms	Ohms	Ohms	—	—	—	—	—	—	58.00
25	Per	Per	Per	Per	Per	15.40	15.90	—	16.90	24.65	—	—
30	Volt	Volt	Volt	Volt	Volt	15.40	15.90	17.40	16.90	24.65	28.60	—
50	↑	↑	↑	↑	↑	15.40	15.90	17.40	16.90	24.65	28.60	58.00
100	↑	↑	↑	↑	↑	15.40	15.90	17.40	16.90	24.65	—	58.00
150	↑	↑	↑	↑	↑	15.40	15.90	17.40	16.90	24.65	28.60	—
200	↑	↑	↑	↑	↑	15.40	—	—	16.90	24.65	—	58.00
300	↑	↑	↑	↑	↑	15.40	15.90	17.40	16.90	24.65	—	—
500	↑	↑	↑	↑	↑	15.40	15.90	17.40	16.90	24.65	—	58.00

50 mv range to be used with external shunts and .065 ohm leads.

‡ NOTE: Range of 50 ma. and up are shunted and have a drop of approximately 50 mv on Model 1971, and 100 mv on Models 1921, 1931, 1941 and 1951.

† For ranges above 30 amps use 50 mv instrument, with required external shunt.

D-C (External magnet) MODELS 1936T - 3½"/1946T - 4½"/Taut Band — 1946/1947 Pivot Jewel - 7½"

	Nominal Resistance Ohms				PRICES			
Ranges	1936T	1946 1%	1946T	1976	1936T	1946	1946T	1976
μa								
5	13500	—	13500	—	$32.00	—	$35.00	—
10	5300	—	5300	—	28.00	—	31.00	—
20	2100	5400	2100	—	24.00	$24.00	27.00	—
50	—	2180	870	2720	—	30.50	33.60	$56.40*
100	—	870	320	—	—	29.80	32.70	—

* Available with knife-edge pointer and ½% accuracy at $63.70 list.

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WESTON INSTRUMENTS, INC.

MODEL 1900 STOCK PANEL INSTRUMENT SERIES

RECTIFIER TYPE A-C (Cormag) — MODELS 1922 - 2½"/1932 - 3½"/1942 - 4½"

	Nominal Resistance Ohms			PRICES		
Ranges	1922	1932	1942	1922	1932	1942
μa						
100	4000	—	—	$22.50	—	—
200	2000	—	—	22.50	—	—
500	800	—	—	22.50	—	—
ma						
5	475	—	—	$19.30	—	—
volts						
10	1000	—	1000	$20.20	—	$21.70
15	ohms	—	ohms	—	—	21.70
100	per	—	per	20.20	—	—
150	volt	—	volt	20.20	—	21.70
300		—		20.20	—	—

A-C (Iron Vane) MODELS 1924 - 2½"/1934 - 3½"/1944 - 4½"/1954 - 5½"

	Approximate Resistance Ohms	PRICES			
Ranges	1924 1934 1944 1945	1924	1934	1944	1945
ma					
10	2550	$14.35	$14.65	$15.40	—
50	100	14.35	14.65	15.40	—
100	25	14.35	14.65	15.40	—
200	6.33	14.35	14.65	—	—
250	4.0	14.35	14.65	—	—
500	1.0	14.35	14.65	15.40	—
amps					
1	.25	$14.35	$14.65	$15.40	—
2	.062	14.35	14.65	—	—
3	.025	14.35	14.65	15.40	—
5	.016	14.35	14.65	15.40	—
10	.0045	14.35	14.65	15.40	—
15	.0025	14.35	14.65	—	—
20	.0011	14.35	14.65	15.40	—
25	.0011	14.35	14.65	15.40	—
30	.00056	14.35	14.65	15.40	—
50	.00027	14.35	14.65	15.40	—
100*	.016	14.35	14.65	15.40	—
200*	.016	14.35	14.65	—	—
300*	.016	14.35	14.65	—	—

* 5 ampere range for use with current transformer.

	Approximate Resistance Ohms			PRICES			
	1924 1934	1944	1954	1924	1934	1944	1954
volts							
3	6	10.5	10.5	$15.00	$15.40	$16.15	$20.70
5	—	—	—	—	—	16.15	—
7.5	37	35	—	15.00	15.40	16.15	—
8	—	—	—	—	—	—	—
10	66.5	66.5	—	15.00	15.40	16.15	—
15	150	143	143	15.00	15.40	16.15	20.70
25	500	500	—	15.00	15.40	16.15	—
30	600	560	560	15.00	—	16.15	20.70
50	1665	1665	—	15.00	15.40	16.15	—
75	3750	—	—	15.00	—	—	—
100	—	6700	—	—	—	16.15	—
130	—	—	—	—	—	—	—
150	15,000	14,300	14,300	15.00	15.40	16.15	20.70
300	60,000	56,000	56,000	15.00	15.40	16.15	20.70
500	100,000	93,500	—	15.00	—	16.15	—

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WESTON INSTRUMENTS, INC.

MODELS 201/301 PANEL INSTRUMENT SERIES

MODELS 201/301
D-C VOLTMETERS — 1000 OHMS PER VOLT

Range	Scale Div. 201	Scale Div. 301	Price 201	Price 301
1.5	30	75	$13.90	$14.90
3	30	60	13.90	14.90
5	25	50	13.90	14.90
8	40	40	13.90	14.90
10	20	50	13.90	14.90
15	30	75	13.90	14.90
25	30	75	13.90	14.90
30	30	60	13.90	14.90
50	25	50	13.90	14.90
100	20	50	13.90	14.90
150	30	75	13.90	14.90
200	40	40	14.40	15.40
250	25	50	14.40	15.40
300	30	60	14.40	15.40
500	25	50	14.90	15.40
1KV	—	50	——	19.80

MODELS 201/301 — D-C MILLIAMMETERS

Range	Scale Div. 201	Scale Div. 301	Approx. Resis. Ohms 201	Approx. Resis. Ohms 301	Price 201	Price 301
1	20	50	100	88	$13.40	$14.40
1.5	—	75	—	88	——	14.40
2	40	40	40	45	13.40	14.40
3	—	60	—	45	——	14.40
5	25	50	6	8	13.40	14.40
10	20	50	2.5	2.5	13.40	14.40
15	30	75	2.5	2.5	13.40	14.40
20	40	40	2.5	2.5	13.40	14.40
30	30	60	2.5	2.5	13.40	14.40
50	25	50	2	2	13.40	14.40
100	20	50	1	1	13.40	14.40
150	30	75	0.66	0.66	13.40	14.40
200	—	40	—	0.5	——	14.40
300	—	60	—	0.33	——	14.40
500	25	50	0.2	0.2	——	14.40
1-0-1	40	40	40	45	13.40	14.40
10-0-10	—	50	—	2.5	13.40	14.40
50-0-50	—	50	—	2.0	——	14.40
100-0-100	40	40	1	1	13.40	14.40

MODELS 201/301 — D-C AMMETERS

Range	Scale Div. 201	Scale Div. 301	Price 201	Price 301
1	20	50	$13.40	$14.40
1.5	30	75	13.40	14.40
2	40	40	13.40	14.40
3	30	60	13.40	14.40
5	25	50	13.40	14.40
10	20	50	13.40	14.40
15	30	75	14.40	15.40
20	20	40	14.40	15.40
30	30	60	14.40	15.40
50	25	50	14.40	15.40
75*	—	—	——	14.40
100*	—	—	13.20	14.40
150*	—	—	——	14.40
200*	—	—	13.20	14.40
300*	—	—	13.20	14.40
500*	—	—	13.20	14.40
10-0-10	—	40	——	15.40
30-0-30	—	60	——	15.40
50-0-50	—	50	——	15.40

*50 mv range to be used with external shunts and .065 ohm leads.

MODELS 201/301—206*/306* D-C MICROAMMETERS

Range	Scale Div. 201/ 301/ 206	306	Approx. Resis. 201	206	301	306	Price 210	206	301	306
20	40	40	—	1480	5500	1480	$ —	$25.50	$23.70	$26.40
30	—	60	—	—	5500	—	—	—	22.50	25.50
50	25	50	4150	1175	4800	1175	19.30	23.40	20.30	23.40
100	20	50	870	660	1230	660	16.40	21.50	17.30	21.50
200	40	40	600	—	600	55	13.90	—	14.90	21.50
500	25	50	160	—	230	—	13.90	—	14.90	—
10-0-10	—	40	—	—	5500	—	—	—	23.70	—
25-0-25	—	50	4150	—	4800	—	19.30	—	20.30	—
50-0-50	20	50	870	—	1230	—	16.40	—	17.30	—
100-0-100	40	40	600	—	600	—	13.90	—	14.90	—
500-0-500	20	50	100	—	88	—	13.40	—	14.40	—

*External magnet type, unshielded

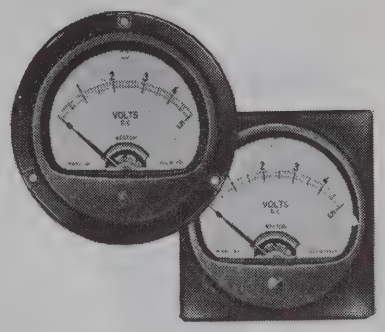
MODEL 302 RECTIFIER TYPE A-C VOLTMETER

1000 ohms per volt

Range	Scale Div. 302	Price 302
1*	50	$21.30
5	50	20.70
10	50	20.70
15	75	20.70
30	60	20.70
50	50	20.70
100	50	20.70
150	75	20.70
300	60	21.30

*2000 ohms per volt

- 2½" and 3½" Sizes
- 2% Accuracy Full Scale
- Spring Back Jewels
- Long Term Stability
- Self Shielded Mechanism
- Cases Sealed Against Dust
- Minimum Power Consumption
- Minimum Response Time
- Note: Specify Round or Square Case



MODEL 302 RECTIFIER TYPE A-C MILLIAMMETER

Range	Scale Div. 302	Approx. Resis. 302	Price 302
1	50	470	$20.70
2	40	270	20.70
5	50	150	20.70
0.5	50	1030	20.70

MODELS 202/302
RECTIFIER TYPE A-C MICROAMMETERS

Range	Scale Div. 302	Approx. Resis. 302	Price 302
100	50	3400	$24.40
200	—	2400	——
300	—	2000	——
500	50	1030	20.70

MODELS 204/304—A-C VOLTMETERS—25-125 CYCLES

Range	Scale Div.	OHMS/V 204	OHMS/V 304	Price 204	Price 304
1.5	30	—	3	—	$14.10
3	30	—	15	—	14.10
5	50	26	26	13.35	14.10
10	50	100	100	13.35	14.10
15	30	250	250	13.35	14.10
30	30	—	790	—	14.10
50	50	2124	2124	13.35	14.10
75	25	5074	5074	13.35	14.10
100	50	10065	10065	13.35	14.10
130	26	—	13065	—	14.45
150	30	20295	20295	13.75	14.45
300	30	81550	81550	13.75	14.45
500	50	—	131550	—	17.50

MODELS 204/304—A-C AMMETER—25-500 CYCLES

Range	Amps Scale 204	Amps Scale 304	Scale Div. 204	Scale Div. 304	Approx. Resis. 204	Approx. Resis. 304	Price 204	Price 304
1	1	1	50	50	0.130	0.130	$12.95	$13.75
1.5	—	1.5	—	30	—	0.055	—	13.75
2	2	2	40	40	0.026	0.026	12.95	13.75
3	3	3	30	30	0.013	0.013	12.95	13.75
5	5	5	50	50	0.005	0.005	12.95	13.75
10	10	10	50	50	0.0014	0.0014	12.95	13.75
15	15	15	30	30	0.0015	0.0015	12.95	13.75
20	20	20	40	40	0.0005	0.0005	12.95	13.75
30	30	30	30	30	0.0004	0.0004	12.95	13.75
50	50	50	50	50	0.0002	0.0002	12.95	13.75
100*	—	100	—	50	—	0.005	——	13.75
200*	—	200	—	40	—	0.005	——	13.75
300*	—	300	—	30	—	0.005	——	13.75

*For use with Current Transformer. Above prices do not include Transformer.

MODELS 204/304 — A-C MILLIAMMETERS

Range	Scale Div. 204	Scale Div. 304	Approx. Resis. 204	Approx. Resis. 304	Price 204	Price 304
50	—	50	—	34	—	$13.75
100	—	50	—	8.5	—	13.75
500	50	50	0.42	0.42	12.95	13.75

MODELS 208/308 — THERMO-AMMETERS

Range	Scale Div. 208	Scale Div. 308	Price 208	Price 308
1	—	50	—	$29.30
3	—	60	—	29.30
5	25	50	$28.40	$29.30
8	—	40	—	29.30
10	—	50	—	29.30
15	—	60	—	29.30

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WESTON INSTRUMENTS, INC.

WESTON MULTI-RANGE ANALYZERS

MODEL 80 SERIES



— ACCURACY — High accuracy capabilities — see individual specifications.

— READABILITY — console type presentation provides optimum readability of scale and control deck, whether sitting or standing, large 5½" meter.

— RELIABILITY — Sound, basic design, with hi-impact ABS plastic cases, spring backed jewels, precision components.

— PARALLAX CORRECTION — Unique refractive-type antiparallax scale for "on the mark" readings.

SPECIFICATIONS

MODEL 80 — VOLT-OHM-MILLIAMMETER

Accuracy—1% DC, 1.5% AC Ohmmeter—1% of Linear Scale 1 & 5 KV—2% DC and 2.5% AC.
Scale Length—4.9".
Ranges—DC Volts—0.25/1/2.5/10/25/50/100/250/1 KV/5 KV @ 20,000Ω/volt.
AC Volts—2.5/10/50/250/500/1 KV/5 KV/@ 5,000 Ω/volt.
DC Current—50μa/1/10/100 ma/1 and 10 amps.
Ohmmeter—Five Ranges; 2 k to 20 meg, full scale; 20 to 200 k center scale.
DB Scale—10 to + 10 DB.
Price—Cat. No. 80-9008001 s **$79.50**

MODEL 81 — DC VOLTMETER

Accuracy—1% except 2.0% on the 1000 volt range.
Scale—50 divisions.
Ranges—0.25/1/2.5/5/10/25/50/100/250/1000.
Sensitivity—20,000 ohms per volt.
Price—Cat. No. 81-9008102 s **$68.50**

MODEL 81 — D-C MILLIAMMETER/AMMETER

Accuracy—1 %.
Scale—100 and 60 divisions. NOTE: The 10 ma range has a drop of 50 mv so that the meter can be used with external shunts.
Ranges—10/30/100/300 milliamperes, 1/3/10 amperes.
Price—Cat. No. 81-9008101 s **$68.50**

MODEL 81 — D-C MICROAMMETER/MILLIAMMETER

Accuracy—1%.
Scale—100 and 60 divisions.
Resistance—2500/1390/475/164/50/16.6/5 ohms.
Ranges—.1/.3/1/3/10/30/100 milliamperes.
Price—Cat. No. 81-90081003 s **$68.50**

MODEL 82 — A-C VOLTMETER

Accuracy—1.5% The combination of resistors and selected germaninum diodes results in temperature and frequency error usually less than 1% for a change of 10°C and frequencies from 25 to 2000 cycles. Ranges below 250V are useable to 15kc.

MODEL 82 — A-C VOLTMETER (Cont.)

Scale—50 divisions.
Ranges—2.5/10/50/250/500/1000 volts.
Sensitivity—5000 ohms per volt.
Type—Rectifier Type.
Price—Cat. No. 82-9008201 s **$71.50**

MODEL 82 — A-C MILLIAMMETER/AMMETER

Accuracy—2% from 60 to 400 cps; from 25 to 1000 cps the frequency error is 1.5%. The instrument is useable to 5 kc.
Loss—From approximately 0.5 va for the low ranges up to 1.5 va for the 5 ampere range at 60 cps.
Scale—100 divisions.
Ranges—50/100/200/500 milliamperes, 1/2/5 amperes.
Type—Transformer—rectifier.
Price—Cat. No. 82-9008202 s **$71.50**

MODELS 432 - 433 - 931 PORTABLE INSTRUMENTS

MATCHED A-C AND D-C PORTABLE INSTRUMENTS

MODEL 433—A-C INSTRUMENTS

Scale Length 4.04"—Accuracy within ¾ of 1% — Movable Iron Type — Shielded Case Size 5⅛" x 5¼" x 3¼"—Weight 2½ lbs.—Hand Calibrated Mirror Scales Bakelite Case with Carrying Strap.
Note: These instruments are calibrated for use in a horizontal position.

A-C VOLTMETERS

Made with single, double and triple ranges. For use on frequencies from 25 to 125 cycles.

Range	Price
30/15	$103.00
150/75	103.00
300/150	103.00
600/300/150	121.00
750/300/150	121.00

A-C MILLIAMMETERS

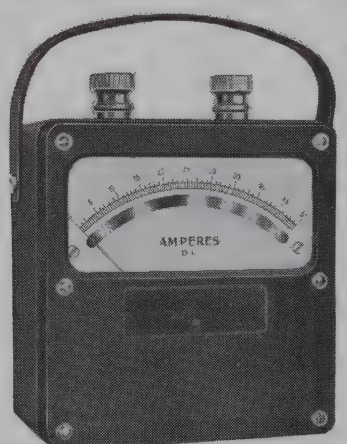
Made in single and double ranges only, for use on frequencies from 25 to 500 cycles.

Range	Price
30, 500	$ 95.00
150/75	108.00
500/250	108.00

A-C AMMETERS

Made in single, double and triple ranges for use on frequencies from 25 to 500 cycles. All instruments have two binding posts; double and triple range instruments are provided with a range selector switch.

Range	Price
5	$ 96.00
50	96.00
10/5	110.00
10/5/1	151.00
50/20/5	151.00



MODEL 432—D-C AND SINGLE PHASE A-C WATTMETERS

Double voltage and single or double current ranges, self-contained up to 300 volts and 50 amperes, frequencies from 25 to 125 cycles.

Electrodynamometer Type

Accuracy ½ of 1%....Scale Length 4.04"
Case Size 5⅛" x 5¼" x 3¼" .....Wt. 3¼ lbs.

Normal Volts	Normal Amps	Price
150/75	1	$216.00
Double Current Ranges		
300/150	5/2.5	$239.00

MODEL 931—D-C INSTRUMENTS

Scale Length 4.04"—Accuracy within ½ of 1% Core Magnet Moving Coil Type. Case Size: 5⅛" x 5¼" x 3¼"—Weight 2 lbs. — Hand Calibrated Mirror Scales — Bakelite Case with Carrying Strap.

Note: These instruments are calibrated for use in a horizontal position.

D-C VOLTMETERS

Range	Price 1,000 Ohms Per Volt	Price 5,000 Ohms Per Volt
3/15/150	$109.00	$122.00
300/150/3	109.00	122.00
750/300/150	109.00	122.00

D-C AMMETERS

	Price
.1/1/10	$110.00
.05/.5/5	110.00
50/20/5	110.00

Self-contained up to 50 amperes inclusive, but can be supplied with external 50 mv shunts and 5 ft. leads.

D-C MILLIAMMETERS

Range	Price
1.5/15/150	$107.00
1500/150/15	107.00
15/1.5/.15	119.00

Single range, Milliammeters with ranges above can be supplied with external 50 mv shunts and 30 ma are shunted and have a drop of 50 mv ±5%.

D-C MICROAMMETERS

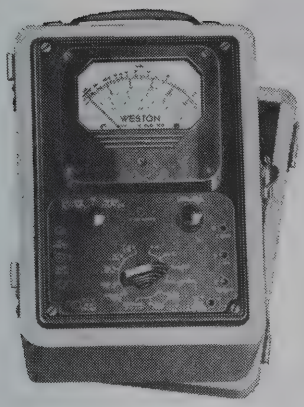
	High Resistance		Low Resistance	
Range	Approx. Res. Ohms	Price	Approx. Res. Ohms	Price
30	2300	$119.00	490	$122.00
100	2000	107.00	60	119.00
200	600	107.00	15	107.00

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WESTON INSTRUMENTS, INC.

MODEL 779 SUPER-SENSITIVE ANALYZER



Model 779 Type 1B
Price.....$194.25

ACCURACY: A-C within 3%; D-C within 2% to 250 volts; 3% on 1,000 volt range.

Size: 6⅜" x 9⅛" x 4⅞" (162 x 232 x 124 mm)

Approx. Wt.: 6 lbs. (2.72 kgs.)

A compact 26 range ultra-sensitive analyzer with five d-c voltage ranges at a sensitivity of either 1,000 or 20,000 ohms per volt. A-C temperature compensated; precision resistors throughout. Supplied in a rugged solid oak case with a removable cover and convenient carrying handle. Test leads are provided.

RANGES

Volts D-C	Volts A-C	Current D-C Only	Decibels	Ohms
2.5	2.5	.1 Ma	— 14 to + 2*	0-3000
10	10	1 Ma	— 2 to + 14*	0-30,000
50	50	10 Ma	+ 12 to + 28*	0-300,000
250	250	50 Ma	+ 26 to + 42†	0-30 Meg
1000	1000	250 Ma	+ 38 to + 54††	
		1 Amp	(6 milliwatts,	
		10 Amp	500 ohms, zero level)	

*Substantially flat to 10,000 cycles.
†Substantially flat to 3,000 cycles. ††Substantially flat to 1,000 cycles.

MODEL 799 INSULATION TESTER



Model 799

ACCURACY: Within ⅛" of scale length.

SCALE: 2.375" (60.3 mm)

Size: 3³⁄₁₆" x 5¼" x 5" (86 x 133 x 127 mm)

Approx. Wt.: 3.8 lbs. (1.7 kgs.)

For leakage measurements up to 10,000 megohms at low voltage at a maximum test potential 50 volts. Test leads, tubes, batteries and oak case are supplied.

RANGES: 0-10,000 megohms (Logarithmic scale)

Price.....$108.75

MARK II ANALYZER

The new thin-line Mark II is a highly sensitive and extremely rugged volt-ohm-milliammeter designed for a wide range of accurate test measurements in the electronic field.

Famous CORMAG® mechanism protects the instrument against false readings due to magnetic disturbances. Electrostatic shielding assures accurate measurements at high d-c voltages. Fuses in the low ohmmeter circuits prevent burnout if voltages are mistakenly applied. Interchangeable parts eliminate all need for parts selection in the event replacements are ever necessary. The breakproof case will withstand dropping and thus eliminate the major source of repair and maintenance costs.

FEATURES

- Modern Thin-Line Design
- Spring Back Jewels for Maximum Shock Resistance
- Fused Resistance Ranges
- Transit Switch Position to Dampen Movement During Transportation
- Fully Insulated Crack-proof Case
- Single Selector Knob for all Functions and Ranges
- Wide Angle Scale for Maximum Visibility
- Precision Components —No Parts Selection Required
- Single Board Etched Wiring Circuit for Easy Maintenance
- Static Shielded for Accurate High Voltage Measurement
- 4-Way Combination Tilt Stand and Protective Cover Available

SPECIFICATIONS

Accuracy: 2%, d-c; 3%, a-c & 4000 v d-c.

Scale Length: 4.63"

Ranges:
- D-C Volts: 1.6, 8, 40, 160, 400, 800, 4000 . . . at 20,000 ohms/volt.
- A-C Volts: 1.6, 8, 40, 160, 400, 1600 . . . at 1,000 ohms/volt.
- DB Range: —15 db to +54 db (in six ranges).
- D-C Amperes: 8
- D-C Milliamperes: 1.6, 8, 80, 800.
- D-C Microamperes: 80.

Ohms Range	Center Scale	Full Scale
R x 1	25	1,000
R x 10	250	10,000
R x 100	2,500	100,000
R x 1,000	25,000	1 megohms
R x 10,000	250,000	10 megohms

Case: Black impact resistant plastic, with carrying strap.

Panel: Black impact resistant plastic with engraved white markings.

Size: 6.25" x 7.50" x 3.0".

Approx. Weight: 2.5 lbs.

Ohms: Five decade ranges: 1K to 10 meg full scale; 25 ohms to 250K center scale



Model 980 Mark II

Price.....$53.50

Combination protective front cover and tilt stand $5.50

Eveready leather carrying case—Model 9959—Part No. 249350.....$9.75

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WESTON INSTRUMENTS, INC.

Model 749
Miniature Clamp Volt-Ammeter



Light weight and rugged pocket-size instrument for quick easy servicing. Has self-shielded core magnet mechanism with spring backed jewels, and shatter-proof Plexiglas window. Only one scale for all ranges and functions. Jaws take up to 1" round, or 1¾" x ⅜" rectangular conductors. Furnished with test leads in scuff proof case.

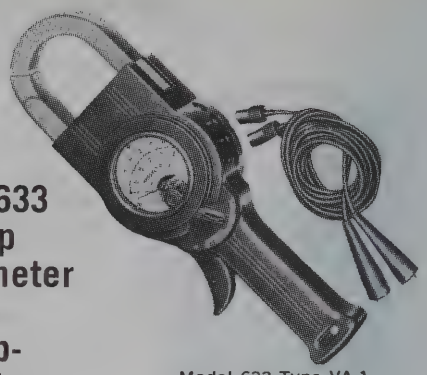
Plug-In Adapter available for making both current and voltage measurements . . . has female receptacles on both sides for plugging in load without disturbing circuit being tested . . . convenient for lead insertion for voltage checks . . . serves as 10 to 1 divider for low current measurements.

RATED ACCURACY: (Model 749) ±3% full scale deflection.

RANGES: Current 300/150/60/30/15/6 amperes a-c.
Voltage 600/300/150 volts a-c.

Model 749—$51.50 complete Plug-In Adapter—$5.25

Model 633
Clamp Volt-Ammeter and Clamp-Ammeter



Model 633 Type VA-1

	Price
Model 633 Type VA-1 (Incl. Potential Leads)—1000/250/100/25/10 amperes a-c 700/350/175 volts a-c	$141.50
Model 633 Type A-3—2000/1000/500/250/100/50 amperes a-c	133.50
Model 9958, 50 foot Extension Cable, Plug & Receptacle for Model 633 Type A-3	79.25
Leather Carrying Case (Model 633 Types VA-1, A-3)	13.50
Leather Carrying Case (Model 9958—Cable, Plug and Receptacle)	22.50

NOTE—Model 633 instruments may be used for continuous duty up to 500 amperes.

Approximate Dimensions and Weights

Model 633 Types VA-1, A-3	15⅝"x4⅜"x2½" 3¾ lbs.
Leather Carrying Case (Types VA-1, A-3)	14½"x5½"x3⅝" 2¼ lbs.
Model 9958, 50 Foot Extension Cable, Plug & Receptacle	4¼ lbs.
Leather Carrying Case (Model 9958—Cable, Plug & Receptacle)	14"x8½"x3¾" 4¼ lbs.

Model 614 — Foot-Candle Meters

Size: 7⅜" x 3⅜" x 2¼" Scale Length: 2.36"
Weight: 1 lb. 13 ozs.

This unit is ideal for general commercial lighting surveys where wide ranges of light values exxist. Completely self-contained, no outside power or batteries being required. Available for checking two different light situations.

†VISCOR filtered, 0-60/120/600 foot-candles, for visual correction for color ..... Price $160.00

†VISCOR and Cosine correction filtered, 0-100/250/500 foot-candles for visual correction for color and direction correction.
Price $164.00



Model 614

Model 703 — Sightmeters

Size: 4⅝" x 2⅝" x 1⅜" Scale Length: 1.57"
±75% of full scale accuracy

This pocket sized meter is ideal for checking illumination levels at work stations. It is available for checking three different light situations. Leather case available ..... Price $3.25

Unfiltered, Type 3A, 0-75 foot-candles. ..... Price $52.00

†VISCOR filtered, Type 6A, 0-75 foot-candles for visual response correction for color ..... Price $65.00

†VISCOR and Cosine correction filters Type 7, 0-100 foot-candles for visual response correction for color and direction correction ..... Price $69.00

Model 9924 Multiplier Disc fits Type 3A and Type 6A and multiplies scale readings by 10 ..... Price $2.20

†VISCOR—A registered trademark.



Model 703

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WESTON INSTRUMENTS, INC.

MODELS 901/904/905 PORTABLE INSTRUMENTS

¼ - ½% ACCURACY

Size: 7½" x 7¼" x 3⅝" **Scale Length: 5½"**

D-C 901, ¼% Accuracy, Self Shielded Permanent Magnet Moving Coil Type

A-C 904, ½% Accuracy, Movable Iron Type

These modern style instruments are used for general testing and for checking other meters in daily use in industry where easy reading and high shielding are desired. Long 5½" hand calibrated mirror scales combined with knife-edge pointers eliminate reading errors. Leather carrying cases are available, specify instrument model and range—Price $24.50.



Model 901

D-C VOLTMETER (7 RANGE)—Model 901

(5000 ohms per volt)

Range (Volts)	Price
750/300/150/75/30/15/3	$197.00

D-C AMMETER—Model 901

Range (Amperes)	Price
50 mv/20/5/2	$179.00

D-C MILLIAMMETERS (7 RANGE)—Model 901

Range (Ma)	Approx. Res. Ohms	Price
1000/500/200/100/50/20/10	.049/.099/.244/.475/.9/1.88/2.5	$186.00
100/50/20/10/5/2/1	1.49/2.96/7.28/14.1/26.4/52.5/60	186.00

A-C VOLTMETER—Model 904

Range (Volts)	Approx. Res. Ohms	Price
750/300/150*	3400/13,600/6,800	$174.00
750/300/150/75/ 30/15/7.5/3**	117,500/18,400/5180/ 1145/182/46/11.1/1.76	267.00

†Other frequency ranges available. Prices on request.
*Frequency 25-125 cps.
**Frequency 50-125 cps, accuracy ½%; 125-450 cps, accuracy 1%.

A-C MILLIAMMETERS—Model 904

(Frequency 25 to 500 cycles)

Range (Ma)	Approx. Res. Ohms	Price
150/75	16/64	$191.00
300/150*	4/16	191.00

*Also stocked for 25-1000 cycles at $191.50.

A-C AMMETERS—Model 904

Range (Amperes)	Price
200/100/50/20/10/5/2**	$240.00
(Frequency 25 to 1000 cycles)	
50/20/10/5/2/1	233.00

**Frequency is 50-450 cps.

D-C AND SINGLE PHASE A-C WATTMETERS—Model 905

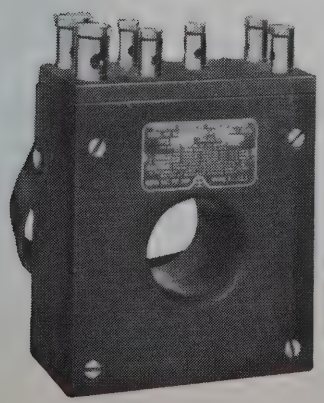
(Frequency 25-60 cycles)

Volts		Amperes		Watts		
Normal	Max.	Normal	Max.	High Range	Low Range	Price
200/100	300/150	25	50	5 KW	2.5 KW	$213.00
		5	10	1 KW	.5 KW	213.00
		10/5	20/10	2/1 KW	1/.5 KW	229.00
		5/2.5	10/5	1000/500	500/250	229.00

MODEL 461 CURRENT TRANSFORMERS

Size: 7.97" x 6.63" x 2.75" **Weight: Type 1—8 lbs.; Type 2—8.4 lbs.** **Core Opening: 2.12"**

Models 461 are used with A-C instruments as multipliers. Four self-contained primary ranges are brought out to binding posts. A secondary short circuiting switch is provided. Black bakelite case.



Range (Amps)	Type*	Price
800/400/200/ 100/50/20/10 Pri. to 5 Sec.	1	$127.00
800/400/200/ 100/50/20/10 Pri. to 5 Sec.	2	159.00
1000/500/250/ 100/50/25/10 Pri. to 5 Sec.	1	127.00
1000/500/250/ 100/50/25/10 Pri. to 5 Sec.	2	$159.00
500/250/100/ 50/25/10/5/ 2.5/1/0.5 Pri. to 5 Sec.	5	170.00

*Type 1—Primarily used for Ammeter applications.
Type 2—Primarily used for Wattmeter applications.
Type 5—Similar to Type 2 except for additional ranges.

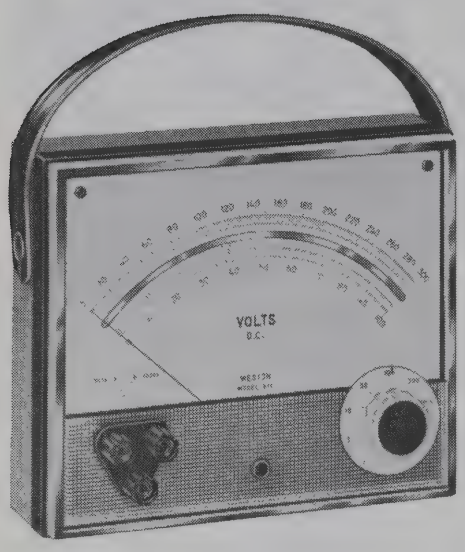
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WESTON INSTRUMENTS, INC.

MODELS 911/912 PORTABLE/PANEL INSTRUMENTS

Newly designed Weston Portable/Panel instruments now provide a combination of features never before offered in portable test equipment. Equally valuable in shop or field, these units feature high accuracy, long-scale length and modern styling. And, these instruments are designed for . . .
Panel or switchboard mounting without special adaptors or attachments! Simply remove meter from case and mount on panel . . . **all** hardware is supplied. The compact steel case may be attached behind panel when mechanical protection is required.



Model 911/912

SPECIFICATIONS

ACCURACY—±1% of full scale value on d-c voltmeters and milliammeters (±2% of full scale value on 300 and 1000 volts d-c).
±2% of full scale value on rectifier type a-c voltmeters 10 through 300 volts.
±3% of full scale value on rectifier type a-c voltmeters for 1000 volt range and 3 volt range above mid-scale.

COMPACT CASE—Modern designed instrument front of clear durable plastic provides unlimited natural illumination which, coupled with knife-edge pointers and mirror scale, provide unexcelled readability. The instrument is cased in heavy duty, grey finished steel. Handle can be swung under instrument so that it may be tilted for easy reading. Size: 7½" x 6½" x 2⅜".

COMPONENTS—Weston VAMISTOR® precision metal film resistors and other long-life components are used.
Adjustable resistors provide for easy calibration, if required.

BINDING POSTS—Screw type with captive heads can use all types of leads. Triangular base allows greater torque when securing leads. Wide ¾" spacing permits use of plug type leads. Cross hole located so fine wire is not cut.

SCALE—Large 7.2" mirror back with knife-edge pointer.

MECHANISM—CORMAG® self-shielding, with spring-backed jewels.

RANGE SWITCH—Large, sure-grip knob.

SIZE—7½" x 6½" x 2⅜".

RANGES AND PRICES

Model 911 D-C VOLTMETER (20,000 ohms per volt)
1000/300/100/30/10/3/1 Volts ..... Price

Model 911 D-C AMMETER
10/3/1 amps., 300/100/30/10 ma ..... Price

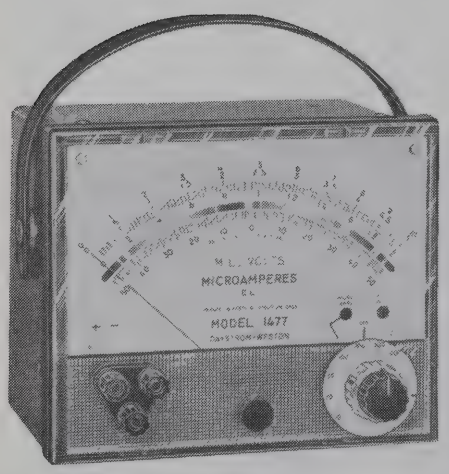
Model 911 D-C MILLIAMMETER
100/30/10/3/1/.3/.1 milliamperes ..... Price $68.50

Model 912 A-C VOLTMETER (5,000 ohms per volt)
1000/300/100/30/10/3 Volts ..... Price $78.50

Model 912 A-C AMMETER
5/2/1 (Amperes) 500/200/100/50 (ma) ..... Price $78.50

MODEL 1477 D-C MILLIVOLT/MICROAMMETER

Size: 7½" x 6½" x 4⅜" **Weight: 5½ lbs.** **Scale Length: 7.2"**



A portable test instrument designed to measure potentials and currents in the low-level millivolt and microampere ranges. No energy is drawn from the input circuit during steady-state operation. Only with an initial input application is there a small current taken during the transient period prior to steady state indication.

D-C Input Ranges
Millivolts 1/2/5/10/20/50/100/200/500/1000
Microamperes 10/20/50/100/200/500/1000

D-C Output
(Rear Terminals) ..... 1 MA DC for full scale input (into a load up to 5000 ohms)

Power Requirements ..... 120 volts AC, 50 or 60 cycles, 19 watts

Accuracy
Panel Indicator (Both Scales) ..... ±1% of full scale value on ranges of 2-1000 MV and 20-1000 μA
±2% of full scale value on ranges of 1 MV and 10 μA
1 MA Output ..... ±0.25% on ranges of 5-1000 MV and 50-1000 μA
±0.5% on ranges of 1-2 MV and 10-20 μA

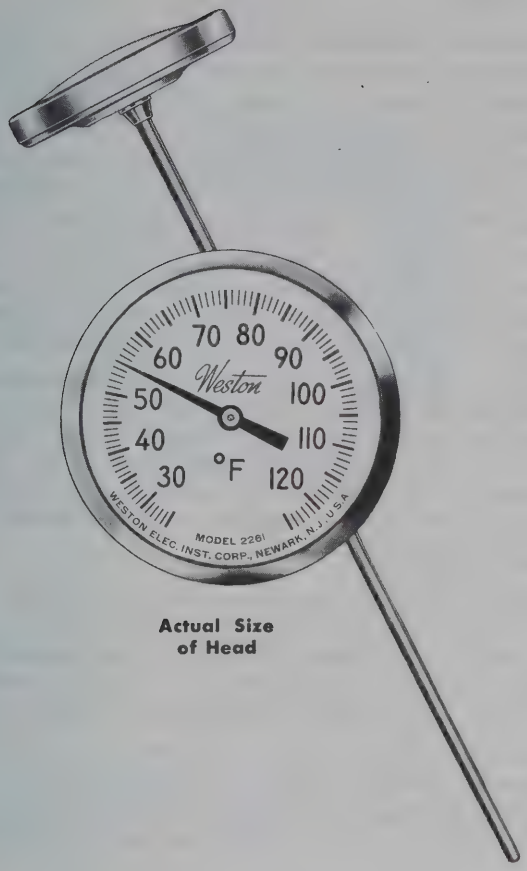
Operating Position ..... Vertical

Price $446.25

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TESTING THERMOMETER
MODEL 2261



Actual Size of Head

GENERAL: This thermometer, except for the scale glass, is completely encased in stainless steel, which is corrosion resistant to most acids and gases. For protection against corrosives that attack stainless steel, see page 3.

HEAD: 1¾" diameter, 18-8 stainless steel case and bezel. Metal scale plate with permanent black figures and markings. Pointer and scale designed for easy reading. Glass window is standard (See page 3 for plastic windows). If head is to be subjected to temperatures in excess of 300 F, state temperature when ordering.

SCALE LENGTH: 3.40 inches.

STEM: 18-8 Type 304 stainless steel, .142" diameter. Standard stem length is 8" including hub; other stem lengths up to 12" in ½" increments and from 12" to 24" in 1" increments available on special order. Stems from 12" to 24" long are .162" diameter.

IMMERSION: For correct temperature indications, immerse at least 2" in liquids and 4" in gases.

ACCURACY: Within ½ of 1% of the thermometer range (1 F per 200 F or ½ C per 100 C).

RANGE	°/DIV.	RANGE	°/DIV.	RANGE	°/DIV.
- 100 to 100 F	2	50 to 300 F	2	- 10 to 110 C	2
25 to 125 F	1	50 to 400 F	5		
- 40 to 160 F	2	50 to 500 F	5	0 to 100 C	1
0 to 180 F	2			0 to 150 C	2
		- 100 to 40 C	2	0 to 250 C	2
0 to 220 F	2	0 to 50 C	½		
50 to 250 F	2	- 50 to 100 C	2		

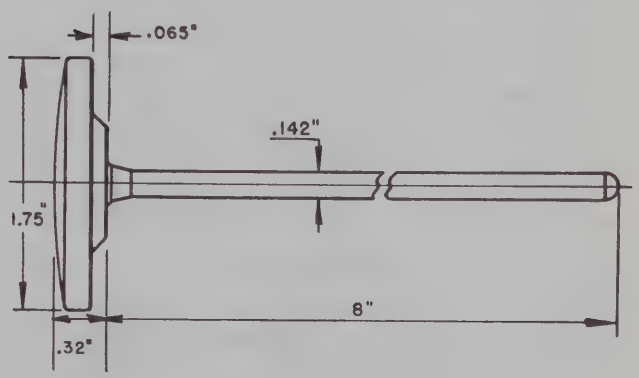
Spike Stem Thermometer—Model 2261

The addition of a spike stem makes the Model 2261 an ideal meat or food testing thermometer.

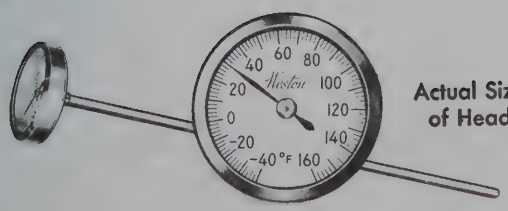
Can also be supplied for internal oven use where the entire thermometer would be used at continuous high temperatures. Available in following ranges.

Ranges	Stem Lengths	Ranges	Stem Lengths
-40 to 160 F	5" or 8"	0 to 220 F	5" or 8"
0 to 180 F	5" or 8"	25 to 125 F	5"

Approximate Weight ..... 1 oz.



MIDGET THERMOMETER — MODEL 2291



Actual Size of Head

Approximate Weight ..... 1 oz.

GENERAL: Where space is limited, this custom fabricated compact thermometer is ideal for fastening to equipment by means of its ¼-28x¼" long threaded hub, located at the stem-case junction.

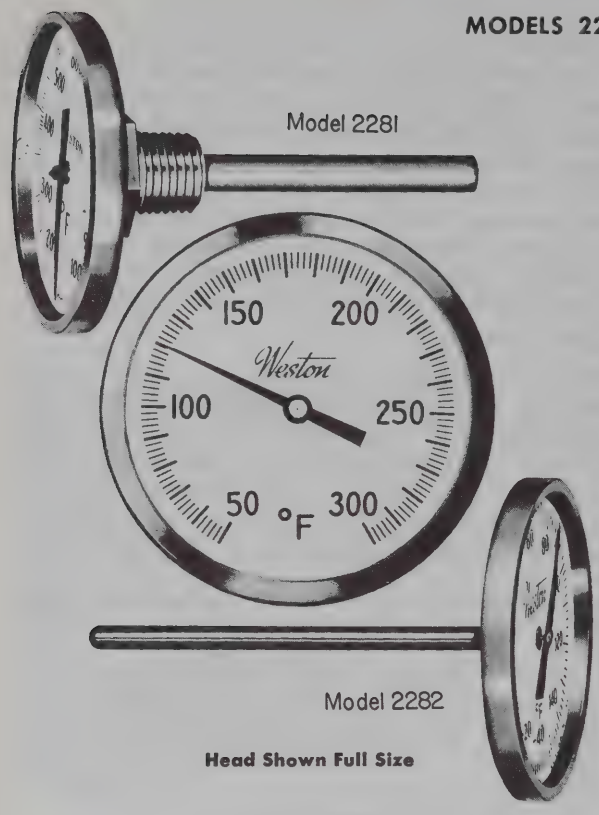
HEAD: 1" diameter, 18-8 stainless steel, case and bezel. Plastic window is standard. If head temperature exceeds 220 F a glass window can be supplied at a surcharge. Metal scale plate with permanent black figures and markings. Scale length 2.1".

WES-1

All Dimensions are Approximate.

GENERAL PURPOSE THERMOMETERS

MODELS 2281 AND 2282



Head Shown Full Size

GENERAL: The overall design of these thermometers makes them particularly adaptable for either testing or general industrial use where small size is important. Model 2281 is the industrial version, regularly equipped with 18-8 stainless steel, ¼" diameter stem and threaded ¼" National Pipe Thread connection nut. (Can be supplied with ⅜" or ½" N.P.T. connection nut at a surcharge.)

For general test purposes Model 2282 is recommended and is regularly supplied with 18-8 stainless steel, .142" diameter stem, without connection nut.

HEAD: 2" diameter, 18-8 stainless steel case and bezel. Metal scale plate with permanent black figures and markings. Pointer and scale designed for easy reading. Glass window is standard (See page 3 for plastic windows). If head is to be subjected to temperatures in excess of 300 F, state temperature when ordering.

SCALE LENGTH: 4½".

STEM: Model 2281, 18-8 Type 304 stainless steel, .25" diameter. Standard lengths are 2½", 4", 6", 9", 12", 18" and 24", including threads. (Can be supplied with intermediate stem lengths up to 12" in ½" increments and from 12" to 36" in 1" increments on special order.

Model 2282, 18-8 Type 304 stainless steel, .142" diameter. Standard length 8" including hub. Can be supplied in other stem lengths up to 12" in ½" increments. Stems from 12" to 24" long are .162" diameter.

IMMERSION: For correct temperature indications, the stem should be immersed at least 2" in liquids and 4" in gases.

ACCURACY: Within 1% for Model 2281 and ½% for Model 2282 of range over entire scale.

MODEL 2281

RANGE	°/DIV.	RANGE	°/DIV.	RANGE	°/DIV.
–100 to 100 F	2	50 to 500 F	5	–10 to 110 C	1
–40 to 120 F	2	150 to 750 F	10	0 to 150 C	2
25 to 125 F	1	*200 to 1000 F	10	0 to 200 C	2
0 to 200 F	2	–100 to 50 C	2	0 to 300 C	5
20 to 240 F	2	0 to 50 C	½	100 to 400 C	5
50 to 300 F	2	–50 to 100 C	2		
50 to 400 F	5	0 to 100 C	1		

*Not recommended for continuous operation above 800 F.

MODEL 2282

RANGE	°/DIV.	RANGE	°/DIV.	RANGE	°/DIV.
–100 to 100 F	2	50 to 300 F	2	–10 to 110 C	1
25 to 125 F	1	50 to 400 F	5	0 to 100 C	1
–40 to 160 F	2	50 to 500 F	5	0 to 150 C	2
0 to 180 F	2	–100 to 40 C	2	0 to 250 C	5
0 to 220 F	2	0 to 50 C	½		
50 to 250 F	2	–50 to 100 C	2		

Correspondence is invited relative to special modification or application.

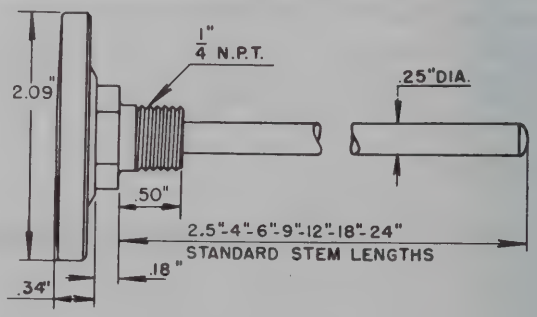
Model 2282—Scale Calibrated in Both °C and °F

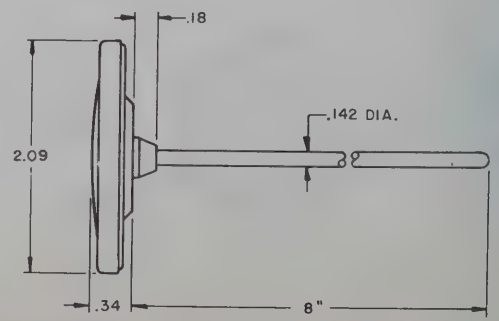
For use in exploring unknown temperatures with less danger of overscaling. Stem Length 8".

with .142" diam. stem	*with .25" diam. stem*
Range { — 100 to 260C — 150 to 500F	Range { — 100 to 540C — 150 to 1000F

Approximate Weights

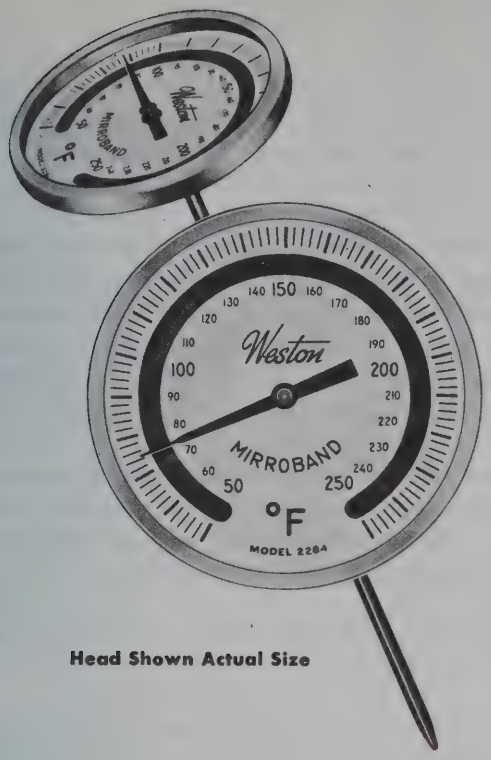
Model 2281, 2½" to 12" stem—Model 2282, 8" stem.....2 oz.





All Dimensions are Approximate.

MIRROBAND® PRECISION TESTING THERMOMETER



Head Shown Actual Size

GENERAL: The overall design of these rugged all-metal thermometers makes them particularly useful for precise temperature measurement. A mirror scale and a knife-edge pointer are incorporated to eliminate parallax error. Except for the scale glass, this thermometer is completely encased in welded stainless steel which is corrosion resistant to most common acids and gases.

HEAD: 2" diameter, metal scale plate with white background and black figures and markings. Glass window is standard. If head is to be subjected to temperatures in excess of 250°F, state temperature when ordering.

SCALE LENGTH: 4½"

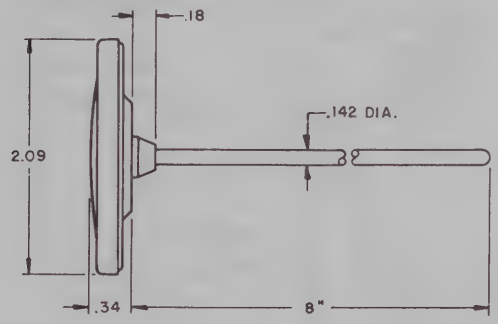
STEM: 18-8 type 304 stainless steel, .142" diameter. Standard length is 8".

IMMERSION: For correct temperature indications, the stem should be immersed at least 2" in liquids, 4" in gases and approximately in the center of soft solids.

ACCURACY: Within ½ % of range over the entire scale.

MODEL 2284

RANGE	°/DIV.	RANGE	°/DIV.	RANGE	°/DIV.
25 to 125 F.	1	50 to 250 F	2	– 10 to 110 C	1
– 20 to 100 F	1	50 to 500 F	5	0 to 250 C	5
0 to 220 F	2				



POCKET THERMOMETER (With External Adjustment) —MODEL 2292

GENERAL: Ideal for spot checking by inspectors, foremen, operators in various industries such as heating, ventilating, chemical and oil. Supplied with a hard rubber carrying case with an attached pocket clip.

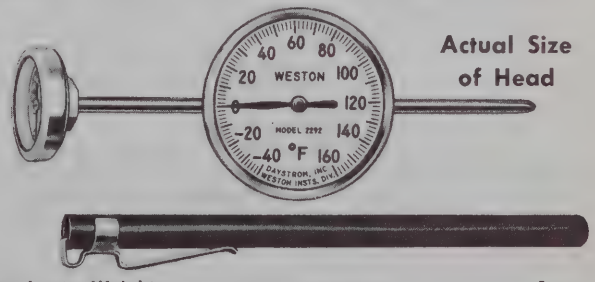
The thermometer can be recalibrated without disassembly by firmly holding the head and immersing the stem at least 2" in an agitated known controlled temperature bath and turning the hex nut until the pointer indicates the correct temperature.

HEAD: 1" diameter, 18-8 stainless steel, case and bezel. Plastic window is standard. If head temperature exceeds 220 F a glass window can be supplied at a surcharge. Metal scale plate with permanent black figures and markings. Scale length 2.1".

STEM: 5" spiked, (For easy insertion into meat, food packages or any semi-solid materials) 18-8 Type 304 stainless steel, .142" diameter.

IMMERSION: For correct indications the stem should be immersed at least 2" in liquids and 4" in gases.

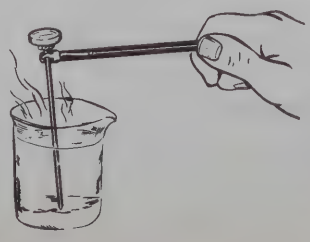
ACCURACY: Within ½ % of range over entire scale.



Actual Size of Head

Approximate Weight.....1 oz.

RANGE	°/DIV.	RANGE	°/DIV.	RANGE	°/DIV.
– 40 to 160 F	2	0 to 220 F	2	0 to 150 C	2
25 to 125 F	1	50 to 500 F	5	0 to 250 C	5

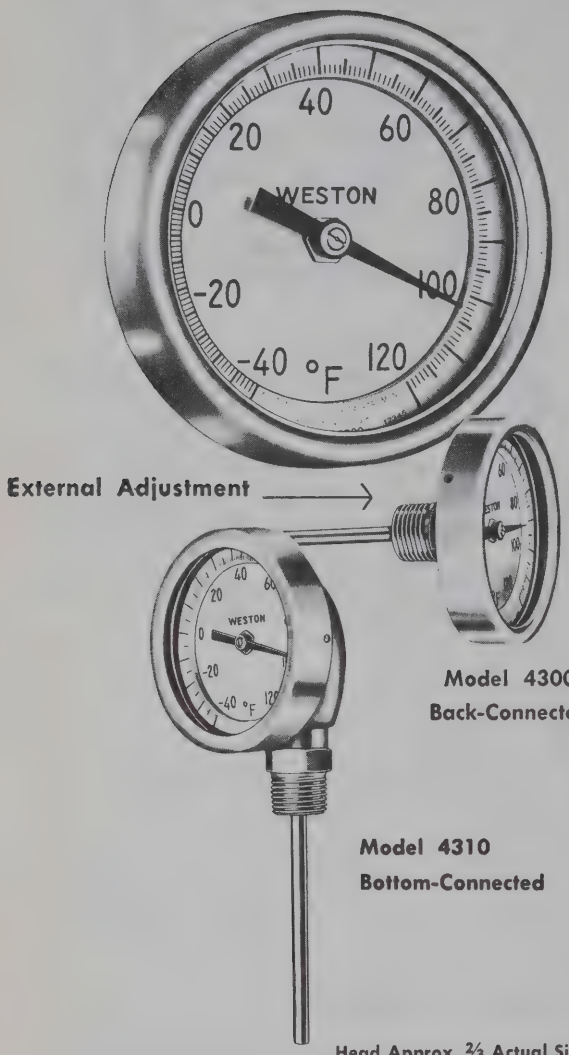


Note a small loop on the clip at the end of the black pocket case provided with the thermometer. By inserting the stem through the loop, the case becomes a convenient handle for immersing the thermometer in liquids and avoids possible burns or loss of thermometer.

All Dimensions are Approximate.

481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351

3" and 5" STANDARD INDUSTRIAL THERMOMETERS
WITH EXTERNAL ADJUSTMENT



Head Approx. ⅔ Actual Size

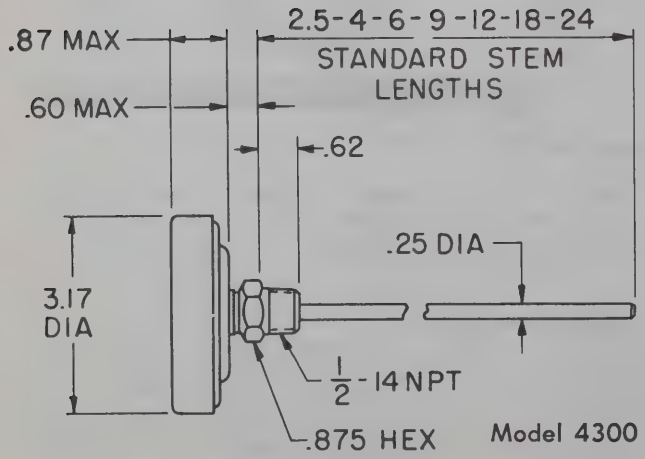
HEAD: Models 4300/4310 3" diameter and Models 4500/4510 5" diameter, with stainless steel cases and bezels. Heavy glass windows provide high resistance to breakage. Removable covers simplify replacement of glass in the field. Equipped with quick-lock bezels and special gasket material which protect against breathing and leakage under outdoor environmental conditions and low temperature service without fogging or freeze-up. Even with external changes in temperature "no breathing" action takes place, thus providing the maximum protection for the internal parts of the instruments.

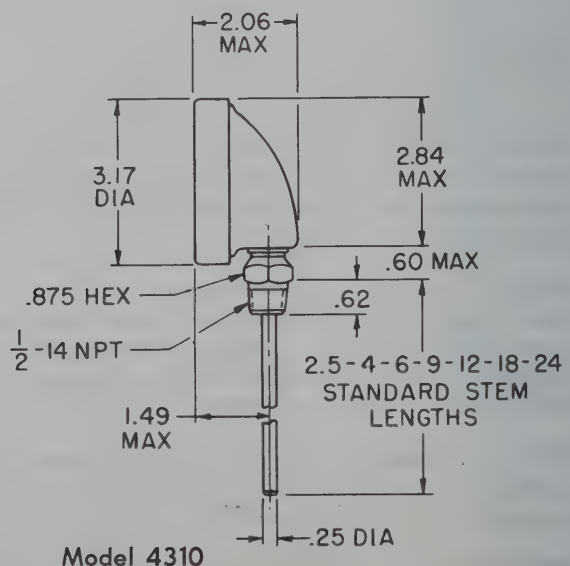
SCALE and POINTER: In-line scale and pointer provide accurate readings at any eye level. Metal scale plate, with permanent black figures and markings. Pointers are damped against excessive movement in the presence of vibration.

Models 4300/4310 scale lengths are 6" and Models 4500/4510 are 10".

STEM: 18-8 Type 304 Stainless Steel, ¼" diameter. Standard lengths are 2½", 4", 6", 9", 12", 18" and 24". (Can also be supplied with stem lengths from 2½" to 12" in ½" increments and from 12" to 36" in 1" increments. From 36" to 72" in 6" increments for Models 4300/4500 and 36" to 48" for Models 4310/4510 in 6" increments on special order.

All stainless steel welds are used at both plug and case ends of the stem, thus providing high resistance to corrosion.





All Dimensions are Approximate.

3" and 5" STANDARD INDUSTRIAL THERMOMETERS
WITH EXTERNAL ADJUSTMENT

CONNECTION NUT: 18-8 stainless steel threaded ½" N.P.T., is standard. Can be supplied with ¾" N.P.T. at a surcharge.

IMMERSION: For correct temperature indications the stem should be at least 2" in liquids and 4" in gases.

ACCURACY: Within ±1% of range over entire scale.

ADJUSTMENT: EXTERNAL ADJUSTMENT (ALLEN) screw provides an easy means of recalibration. Simply immerse stem in a liquid of known temperature and adjust to correct reading. This feature also permits a 360° rotation of the scale, thus it is a simple matter to adjust the scale to a readable position, regardless of stem location.

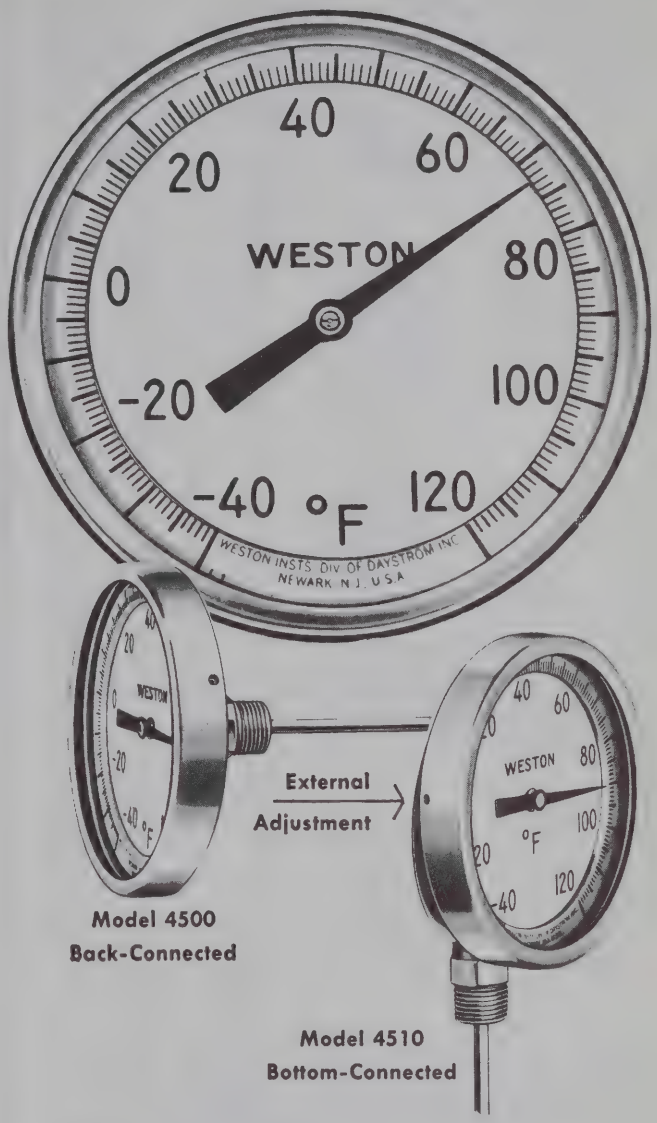
MODELS 4300/4310/4500/4510

RANGE	°/DIV.	RANGE	°/DIV.	RANGE	°/DIV.
—100 to 100 F	2	50 to 400 F	5	—10 to 110 C	1
—40 to 120 F	1	50 to 500 F	5	0 to 50 C*	½
0 to 200 F	2	150 to 750 F	10	0 to 100 C	1
25 to 125 F*	1	200 to 1000 F**	10	0 to 150 C	1
20 to 240 F	2	—100 to 50 C	1	0 to 200 C	2
50 to 300 F	2	—50 to 100 C	1	0 to 300 C	5
				100 to 400 C	5

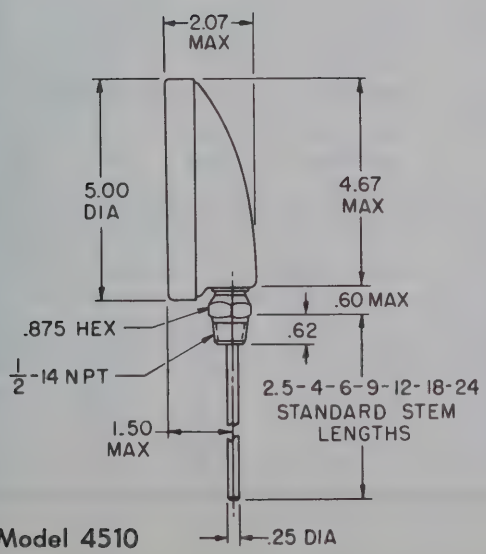
*Not available in models 4310 and 4510 bottom connected.
**Not recommended for continuous operation above 800 F.

Approximate Weights

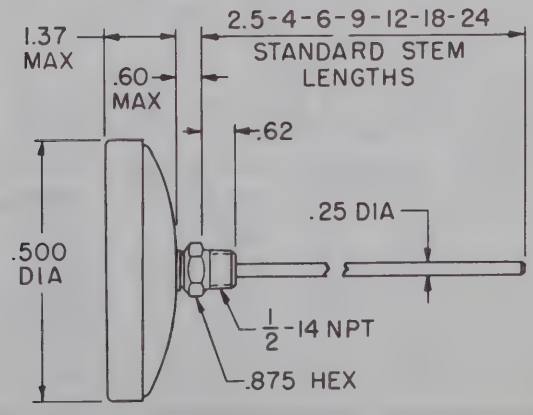
2½" to 24" stem.....½ lb.



Head Approx. ⅔ Actual Size



Model 4510



Model 4500

All Dimensions are Approximate.

WES-5

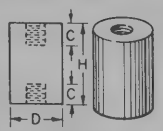
1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625

FEEDTHRU - STEATITE PILLARS - CORRUGATED CERAMIC - STANDOFF INSULATORS

BIRNBACH STEATITE PILLARS

JAN-1-8 and JAN-1-10 SPECS. (Less Hardware)

In many constructions, these unmounted threaded Steatite pillars will facilitate assembly because of the one hole mounting and parallel mounting surfaces. They are made of L5 glazed Steatite with threaded holes on both sides.

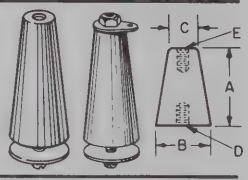


Cat. No.	Old Jan Type Designation	New Mil Type Designation	H	D	Length of Thread	Thread
441			1/4"	1/4"	All	6-32
441B			3/8"	1/4"	5/32"	6-32
441A			1/2"	1/4"	5/32"	6-32
444A			3/4"	1/4"	1/4"	6-32
445A			1"	1/4"	1/4"	6-32
442			3/8"	3/8"	5/32"	6-32
442A	NS5W0104	NL633W01-004	1/2"	3/8"	5/32"	6-32
443A	NS5W0105	NL633W01-005	5/8"	3/8"	1/4"	6-32
444B	NS5W0106	NL633W01-006	3/4"	3/8"	1/4"	6-32
445B	NS5W0108	NL633W01-008	1"	3/8"	3/8"	6-32
446B	NS5W0110	NL633W01-010	1 1/4"	3/8"	3/8"	6-32
446A	NS5W0112	NL633W01-012	1 1/2"	3/8"	3/8"	6-32
446C	NS5W0116	NL633W01-016	2"	3/8"	3/8"	6-32
443			1/2"	1/2"	9/64"	6-32
444			3/4"	1/2"	1/4"	6-32
445			1"	1/2"	3/8"	6-32
446			1 1/2"	1/2"	3/8"	6-32
447			2 1/2"	1/2"	3/8"	6-32
440	NS5W0205	NL633W02-005	5/8"	1/2"	3/16"	8-32
440A	NS5W0206	NL633W02-006	3/4"	1/2"	1/4"	8-32
440B	NS5W0208	NL633W02-008	1"	1/2"	3/8"	8-32
440C	NS5W0210	NL633W02-010	1 1/4"	1/2"	3/8"	8-32
440D	NS5W0212	NL633W02-012	1 1/2"	1/2"	3/8"	8-32
440E	NS5W0216	NL633W02-016	2"	1/2"	3/8"	8-32
440F	NS5W0220	NL633W02-020	2 1/2"	1/2"	3/8"	8-32
440G	NS5W0224	NL633W02-024	3"	1/2"	3/8"	8-32
444C			3/4"	3/4"	1/4"	10-32
445C	NS5W0308	NL633W03-008	1"	3/4"	3/8"	10-32
445D	NS5W0310	NL633W03-010	1 1/4"	3/4"	3/8"	10-32
445E	NS5W0312	NL633W03-012	1 1/2"	3/4"	3/8"	10-32
445F	NS5W0316	NL633W03-016	2"	3/4"	3/8"	10-32
445G	NS5W0320	NL633W03-020	2 1/2"	3/4"	3/8"	10-32
445H	NS5W0324	NL633W03-024	3"	3/4"	3/8"	10-32
445S	NS5W0332	NL633W03-032	4"	3/4"	3/8"	10-32
448			2 1/2"	3/4"	3/4"	1/4-20
449			4"	3/4"	3/4"	1/4-20
447A	NS5W0410	NL633W04-010	1 1/4"	1"	7/16"	1/4-20
447B	NS5W0412	NL633W04-012	1 1/2"	1"	1/2"	1/4-20
447D	NS5W0416	NL633W04-016	2"	1"	5/8"	1/4-20
447E	NS5W0420	NL633W04-020	2 1/2"	1"	5/8"	1/4-20
447F	NS5W0424	NL633W04-024	3"	1"	5/8"	1/4-20
447G	NS5W0432	NL633W04-032	4"	1"	5/8"	1/4-20
447H	NS5W0440	NL633W04-040	5"	1"	5/8"	1/4-20
447J	NS5W0448	NL633W04-048	6"	1"	5/8"	1/4-20

BIRNBACH CONE STANDOFF INSULATORS

(Steatite)

Made of low absorption high tensile strength steatite with a smooth glaze. All heights except the No. 430 are available with a Jack or a threaded hole top. Available in a white glaze and are complete with screws, metal & cork washers.



Cat. No.	Height A	Base Dimensions B	C	Threaded Holes D	E	Mounting Hole
430	5/8"	5/8"	3/16"	6-32	6-32	5/32"
431	1"	1 1/16"	1/2"	8-32	8-32	3/16"
431J	1"	1 1/16"	1/2"	8-32	No. 403 Jack	3/16"
432	1 1/2"	7/8"	5/8"	10-32	10-32	7/32"
432J	1 1/2"	7/8"	5/8"	10-32	No. 403 Jack	7/32"
433	2 3/4"	1 1/4"	3/4"	1/4-20	1/4-20	9/32"
433J	2 3/4"	1 1/4"	3/4"	1/4-20	No. 395 Jack	9/32"

BIRNBACH STANDOFF INSULATORS

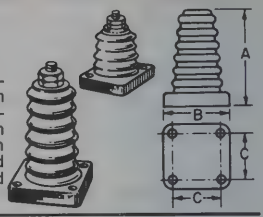
Made of highly vitrified low absorption glazed porcelain. No washers necessary—mounting surface is ground flat; for No. 966 it is advisable to use cork washers which are available. All brass nickel-plated hardware supplied.



Cat. No.	Height A	Base Dimension B	C	D	Mounting Holes	Hardware
405	5/8"	1"	17/32"	1 1/16"	5/32"	6-32
965	1"	1 1/4"	3/4"	1 3/16"	5/32"	8-32
966	1"	1 3/8"	7/8"	1"	5/32"	8-32
966J	1"	1 3/8"	7/8"	1"	5/32"	No. 403 Jack
866	1 1/2"	1 3/4"	1 1/8"	1 1/4"	5/32"	10-32
866J	1 1/2"	1 3/4"	1 1/8"	1 1/4"	5/32"	No. 403 Jack
866SJ	1 1/2"	1 3/4"	1 1/8"	1 1/4"	5/32"	No. 395 Jack
4275	2 3/4"	2 3/4"	2"	2 1/8"	1/4"	1/4-20
4275J	2 3/4"	2 3/4"	2"	2 1/8"	1/4"	No. 399 Jack
4450	4 1/2"	3 5/8"	2 1/2"	2 5/8"	9/32"	1/4-20
4450J	4 1/2"	3 5/8"	2 1/2"	2 5/8"	9/32"	No. 399 Jack

BIRNBACH METAL BASE INSULATORS

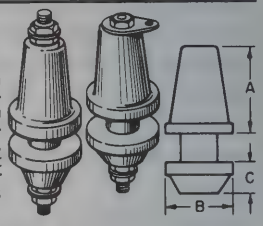
Designed to replace conventional porcelain insulators where base cracks when fastened down. Corrugated surface provides long leakage path. Made of high tensile strength low absorption porcelain fully glazed. Supplied with nickel-plated brass screws and nuts, cadmium plated drawn steel bases.



Cat. No.	Height A	Base Dimension B	C	Mounting Screw D	Hardware
867	1 3/8"	1 7/8" x 1 5/16"	1 1/2"	2 No. 8	10-32
867J	1 3/8"	1 7/8" x 1 5/16"	1 1/2"	2 No. 8	No. 403 Jack
4176	2 3/4"	1 3/4" x 1 3/4"	1 3/4"	4 No. 10	1/4-20
4176J	2 3/4"	1 3/4" x 1 3/4"	1 3/4"	4 No. 10	No. 395 Jack
4451	4 1/2"	2 1/4" x 2 1/4"	1 3/4"	4 No. 10	1/4-20
4451J	4 1/2"	2 1/4" x 2 1/4"	1 3/4"	4 No. 10	No. 395 Jack

BIRNBACH FEEDTHRU INSULATORS

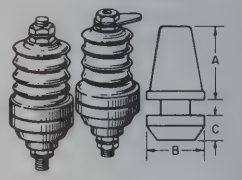
Made of highly vitrified, low absorption porcelain smoothly glazed to prevent accumulation of dust or dirt. Maximum strength is achieved by the proper proportions and flat mounting surfaces. Long insulating sleeves on the lower part of the insulator contribute much to their performance on high voltages. Brass nickel-plated hardware.



Cat. No.	Height A	Dimen. B	C	Mounting Hole	Hardware
458	5/8"	11/16"	1/4"	5/16"	6-32
478	1"	13/16"	5/16"	7/16"	10-32
478J	1"	13/16"	5/16"	7/16"	No. 403 Jack
4125	1 1/4"	7/8"	3/8"	7/16"	10-32
4125J	1 1/4"	7/8"	3/8"	7/16"	No. 403 Jack
4234	2 3/4"	2"	1"	3/4"	1/4-20
4175	2 3/4"	1 1/4"	3/4"	5/8"	1/4-20
4175J	2 3/4"	1 1/4"	3/4"	5/8"	No. 394 Jack

CORRUGATED FEEDTHRU INSULATORS

The six new corrugated type feed-thru insulators have more than twice the leakage path of the straight type because of increased surface of the corrugations and recommends itself where a straight side insulator of equal height is not satisfactory because of its shorter leakage path. Brass nickel-plated hardware and cork mounting washers supplied.



Cat. No.	Height A	Dimen. B	C	Mounting Hole	Hardware
479	1 3/8"	1 1/4"	11/16"	5/16"	10-32
479J	1 3/8"	1 1/4"	11/16"	5/16"	No. 403 Jack
4276	2 3/4"	1 5/8"	1"	3/4"	1/4-20
4276J	2 3/4"	1 5/8"	1"	3/4"	No. 394 Jack
4452	4 1/2"	2 1/8"	1 1/2"	1"	1/4-20
4452J	4 1/2"	2 1/8"	1 1/2"	1"	No. 394 Jack

HIGH VOLTAGE FEEDTHRU INSULATOR

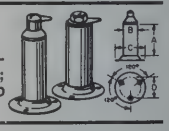
This insulator has been designed to meet the demand for an insulator having high dielectric and mechanical strength. The extra long leakage path is made possible by the corrugations on the top insulator. The bottom sleeve taper from a base dia. of 1 3/16" where the electric stress is greatest.



Cat. No.	Height	Base Dia.	Mounting Hole	Hardware
4233	1 5/8"	2"	1 1/4"	1/4-20

STEATITE PILLARS

Have great tensile strength with extremley low losses at very high frequencies. Tapped on both ends; supplied with nickel plated mounting base and top hardware.



Cat. No.	Height A	Dimen. B	Base Dia. C	D	Hardware
450	1"	1/2"	1 1/8"	7/8"	6-32
450J	1"	1/2"	1 1/8"	7/8"	No. 403 Jack
451	1 1/2"	1/2"	1 1/8"	7/8"	6-32
451J	1 1/2"	1/2"	1 1/8"	7/8"	No. 403 Jack
452	2 1/2"	1/2"	1 1/8"	7/8"	6-32
452J	2 1/2"	1/2"	1 1/8"	7/8"	No. 403 Jack
453	2 1/2"	3/4"	1 3/16"	1 3/16"	1/4-20
453J	2 1/2"	3/4"	1 3/16"	1 3/16"	No. 395 Jack
454	4"	3/4"	1 3/16"	1 3/16"	1/4-20
454J	4"	3/4"	1 3/16"	1 3/16"	No. 395 Jack

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Tuck

ELECTRICAL SPECIALTY TAPES

Individually Boxed

USER PRICE SCHEDULE

ACETATE TAPES

No. 10 Acetate Fibre Natural

72 Yd. Rolls	1-11 Rolls	12-35 Rolls	36-143 Rolls	144 or more Rolls
1/4	.84	.76	.71	.67
3/8	1.25	1.13	1.07	1.01
1/2	1.67	1.51	1.43	1.35
5/8	2.09	1.82	1.68	1.58
3/4	2.39	2.08	1.92	1.81
7/8	2.69	2.34	2.16	2.03
1"	2.99	2.60	2.39	2.25

No. 14 Acetate Film - Rayon - Re-inforced Transparent

60 Yd. Rolls	1-11 Rolls	12-35 Rolls	36-143 Rolls	144 or more Rolls
1/4	.91	.83	.78	.73
3/8	1.37	1.24	1.17	1.10
1/2	1.82	1.64	1.56	1.46
5/8	2.28	2.05	1.94	1.82
3/4	2.71	2.44	2.25	2.11
7/8	3.04	2.74	2.53	2.37
1"	3.38	3.04	2.80	2.84

No. 37 Acetate Film Cloth - Thermosetting Natural

72 Yd. Rolls	1-11 Rolls	12-35 Rolls	36-143 Rolls	144 or more Rolls
1/4	1.59	1.44	1.36	1.28
3/8	2.39	2.16	2.04	1.92
1/2	3.19	2.87	2.72	2.55
5/8	3.98	3.59	3.39	3.19
3/4	4.78	4.31	4.07	3.83
7/8	5.58	5.02	4.74	4.46
1"	6.31	5.74	5.42	5.11

CLOTH TAPES

No. 53 Cotton Cloth - Thermosetting Black
No. 55 Cotton Cloth - Thermosetting White

60 Yd. Rolls	1-11 Rolls	12-35 Rolls	36-143 Rolls	144 or more Rolls
1/4	.76	.69	.65	.61
3/8	1.14	1.04	.98	.92
1/2	1.52	1.37	1.30	1.22
5/8	1.90	1.72	1.62	1.53
3/4	2.28	2.05	1.94	1.82
7/8	2.66	2.40	2.27	2.13
1"	3.03	2.74	2.58	2.43

No. 51 Glass Cloth - Thermosetting White

60 Yd. Rolls	1-11 Rolls	12-35 Rolls	36-143 Rolls	144 or more Rolls
1/4	2.07	1.86	1.76	1.66
3/8	3.10	2.79	2.64	2.49
1/2	4,13	3.73	3.52	3.32
5/8	5.17	4.56	4.39	4.14
3/4	6.19	5.58	5.27	4.96
7/8	7.24	6.52	6.16	5.79
1"	8.27	7.45	7.03	6.62

No. 59 Glass Cloth w/Silicone Adhesive-Thermosetting (60yds) White

36 Yd. Rolls	1-11 Rolls	12-35 Rolls	36-143 Rolls	144 or more Rolls
1/4	3.12	2.81	2.66	2.49
3/8	4.68	4.22	3.98	3.75
1/2	6.24	5.61	5.31	5.00
5/8	7.82	7.04	6.64	6.26
3/4	9.36	8.43	7.95	7.49
7/8	10.94	9.84	9.30	8.75
1"	12.50	11.25	10.62	9.99

No. 59 Glass Cloth w/Silicone Adhesive-Thermosetting (36yds) White

60 Yd. Rolls	1-11 Rolls	12-35 Rolls	36-143 Rolls	144 or more Rolls
1/4	1.88	1.69	1.60	1.50
3/8	2.82	2.54	2.40	2.26
1/2	3.76	3.38	3.20	3.01
5/8	4.71	4.24	4.00	3.77
3/4	5.64	5.08	4.79	4.51
1"	7.53	6.78	6.40	6.02

No. 57 Acetate Rayon Cloth - Thermosetting Black, White

72 Yd. Rolls	1-11 Rolls	12-35 Rolls	36-143 Rolls	144 or more Rolls
1/4	1.12	1.02	.96	.90
3/8	1.69	1.53	1.44	1.35
1/2	2.25	2.03	1.91	1.80
5/8	2.81	2.53	2.40	2.26
3/4	3.37	3.03	2.87	2.70
7/8	3.94	3.54	3.35	3.15
1"	4.49	4.05	3.82	3.60

481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351

ELECTRICAL SPECIALTY TAPES

USER PRICE SCHEDULE — Individually Boxed

POLYESTER PAPER TAPES

No. 39 Polyester Film Rope Paper Laminated Flatback - Thermosetting Black
No. 41 Polyester Film Rope Paper Laminated Flatback - Thermosetting Tan

60 Yd. Rolls	1-11 Rolls	12-35 Rolls	36-143 Rolls	144 or more Rolls
1/4	.58	.53	.50	.47
3/8	.87	.79	.74	.70
1/2	1.16	1.05	.99	.93
5/8	1.45	1.31	1.24	1.16
3/4	1.74	1.57	1.48	1.40
7/8	2.03	1.83	1.73	1.63
1"	2.32	2.09	1.98	1.86

No. 395 Polyester Film Rope Paper Laminated Flatback - Thermosetting Black
No. 415 Polyester Film Rope Paper Laminated Flatback - Thermosetting Tan

60 Yd. Rolls	1-11 Rolls	12-35 Rolls	36-143 Rolls	144 or more Rolls
1/4	.56	.51	.48	.45
3/8	.84	.76	.71	.67
1/2	1.11	1.01	.95	.89
5/8	1.39	1.26	1.19	1.11
3/4	1.67	1.51	1.42	1.34
1"	2.23	2.01	1.90	1.71

No. 42 Rope Tissue Mylar Laminated Flatback Tan

60 Yd. Rolls	1-11 Rolls	12-35 Rolls	36-143 Rolls	144 or more Rolls
1/4	.98	.89	.84	.79
3/8	1.47	1.33	1.24	1.17
1/2	1.94	1.76	1.66	1.55
5/8	2.43	2.20	2.08	1.94
3/4	2.92	2.64	2.48	2.34
1"	3.89	3.51	3.32	2.99

POLYESTER FILM TAPES

No. 49 Polyester Film (1 mil) - Thermosetting Orange-Yellow
No. 49 LY Polyester Film (1 mil) - Thermosetting Lemon-Yellow
No. 50 Polyester Film (1 mil) - Thermosetting Transparent

72 Yd. Rolls	1-11 Rolls	12-35 Rolls	36-143 Rolls	144 or more Rolls
1/4	1.22	1.10	1.04	.98
3/8	1.83	1.65	1.56	1.47
1/2	2.44	2.20	2.07	1.96
5/8	3.05	2.76	2.60	2.45
3/4	3.66	3.29	3.11	2.93
7/8	4.27	3.85	3.63	3.42
1"	4.88	4.40	4.15	3.91

No. 249 Polyester Film (2 mil) - Thermosetting Orange-Yellow
No. 249 LY Polyester Film (2 mil) - Thermosetting Lemon-Yellow
No. 250 Polyester Film (2 mil) - Thermosetting Transparent

72 Yd. Rolls	1-11 Rolls	12-35 Rolls	36-143 Rolls	144 or more Rolls
1/4	1.96	1.77	1.67	1.58
3/8	2.95	2.66	2.51	2.37
1/2	3.93	3.54	3.33	3.16
5/8	4.91	4.44	4.19	3.94
3/4	5.89	5.30	5.01	4.72
7/8	6.87	6.20	5.84	5.51
1"	7.86	7.08	6.68	6.30

POLYESTER DACRON MAT LAMINATED TAPES

No. 36 Polyester Film Dacron Mat - Laminated - Thermosetting Natural

72 Yd. Rolls	1-11 Rolls	12-35 Rolls	36-143 Rolls	144 or more Rolls
1/4	1.52	1.39	1.31	1.23
3/8	2.29	2.07	1.93	1.82
1/2	3.02	2.75	2.58	2.42
5/8	3.78	3.43	3.24	3.03
3/4	4.54	4.11	3.87	3.66
1"	6.07	5.47	5.17	4.65

TECHNICAL TAPE CORPORATION

TUCK-2

HEAVY DUTY SYNCHRONOUS MOTORS

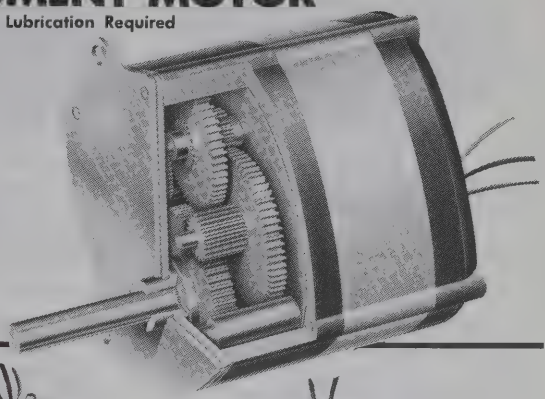
NEW Hurst 600 In. Oz. Model GA
HYSTERESIS REVERSIBLE SYNCHRONOUS
INSTRUMENT MOTOR

● Heavy Duty Gearing ● Can Be Stalled Without Overheating ● No Lubrication Required

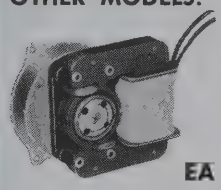
RATED 600 INCH-OUNCE AT 1 RPM (GA Series) Dimensions: 2 13/16" diam, X 3".

OUTPUT SPEEDS: 1, 2, 3, 4, 5, 6, 10, 18, 30, 60, 100, 120, 150, 180, 225, 300 and 3600 RPM (3600 direct drive, no gear train, 1/8" shaft).

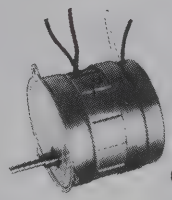
QUANTITY	1 RPM THRU 10 RPM	18 RPM THRU 59 RPM	60 RPM THRU 300 RPM	3600 RPM
1- 9	$30.50	$28.65	$26.45	$20.40
10- 24	28.98	27.22	25.13	19.38
25- 49	27.46	25.79	23.81	18.36
50- 74	25.94	24.36	22.49	17.34
75- 99	24.42	22.93	21.17	16.32
100-249	21.37	20.07	18.52	14.28



OTHER MODELS:



EA



CA



DA
SM



PC-DA
PC-SM
AR-DA
AR-SM

150 INCH-OUNCE (EA Series — open frame) shaded pole. Completely accurate clockwise rotation. An extremely cool running timing motor with same gear units specified above. Torque, 150 inch-ounce at 1 RPM. Dimensions, 3 1/4" long x 2 3/8" wide x 1 5/8" high. Output shaft 3/16" dia. x 1" long flattened. (Exception: 3600 RPM speed has 3/32" output shaft x 1" long flattened. Shipping Wt. 1 lb. 3 oz.

OUTPUT SPEEDS: 1, 2, 4, 6, 8, 10, 12, 20, 30, 60 and 120 RPM. 3600 RPM.

EA	Net Each, Lots of				
	1-24	25-49	50-74	75-99	100-249
PRICE	$ 7.75	7.36	6.98	6.20	5.43
3600 RPM Only	$ 5.20	4.94	4.68	4.16	3.64

120 INCH-OUNCE REVERSIBLE. (DA Series) Instantly reversible (with SPDT switching). Completely accurate both clockwise and counter-clockwise. 100g shock resistance. Vibration resistant, accurate synchronization of 10-55 cps at .065" excursion. Good magnetic shielding. Torque, 120 inch-ounce at 1 rpm. Case dimensions, 2 1/2" dia. x 1 3/4". Output shaft 3/16" dia. x 1" long flattened. Shipping Wt., 1 lb. 1 oz.

OUTPUT SPEEDS: 1, 2, 4, 6, 8, 10, 12, 20, 30, 60 and 120 RPM.

DA	Net Each, Lots of				
	1-24	25-49	50-74	75-99	100-249
PRICE	$12.70	12.07	11.43	10.16	8.89

(Price includes capacitor)

POSITIVE CLUTCH DA SERIES. Basic DA motor with Positive Clutch and instantaneous Brake. Starts in 20 milliseconds — stops 60 rpm shaft in 12°; 1 rpm, 1/5°. Shipping Wt. 1 lb. 5 oz.

OUTPUT SPEEDS: 1, 2, 4, 6, 8, 10, 12, 20, 30, 60 and 120 RPM.

PC-DA	Net Each, Lots of				
	1-24	25-49	50-74	75-99	100-249
PRICE	$17.55	16.67	15.80	14.04	12.29

(Price includes capacitor)

POSITIVE CLUTCH SM SERIES. Basic SM motor with Positive Clutch and Instantaneous Brake. Starts in 20 milliseconds — stops 60 rpm shaft in 12°, 1 rpm 1/5°.

OUTPUT SPEEDS: 1/2, 1, 2, 3, 4, 5, 6, 10, 15, 30 and 60 RPM.

PC-SM	Net Each, Lots of				
	1-24	25-49	50-74	75-99	100-249
PRICE	$15.53	14.75	13.98	12.42	10.87

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

100 INCH-OUNCE REVERSIBLE. (CA Series) Instantly reversible (with SPDT switching). Completely accurate both clockwise and counter-clockwise. 1200 rpm rotor speed for quiet performance. Torque, 100 inch-ounce at 1 rpm. Case dimensions, 2 1/2" dia. x 2 1/8". Output shaft 3/16" dia. x 1" long flattened. Shipping Wt., 1 lb. 2 oz. Most versatile and economical motor in its field!

OUTPUT SPEEDS: 1/3, 1/2, 1, 1 1/2, 2, 2 1/2, 3, 4, 5, 6, 8, 10, 12, 15, 16, 20, 24, 25, 30, 32, 33 1/3, 40, 48, 50, 60, 64, 80, 100, 120, 150, 160, 200, 240, 400, 600, 800 and 1000 RPM.

CA	Net Each, Lots of				
	1-24	25-49	50-74	75-99	100-249
PRICE	$10.88	10.34	9.79	8.70	7.62

(Price includes capacitor)

40 INCH-OUNCE UNIDIRECTIONAL. (SM Series) Shaded pole. Clockwise rotation. Instant start at full torque at 40 inch-ounce at 1 rpm. 100g shock resistance. Vibration resistant, accurate synchronization at 10-55 cps at .065" excursion. Case dimensions, 2 1/2" dia. x 1 3/4". Output shaft 3/16" dia. x 1" long flattened. Shipping Wt., 1 lb.

OUTPUT SPEEDS: 1/2, 1, 2, 3, 4, 5, 6, 10, 15, 30 and 60 RPM.

SM	Net Each, Lots of				
	1-24	25-49	50-74	75-99	100-249
PRICE	$10.68	10.15	9.61	8.54	7.48

100 INCH-OUNCE REVERSIBLE (AR-DA Series) or 40 INCH-OUNCE UNIDIRECTIONAL (AR-SM Series) Each is an Automatic Reset motor when a return spring is attached to the output shaft. When clutch is de-energized the shaft is free for manual or automatic reset. Note: The clutch mechanism is lubricated and completely enclosed. AR Series is designed for heavy applications and will easily handle full torque on model SM or DA (either directional rotation). Physical size and appearance same as PC Series. Accurate within 1/3 second at 1 RPM and more accurate at higher speeds. Max. error in seconds .5625. Case dimensions, 2 1/16" dia. x 2 1/16". Clutch actuator RPM 7/8" height x 1 3/16" width. Output shaft 3/16" dia. x 1" long flattened. Mounting same as standard motor shown in sketch. Shipping Wt., 1 lb. 6 oz.

OUTPUT SPEEDS: 1, 4, 6, 10, 30 and 60 RPM.

AR-DA	Net Each, Lots of				
	1-24	25-49	50-74	75-99	100-249
PRICE	$20.70	19.67	18.63	16.56	14.49

AR-SM	Net Each, Lots of				
	1-24	25-49	50-74	75-99	100-249
PRICE	$18.70	17.77	16.83	14.96	13.09

SUPERSEDES PREVIOUS LISTING

hurst MFG. CORP.

976

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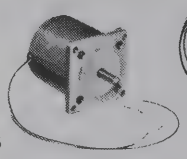
1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625

SLO-SYN® *Synchronous Motors*

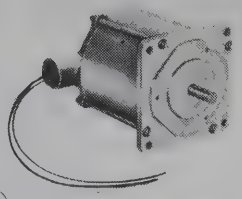
FOR A-C CONSTANT SPEED ● FOR D-C STEPPING



TYPE SS150



TYPE SS25



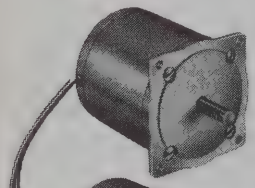
TYPE X250

Permanent magnet type a-c motors having instant start, stop and reverse characteristics and a basic shaft speed of 72 rpm at 60 cycles. Bidirectional; stop or reverse within less than 5° of shaft rotation or .025 second. When used with an auxiliary high speed motor, a SLO-SYN motor can remain coupled to the load and safely overdriven. Can be completely stalled without heating or risk of damage. Can also be used for phase-switched d-c stepping of either 100 or 200 steps/rev. Steps are accurate within ±.09° nonaccumulative. All have lubricated-for-life bearings.

RATINGS AND SPECIFICATIONS FOR A-C APPLICATIONS

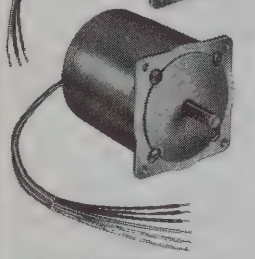
TYPE	MAXIMUM AMPERES	TORQUE (Oz-In)	MAXIMUM MOMENT OF INERTIA OF A RIGIDLY ATTACHED LOAD (Lb-In²)	PHASE-SHIFTING COMPONENTS* RESISTOR	RESISTOR PART NUMBER	CAPACITOR	CAPACITOR PART NUMBER	APPROXIMATE MOTOR WEIGHT (POUNDS) NET	SHIPPING
120 Volts, 50/60 Cycles, 1 Phase, 72 RPM at 60 Cycles									
SS25	0.1	25	0.25	500 ohm ±5%, 5 watt	R-SS25	0.75 mfd ±6%, 330 VAC	C-SS25	1¼	1½
SS50	0.3	50	0.5	250 ohm ±5%, 25 watt	R-SS50/150	2.6 mfd ±6%, 330 VAC	C-SS50	3	3½
SS50M†	0.3	50	0.5	250 ohm ±5%, 25 watt	R-SS50M/150M	2.6 mfd ±6%, 330 VAC	C-SS50M	3	3½
SS150	0.4	150	1.5	250 ohm ±5%, 25 watt	R-SS50/150	3.75 mfd ±6%, 330 VAC	C-SS150	6½	8
SS150M†	0.4	150	1.5	250 ohm ±5%, 25 watt	R-SS50M/150M	3.75 mfd ±6%, 330 VAC	C-SS150M	6½	8
SS250	0.6	250	3	150 ohm ±5%, 50 watt	R-SS250/400	6.5 mfd ±6%, 330 VAC	C-SS250/400	6½	8
SS250M†	0.6	250	3	150 ohm ±5%, 50 watt	R-SS250M	6.5 mfd ±6%, 330 VAC	C-SS250M	6½	8
X250‡	0.6	250	3	150 ohm ±5%, 50 watt	R-SS250/400	6.5 mfd ±6%, 330 VAC	C-SS250/400	7¾	9
SS400	0.6	400	4.5	150 ohm ±5%, 50 watt	R-SS250/400	6.5 mfd ±6%, 330 VAC	C-SS250/400	12¼	13¾
X1000‡§	3.0	1000	9	65 ohm ±5%, 160 watt	R-X1000	30 mfd ±5%, 330 VAC	C-X1000	31	33
SS1800§	4.0	1800	16	40 ohm ±5%, 300 watt	R-SS1800	60 mfd ±6%, 330 VAC	C-SS1800	45	50
240 Volts, 50/60 Cycles, 1 Phase, 72 RPM at 60 Cycles									
SS52§	0.2	50	0.5	1000 ohm ±5%, 10 watt	R-SS52	0.67 mfd ±6%, 660 VAC	C-SS52	3	3½
SS152	0.2	150	1.5	1200 ohm ±5%, 25 watt	R-SS152	1.0 mfd ±6%, 660 VAC	C-SS152	6½	8
SS252	0.3	250	3	500 ohm ±5%, 50 watt	R-SS252/402	1.75 mfd ±6%, 660 VAC	C-SS252/402	6½	8
X252‡	0.3	250	3	500 ohm ±5%, 50 watt	R-SS252/402	1.75 mfd ±6%, 660 VAC	C-SS252/402	7¾	9
SS402	0.3	400	4.5	500 ohm ±5%, 50 watt	R-SS252/402	1.75 mfd ±6%, 660 VAC	C-SS252/402	12¼	13¾
X1002‡§	1.5	1000	9	250 ohm ±5%, 200 watt	R-X1002	8 mfd ±6%, 660 VAC	C-X1002	31	33
SS1802	2.0	1800	16	130 ohm ±5%, 320 watt	R-SS1802	15 mfd ±6%, 660 VAC	C-SS1802	45	50

*External resistor and capacitor must be ordered separately. †Militarized. ‡Explosion-proof. §For 60 cycles. Other phase-shifting components required for 50 cycles.



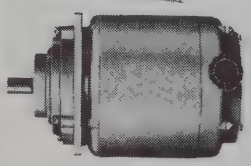
200 RPM

Both 120 volt type TS50 and 240 volt type TS52 have torque ratings of 50 oz-in and shaft speeds of 200 rpm at 60 cycles. When used for d-c stepping, the motors take 72 steps of 5° to make one revolution.



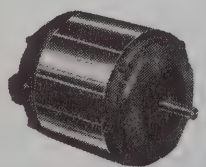
PRECISION STEPPING

Type HS50 is designed for high accuracy stepping with speeds up to 1000 steps/sec.; 200 steps/rev. Steps in 1.8° increments accurate within 0.06 nonaccumulative. Torque is over 100 oz-in at 300 steps/sec.



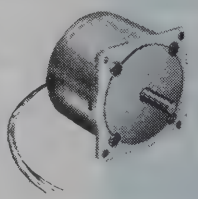
PLANETARY GEAR

Basic 50 and 150 oz-in types and type X250 available with planetary gear assemblies in speeds of 16.6, 3.32, 0.665, 0.133 or 0.027 rpm; 16.6 rpm available in other 250 and on 400 oz-in types.



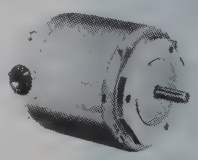
SPECIAL ENVIRONMENT

High Vacuum types for vacuums to 10^{-6} Torr; High Temperature types for temperatures to 130°C; High Radiation types withstand dosage of 3,000 megarads. All available from 50 to 1800 oz-in; High Vacuum 25 oz-in also.



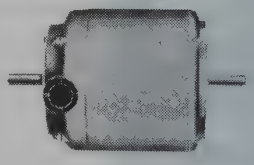
FOUR-LEAD

Designed for d-c stepping to provide the flexibility needed for use with equipment requiring isolated windings with no common connection.



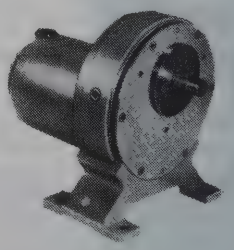
BIFILAR

Used for d-c stepping where use of push-pull circuitry and center-tapped power supply is not possible or where increased torque at high stepping speeds is required.



DOUBLE END

Three-lead, bifilar and four-lead types with output shaft at each end of motor available in all listed torque ratings. 50, 150 and 250 oz-in types available also with planetary gear assemblies in 16.6, 3.32, 0.665, 0.133 or 0.027 rpm speeds.



HIGH TORQUE GEARMOTORS

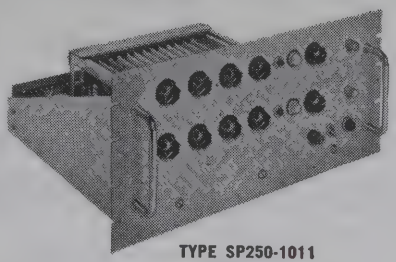
Speeds from 0.5 to 36 rpm, torque ratings from 25 to 1600 lb-in. Consist of single- or double-reduction, parallel-shaft gearbox driven by a SLO-SYN motor. Face or foot mounting possible.

THE SUPERIOR ELECTRIC COMPANY

© U.C.P., Inc.

SLO-SYN® *Preset Indexers*

Provide precise control of digital indexing in applications using SLO-SYN motors for positioning. Desired indexing movement up to 99,999 steps of 1.8° each can be preset on the control panel. Speed adjustable from 4 steps/second to maximum possible with motors used. Either manual or automatic recycling possible. Single- and two-axis types offered. Two-axis types are also available with backlash take-up circuit.



TYPE SP250-1011
(TWO-AXIS)

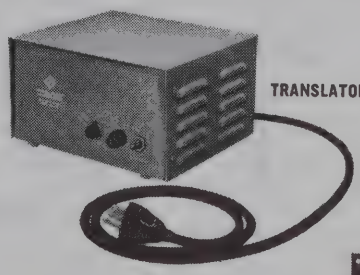


TYPE SP250-4
(ONE AXIS)

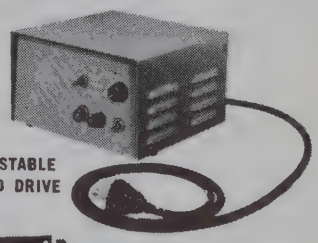
SLO-SYN®

Translators, Adjustable Speed Drives and Translators Modules

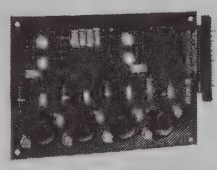
Pulse-to-step converters for use with bifilar SLO-SYN motors connected for incremental stepping. Used in programmed positioning, indexing and indicating operations. Translators use an external signal source; Adjustable Speed Drivers have oscillator to provide signals; Translator Modules are plug-in printed circuit boards with logic capabilities for stepping SLO-SYN motors.



TRANSLATOR



ADJUSTABLE
SPEED DRIVE

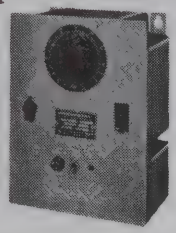


TRANSLATOR
MODULE

POWERSTAT® *DC Motor Speed Controllers*

Provide continuously adjustable speed control of d-c shunt-wound motors from a-c power lines. Full rated torque available at any speed. Feature instantaneous start, stop and reverse, tubeless transient-protected circuitry. Instantly resettable, fast-opening overload protection is provided in the armature circuit in addition to fuse protection.

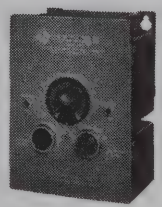
Rated for 120 volt, 60 cycle single phase input. Type MSC16 for motors to ⅙ hp, type MSC33 to ⅓ hp and type MSC75 to ¾ hp. NEMA frame, 1725 rpm, dc motors in ⅙, ⅓ and ¾ hp also available.



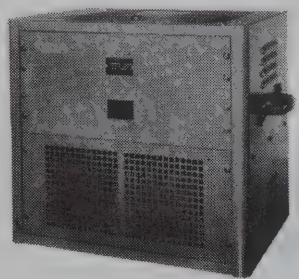
TYPE MSC33

POWERSTAT® *Automatic DC Motor Speed Controllers*

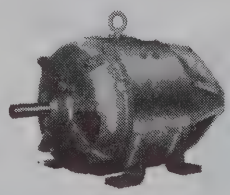
Automatically maintain a preset d-c motor speed regardless of output load variations. Provide adjustable speed drive for heavy-duty equipment. Feature a speed range of 30:1 at constant torque, speed regulation of ±1% of selected speed over the range from zero to full load at nominal input voltage. Have adjustable acceleration control, transient-protected circuitry. Magnetic circuit breaker protects against a suddenly stalled rotor or transient overload. Have built-in synthesized tachometer feedback circuit. Models to 100 hp can be supplied.



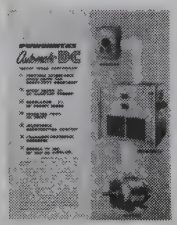
OPERATOR'S STATION

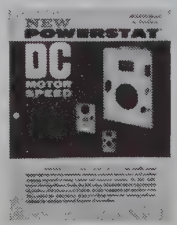


POWER AND CONTROL UNIT



TYPE ADC5 MOTOR







COMPLETE LITERATURE on SLO-SYN motors and control equipment and on POWERSTAT DC Motor Speed Controllers is available on request.

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INDUSTRIAL FOTOLECTRIC CONTROLS

Each Unit Packaged With Easy-to-Follow Installation Instructions.
Engineering Bulletins on All Units Mailed Upon Request.

FOR GENERAL INDUSTRIAL APPLICATIONS



Series 33 Lt. Sources



Model 23 Photocell

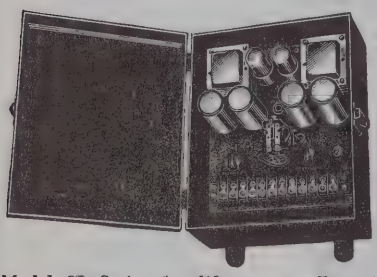
Model 33 Series Light Sources are available in different units for distances listed below, each operating in conjunction with Photocells (Model 23 Series) as designated. Light Source and Photocell heads operate in pairs. Each pair is set supervising by an Amplifier chosen for the task to be performed.
The Light Source and Photocell heads are heavy duty solid cast metal size 3" x 3" x 4½" plus lens. Equipped with ½" conduit fitting. For 110/120 v. 50/60 cy. ac.

FOR CROSS-OVER BEAM, for supervision of small objects (under 2" square) at high speed. Distances shown are from lens to point of supervision. (Moisture-proofed units.)

Model	Max. Distance	Each
33-3	Light Source— 3 inches	$25.05
33-6	Light Source— 6 inches	25.05
33-9	Light Source— 9 inches	25.05
33-12	Light Source—12 inches	25.05
23-3	Photocell. Use with Model 33-3 Light Source	30.00
23	Photocell for use with Models 33-6, 9 and 12 Light Sources	24.00

FOR DIRECTIONAL BEAM, for supervising objects over 2" square. Distances shown cover area of supervision between units.

Model	Max. Distance	Each
33-10	Light Source— 1 to 10 ft.	$19.50
23-10	Photocell	24.00
	Moisture-proofed on order, slightly higher	
33-25W	Light Source—10 to 25 ft.	33.15
23-25W	Photocell (Moisture-proofed)	33.60



MODEL 63 SERIES AMPLIFIERS

For fine precision at high speeds. Specially engineered to operate in conjunction with the above Model 33 Series Light Sources with Model 23 Photocells. All models, 9¼" x 11½" x 5". For 110/120 v. 50/60 cy. ac.

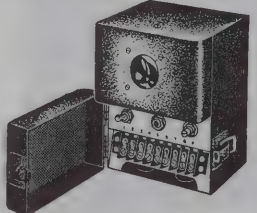
Model 63 Series Amplifiers are well engineered, highest quality units, widely used. The relay will operate up to 650 times a minute under normal conditions. Will operate also from light sources such as bright daylight, artificial lights, radiant energy, etc. These characteristics are basic standards in all Amplifiers of this Series.

Model 63, as described above ..... **Each $123.60**
Model 63-A, equipped with Time Delay Circuit giving delay from 0 to 45 seconds ..... **Each 139.20**
Model 63-B, has added amplification to operate on less active change of light ..... **Each 148.80**
Model 63-C, same as Model 63 but is "dark-energized," and operates when the photocell is dark ..... **Each 127.05**
Model 64 Amplifier. Operates up to 450 times a minute..... **Each 72.72**

TWO-UNIT SET for Indoor Use



Light Source



Amplifier

This Amplifier unit includes Photocell, Relay and Components. Efficient for distances from a few inches to 75 ft., where Relay is not required to operate in excess of 400 times a minute, such as: Counting, sorting large objects; limit switches; start, stop operations; opening doors, etc.
Model 62 R & L "Two-Unit Set".....**Per Set $93.63**



Light Source and Amplifier Identical in Appearance

"DARK-ENERGIZED" SET
Operates When Photocell is Dark

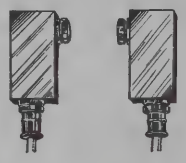
Amplifier includes components to operate as a Two-Unit Set. Light Beam up to 15' supervises 2-inch objects up to 400 times p/m. Dark-Energized photocell unit is designed for installations that require supervisory control when the light beam is absent from the photocell.

Model 107 R & L, Dark-Energized Two-Unit Set.....**Per Set $93.63**

"MINIATURE" FOTOLECTRIC HEADS

Vertical Light Source **Model M-36**

Vertical Photocell **Model M-26**



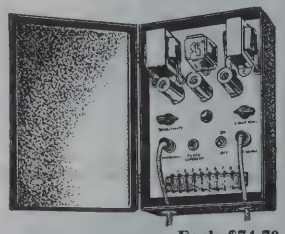
For Horizontal Installation, order Models M-37 and M-27

Size 1¼" x 2½" x ¾", for space limitations, yet unsurpassed for precision control at any desired speed. Units are expertly machined out of solid aluminum blocks for indestructible one-piece construction. Equipped with 6' cable with positive prong-type connectors, screw-band tightening collar. For 110/120 v., 50/60 cy. ac.

Model M-36	Vertical Light Source	$28.20
Model M-26	Vertical Photo-cell Receiver	32.40
Model M-37	Horizontal Light Source	28.20
Model M-27	Horizontal Photo-cell Receiver	32.40

Models 66 and 67 Series Amplifiers

For Use With Miniature Heads



Maximum speed ratings can be regulated on each unit provided that light falling upon photocell will have an "on-period" that equals the "off-period," provided conductor wires to photocell have zero (0) capacity. This insures positive, accurate performance. 110/120 v. 50/60 cy.

Model 67 Amplifier for applications where fine detection at high speeds is not a factor or Relay is not required to operate in excess of 450 times per minute ..... **Each $74.70**

Model 66 Amplifier, operates up to 900 counts a minute. Double-pole, double-throw relay with contact rating 110 v. 60 cy. ac., 10 amp. non-inductive and 5 amp. inductive. Has light beam intensity control. **Each $134.40**

Model 66-A Amplifier, designed for use with ultra high speed electronic decade counters. Accurate counts of light beam interruption or variation of intensity up to 10,000 counts per minute. Output pulses up to 50 volts dc. regulated by the sensitivity control ..... **Each $138.60**

Model 66-T Amplifier, same as Model 66 with a Time Delay circuit incorporated to give regulated time delay from 0 to 45 seconds. Efficient for synchronizing operations ..... **Each $155.40**

FOR INDOOR SMOKE DETECTION

TWO-UNIT SETS

Model 201 Supervises up to 75 ft.
Model 202 Supervises up to 500 ft.

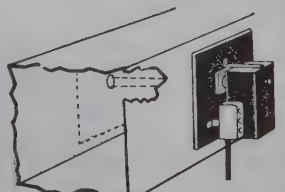
Choose either set according to distance to be supervised. Both sets are designed to detect smoke substantially before heat releases automatic sprinklers. Sets activate whatever remote alarm the user installs. Units should be installed high above floor traffic and several feet from walls; usually suspended from ceiling.

Each set comprises Light Source unit and combined Photocell-amplifier unit. All units are 7 inches high. For 110/120 v. 50/60 cy. ac.

Model 201, Two-Unit Smoke Detector Set. For supervising a distance up to 75 feet..... **$114.60**

Model 202, Two-Unit Smoke Detector Set. For supervising a distance from 75 to 500 feet..... **142.50**

STOP FIRE BEFORE IT SPREADS



Instant Detection, Automatic Control when light beam projected across duct detects smoke.

Most catastrophic fires are due to sparks drawn into or originating in air-conditioning ducts and resulting flames fan-driven to a succession of outbreaks throughout a building. The Worner Fan Motor Stop minimizes this hazard by early detection, stopping of fans and signaling of alarm. Installation consists of Light Source, Photocell Receiver and Control Cabinet with jeweled control readings on the outside. Meets requirements of National Board of Fire Underwriters, Factory Insurance Ass'n. and is listed by U.L. For interesting details, send for Bulletin 650.

Prices slightly higher West of Rockies

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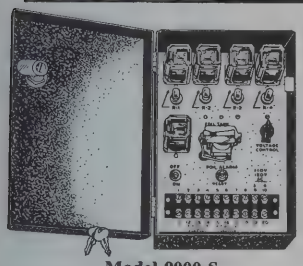
FOTOLECTRIC® UNITS By ELECTRONIC DEVICES WORNER

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The Wholesaler Recommended Equipment. Easy to Stock, Easy to Install.

WORNER BURGLAR ALARM SYSTEMS

Each Unit Packaged With Easy-to-Follow Installation Instructions.
Engineering Bulletins on All Units Mailed Upon Request.



Model 9000-S
Master Control Panel

MODEL 9000 SERIES—the Master Control System.

Consists of Model 9000-S Master Control Panel and can supervise ONE to FOUR Fotolectric (detection) Sets. Contains Relays which energize alarm circuits. Control Panel installed remotely. Size: 7" x 10¼" x 4⅜". For 110-120 v. 50/60 cy. ac.

On a separate circuit, the Master Control Panel will also supervise foil tape, door traps and window switch systems. Both circuits operate independently and simultaneously. Sounds continuous alarm (until reset) when either of these detection circuits is opened or wiring of Fotolectric system is tampered with. Prevents false alarms should power fail or drop momentarily and resets automatically when power is restored. Also operates with any type electrical devices employed by professional burglar alarm companies.

Illustration shows FOUR Relay units plugged in to show plug-in location of 1, 2, 3 or 4 Relays as needed; one Relay for each Fotolectric (detection) Set used. Model 9000-S Master Control Panel list priced "less Relays," as ONE Relay is automatically supplied with each Model No. 9000 series Fotolectric Set ordered.

Model 9000-S Master Control Panel .....**Each, $72.00**

FOTOLECTRIC SETS

Consist of LIGHT SOURCE and PHOTOCELL units ordered in sets according to distance to be covered and by Model Number as shown for each Series.

All Light Sources project infra-red (invisible) light beams.

Sets for 100 and 150 ft. ranges are for indoor use. Sets for 75, 250 and 500 ft. ranges are weatherproof, for both indoor and outdoor use.

Sets for 75, 150, 250 and 500 ft. ranges have unwanted light rejector for maximum daytime operating efficiency. *Cases of similar design house different components for the tasks listed*

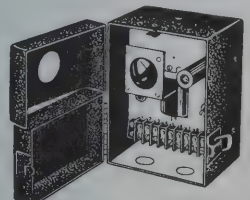
Model	Range	Fotolectric Set	Per Set
9100	100 ft.	Master Trespass Trap	**$111.30**
9150	150 ft.	Master Trespass Trap	**128.70**
9075	75 ft.	Master Trespass Trap	**129.60**
9250	250 ft.	Master Trespass Trap	**138.90**
9500	500 ft.	Master Trespass Trap	**149.10**



For 100 Ft. Ranges
Light Sources and Photocell Receivers have matching cases.



For 150-Ft. Range
Light Source



For 150-Ft. Range
Photo-cell Receiver

MODEL 7000 SERIES comprises (Light Source and Amplifier) Fotolectric Sets that operate in conjunction with burglar alarm companies' central control equipment.

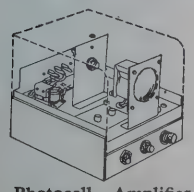
Does not interfere with operation of foil tapes or window traps. For 110/120 v. 50/60 cy. a.c. For 24 v. 60 cy. use Worner Step-Down Transformer.

Model	Range	Fotolectric Set	Per Set
7100	100 ft.	Central Control Trespass Trap	**$111.30**
7150	150 ft.	Central Control Trespass Trap	**128.70**
7075	75 ft.	Central Control Trespass Trap	**129.60**
7250	250 ft.	Central Control Trespass Trap	**138.90**
7500	500 ft.	Central Control Trespass Trap	**149.10**

MODEL 5000 SERIES is a TWO-PIECE set comprising No. 5000 series Fotolectric sets.

For 100 ft. and 150 ft. ranges for interior use only where a single beam is ample protection. Not intended for use with foil systems, etc. Photocell Receivers of both ranges combine relay and amplifier components. On-off switch, phone jack to test plate current, sensitivity control. Lock. Alarm can be turned off or trespass trap reset only by the possessor of the key. For 110/120 v. 50/60 cy. ac.

Model	Range	Fotolectric Set	Per Set
5100	100 ft.	Single Beam Tresp. Trap	**$111.30**
5150	150 ft.	Single Beam Tresp. Trap	**128.70**



Photocell - Amplifier has 2-piece case for convenient installation and servicing.

TRANSISTORIZED BURGLAR ALARM

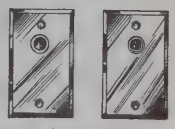
Fotolectric Two-Unit Combination. Indoor use.

Alarm may be sounded at one or more remote locations. Knob control for continuous, limited or reset alarm. The amplifier combines photocell, relay and components. Built-in device minimizes unwanted light. Light Source with infra-red filter provides invisible light beam ranging up to 50 feet. Both units, 5" x 5" x 5½". Two-piece hammerloid cases simplify installation and servicing.

Model 8002 R & L, complete transistor set.....**$93.90**

"MINIATURE" BURGLAR ALARM

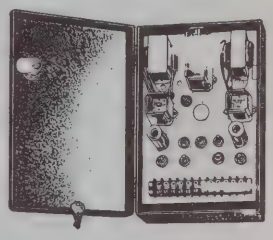
"In-Wall" Concealment



Light Source and Photo-cell Receiver units concealed in light-switch type face plates. Projects invisible light beam ranging up to 35 feet (indoors). Standard size wall plates concealing Fotolectric detection units are high finish stainless steel. Light bulb rated 2000 hours. For guaranteed efficiency Fotolectric sets must be used only with specially engineered amplifiers listed below.

Model 81 "In-Wall" Light Source, each **$24.45**
Model 82 "In-Wall' Photocell Receiver, each **27.96**

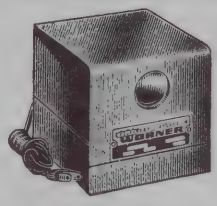
Amplifiers for above Fotolectric Sets

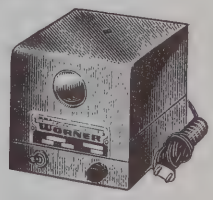


Two specially engineered units. Circuits with no-voltage control relay prevent false alarms due to line voltage irregularities and will sound alarm if tampered with. Standard alarm continuous, regulated warning signal "special" upon order. For 110/120 v., 60 cy. a.c.

Model 86-1 is a single channel Amplifier Panel that will amplify current flow of one FOTOLECTRIC Set. **each $121.89**

Model 86-2 is a dual channel Amplifier Panel that will amplify current flow of two FOTOLECTRIC Sets, guarding separate areas. Will also supervise one FOTOLECTRIC Set, providing for future addition of a second FOTOLECTRIC Set. **each $186.00**





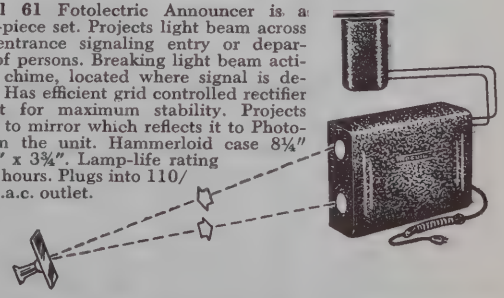
THE TWO-UNIT WORNER WATCHMAN

Exciter Lamp is equipped with removable infra-red filter. Provides invisible light beam ranging up to 50 ft. The Photocell Receiver combines Photocell and electrical components. Equipped with toggle switch for either continuous alarm or to sound only while light beam is broken. Extraneous light rejector maintains daylight range. Two-piece case construction enables removal of cover without unmounting. Identical cases 5" x 5" x 5½" welded steel, mahogany hammerloid finish. For indoor use; 110-120V. 60 cycle A.C.

Model 4000 Two Unit Watchman .....**per set $67.20**

THE ELECTRONIC RECEPTIONIST

Model 61 Fotolectric Announcer is a three-piece set. Projects light beam across any entrance signaling entry or departure of persons. Breaking light beam activates chime, located where signal is desired. Has efficient grid controlled rectifier circuit for maximum stability. Projects beam to mirror which reflects it to Photocell in the unit. Hammerloid case 8¼" x 6½" x 3¾". Lamp-life rating 1000 hours. Plugs into 110/120 v.a.c. outlet.



Model 61 Fotolectric Announcer .....**Per Set $40.50**
Model 61-T. Fully transistorized. Size: 7¾" x 5¾" x 3⅛". Operates 6-volt Chime. Plugs into 110/120 v.a.c. outlet **Per Set $45.00**

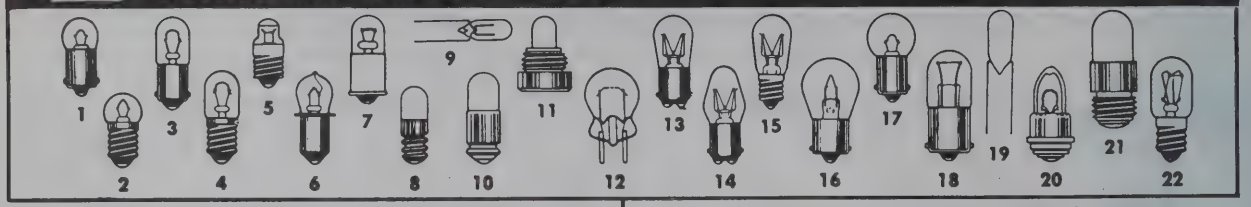
Prices slightly higher West of Rockies

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CHICAGO MINIATURE LAMPS

Only a few of our most popular standard lamps are shown. Complete specifications and engineering data are available. If none of these lamps suit your specific application, we will be glad to consult with you regarding design of a special lamp.

CHICAGO MINIATURE LAMP WORKS



PANEL, INDICATOR, RADIO and COIN MACHINE LAMPS

Lamp No.	Bulb	Base	Fig.	Volt	Amps or Candle-Power	Hrs. Life
43	T-3¼	Min. Bay	3	2.5	.50	3000
44	T-3¼	Min. Bay	3	6.3	.25	3000
46	T-3¼	Min. Scr.	4	6.3	.25	3000
47	T-3¼	Min. Bay	3	6.3	.15	3000
48	T-3¼	Min. Scr.	4	2.0	.06	1000
49	T-3¼	Min. Bay	3	2.0	.06	1000
50	G-3½	Min. Scr.	2	7.5	.25	500
51	G-3½	Min. Bay	1	7.5	.22	1000
52	G-3½	Min. Scr.	2	7.5	.22	1000
53	G-3½	Min. Bay	1	14.4	.12	1000
55	G-4½	Min. Bay	1	7.0	.41	500
57	G-4½	Min. Bay	1	14.0	.24	1000
57X	G-4½	Min. Bay	1	14.0	.24	1000
63	G-6	S.C. Bay	17	7.0	.63	1000
81	G-6	S.C. Bay	17	6.5	1.02	500
1458	G-5	Min. Bay	17	20.0	.25	250
1489	T-5	S.C. Bay	18	6.5	2.75	125
1490	T-3¼	Min. Bay	3	3.2	.16	3000
1618	S-8	D.C. Bay	16	6.4	21 C.P.	200
1648	S-8	D.C. Bay	16	8.0	21 C.P.	200
1815	T-3¼	Min. Bay	3	14.0	.20	3000
1822	T-3¼	Min. Bay	3	36.0	.10	1000
1847	T-3¼	Min. Bay	3	6.3	.15	20000
1866	T-3¼	Min. Bay	3	6.3	.24	L
1891	T-3¼	Min. Bay	3	14.0	.24	500
1892	T-3¼	Min. Bay	3	14.0	.12	L

FLASHLIGHT AND LANTERN LAMPS

PR-2	B-3½	Min. Flgd.	6	2.4	.50	15
PR-3	B-3½	Min. Flgd.	6	3.6	.50	15
PR-4	B-3½	Min. Flgd.	6	2.3	.27	10
PR-6	B-3½	Min. Flgd.	6	2.5	.30	30
PR-7	B-3½	Min. Flgd.	6	3.8	.30	30
PR-12	B-3½	Min. Flgd.	6	6.0	.50	15
PR-13	B-3½	Min. Flgd.	6	4.75	.50	15
13	G-3½	Min. Scr.	2	3.8	.30	15
14	G-3½	Min. Scr.	2	2.5	.30	15
27	G-4½	Min. Scr.	2	5.0	.30	30
31	G-4½	Min. Scr.	2	6.15	.30	15
112	TL-3	Min. Scr.	5	1.1	.22	5
123	G-3½	Min. Scr.	2	1.2	.30	10
222	TL-3	Min. Scr.	5	2.2	.25	5
425	G-4½	Min. Scr.	2	5.0	.50	15
502	G-4½	Min. Scr.	2	5.1	.15	100

SMALL STANDARD VOLTAGE LAMPS

Lamp No.	Watts	Bulb	Fig.	Base	Voltage
3S-6/5	3	S6	—	Canda.	110-125
6T4½/1	6	T-4½	4	Canda.	110-125
6S6	6	S-6	15	Canda.	110-125
6S6/D.C.	6	S-6	13	D.C. Bay	110-125
7C7	7	C-7	22	Canda.	110-125
10C7	10	C-7	22	Canda.	110-125
10C7/D.C.	10	C-7	14	D.C. Bay	110-125
10S6/10	10	S-6	15	Canda.	230-250
10S6/D.C.	10	S-6	13	D.C. Bay	230-250

AIRCRAFT AND SPECIAL LAMPS

Lamp No.	Bulb	Base	Fig.	Volts	Amps or Candle-Power	Hrs. Life
301	G-5	S.C. Bay	17	28	3 C.P.	500
302	G-5	D.C. Bay	17	28	3 C.P.	500
303	G-6	S.C. Bay	17	28	6 C.P.	500
304	G-6	D.C. Bay	17	28	6 C.P.	500
305	S-8	S.C. Bay	16	28	15 C.P.	300
306	S-8	D.C. Bay	16	28	15 C.P.	300
307	S-8	S.C. Bay	16	28	21 C.P.	300
307F	S-8	S.C. Bay	16	28	21 C.P.	300
308	S-8	D.C. Bay	16	28	21 C.P.	300
309	S-11	S.C. Bay	16	28	32 C.P.	300
310	S-11	D.C. Bay	16	28	32 C.P.	300

AIRCRAFT AND SPECIAL LAMPS (cont.)

Lamp No.	Bulb	Base	Fig.	Volts	Amps or Candle-Power	Hrs. Life
311	S-11	S.C. Bay	16	28	50 C.P.	300
312	S-11	D.C. Bay	16	28	50 C.P.	300
313	T-3¼	Min. Bay	3	28	.17	500
313R	T-3¼	Min. Bay	3	28	.17	500
323	T-1¾	Special	11	3	.19	350
323R	T-1¾	Special	11	3	.19	350
325	T-1¾	Special	21	3	.19	350
327LSV	T-1¾	Mid. Flgd.	7	28	.06	25000
328	T-1¾	Mid. Flgd.	7	6	.20	500
328L	T-1¾	Mid. Flgd.	7	6	.20	3000
329	T-1¾	Special	21	2.5	.40	30
330	T-1¾	Mid. Flgd.	7	14	.08	750
331	T-1¾	Mid. Flgd.	7	1.35	.06	500
332	T-1¾	Mid. Flgd.	7	6	.20	500
334	T-1¾	Mid. Grvd.	10	28	.04	1000
335	T-1¾	Mid. Scr.	8	28	.04	1000
336	T-1¾	Mid. Grvd.	10	14	.08	750
337	T-1¾	Mid. Grvd.	10	6	.20	500
337L	T-1¾	Mid. Grvd.	10	6	.20	3000
338	T-1¾	Mid. Flgd.	7	2.7	.06	500
342	T-1¾	Mid. Scr.	8	6	.04	1000
344	T-1¾	Mid. Flgd.	7	10	.015	L
345	T-1¾	Mid. Flgd.	7	6	.04	1000
CM-381	T-1¾	Mid. Flgd.	7	6.3	.20	50000
CM-382	T-1¾	Mid. Flgd.	7	14.0	.08	50000
CM8-725	T-¾	Unbased	19	5.0	.115	16000
1251	G-6	S.C. Bay	17	28	3 C.P.	1000
1768	T-1¾	Mid. Scr.	8	6.0	.20	500
1768L	T-1¾	Mid. Scr.	8	6.0	.20	3000
1769	T-1¾	Mid. Scr.	8	2.5	.20	500
1770	T-1¾	Mid. Scr.	8	6.3	.075	500
1816	T-3¼	Min. Bay	3	13	.33	1000
1819	T-3¼	Min. Bay	3	28	.035	1000
1820	T-3¼	Min. Bay	3	28	.10	1000
1829	T-3¼	Min. Bay	3	28	.07	1000

SPECIAL ULTRAMINIATURE LAMPS

With T1 bulb and rated at 5 volts. All conforming to MS24367 (*) or MS 24515 (†).

Lamp No.	Base	Fig.	Candle Power	Hrs. Life
CM8-680*	Unbased	19	.032 ± 25%	L
CM8-715*	Unbased	19	.147 ± 15%	L
CM8-682†	Special	20	.029 ± 25%	L
CM8-718†	Special	20	.132 ± 25%	L
CM8-685†	Special	20	.048 ± 25%	L
CM8-714†	Special	20	.080 ± 25%	L
CM8-683*	Unbased	19	.053 ± 25%	L
CM8-713*	Unbased	19	.088 ± 25%	L
CM8-682 AS15†	Special	20	.029 ± 15%	L
CM8-685 AS15†	Special	20	.048 ± 15%	L
CM8-714 AS15†	Special	20	.080 ± 15%	L
CM8-718 AS15†	Special	20	.132 ± 15%	L
CM8-680 AS15*	Unbased	19	.032 ± 15%	L
CM8-683 AS15*	Unbased	19	.053 ± 15%	L
CM8-713 AS15*	Unbased	19	.088 ± 15%	L
CM8-715 AS15*	Unbased	19	.147 ± 15%	L

POPULAR NEON GLOW LAMPS

Lamp No.	Watts or MA	Bulb No.	Base	Fig.	Series Resistor Ohms	Life
NE-2	1/25	T-2	Unbsd.	9	200K	25000
NE-2A	1/25	T-2	Unbsd.	9	200K	25000
NE-2D	1/10	T-2	Mid. Flg.	7	62K	5000
NE-2E	1/10	T-2	Unbsd.	9	62K	5000
NE-2H	1/4	T-2	Unbsd.	9	25K	5000
NE-2J	1/4	T-2	Mid. Flg.	7	25K	5000
NE-2X	1/10	T-2	Unbsd.	9	62K	5000
NE-45	1/4	T-4½	Canda.	4	30K	7500
NE-48	1/4	T-4½	D.C. Bay	3	30K	7500
NE-51	1/25	T-3¼	Min. Bay	3	200K	15000
NE-51H	1/4	T-3¼	Min. Bay	3	25K	5000
NE-57	1/4	T-4½	Canda.	4	30K	5000

NOTE: "L" in "Hrs. Life" column indicates extremely long life far in excess of 60,000 hrs. at rated voltage.

MINIATURE LAMPS

PANEL, PILOT, AND FLASHLIGHT LAMPS



Lamp No.	Bulb	Base§	Design Volts	Design Amps.	Net Price* Each	Net Price* Box 10
PR2•	B-3½	S.C. Min. flanged	2.38	0.50	$0.20	$1.22
PR3•	B-3½	S.C. Min. flanged	3.57	.50	.20	1.22
PR4•	B-3½	S.C. Min. flanged	2.33	.27	.20	1.22
PR6•	B-3½	S.C. Min. flanged	2.47	.30	.20	1.22
PR7	B-3½	S.C. Min. flanged	3.7	.30	.25	1.52
PR12•	B-3½	S.C. Min. flanged	5.95	.50	.20	1.22
PR13	B-3½	S.C. Min. flanged	4.75	.50	.20	1.22
6	S-8	D.C. bayonet	6.4	3.00	.35	2.10
8	S-8	D.C. bayonet	8.0	2.20	.35	2.10
10	G-3½	Min. two-pin	2.5	.50	.26	1.59
13	G-3½	Min. screw	3.7	.30	.17	1.04
14•	G-3½	Min. screw	2.47	.30	.17	1.04
27	G-4½	Min. screw	4.9	.30	.20	1.22
31	G-4½	Min. screw	6.15	.30	.22	1.33
39	T-3¼	Min. bayonet	6.3	.36	.35	1.99
40•	T-3¼	Min. screw	6.3	.15	.14	.85
41	T-3¼	Min. screw	2.5	.50	.22	1.34
42	T-3¼	Min. screw	3.2	.35	.27	1.67
43	T-3¼	Min. bayonet	2.5	.50	.22	1.34
44•	T-3¼	Min. bayonet	6.3	.25	.14	.85
45•	T-3¼	Min. bayonet	3.2	.35	.18	1.12
46•	T-3¼	Min. screw	6.3	.25	.14	.85
47•	T-3¼	Min. bayonet	6.3	.15	.14	.85
48	T-3¼	Min. screw	2.0	.06	.22	1.34
49•	T-3¼	Min. bayonet	2.0	.06	.18	1.12
50	G-3½	Min. screw	7.5	.22	.15	.92
51•	G-3½	Min. bayonet	7.5	.22	.13	.82
53•	G-3½	Min. bayonet	14.4	.12	.13	.82
55•	G-4½	Min. bayonet	7.0	.41	.13	.82
57•	G-4½	Min. bayonet	14.0	.24	.13	.82
57X•	G-4½	Min. bayonet	14	.24	.17	1.05
67•	G-6	S.C. bayonet	13.5	.59	.17	1.05
67K	G-6	Candelabra screw	13.5	.41	.44	2.65
71K	G-6	Candelabra screw	22	.18	.35	1.99
112	TL-3	Min. screw	1.2	.22	.17	1.04
123	G-3½	Min. screw	1.25	.30	.17	1.04
131	G-3½	Min. screw	1.3	.10	.18	1.12
136	G-4½	Min. screw	1.25	.60	.20	1.22
159	T-3¼	Wedge	6.3	.15	.22	1.33
222•	TL-3	Min. screw	2.25	.25	.17	1.04
223•	FE-3¾	Min. screw	2.25	.25	.20	1.22
224	TL-2¾	Special 1½-turn thd.	2.15	.22	.20	1.22
233	G-3½	Min. screw	2.33	.27	.20	1.22
243	TL-3	Min. screw	2.33	.27	.20	1.22
259	T-3¼	Wedge	6.3	.25	.20	1.22
263X	G-3½	Min. screw	2.65	.30	.27	1.67
313•	T-3¼	Min. bayonet	28	.17	.31	1.87
327•	T-1¾	S.C. midget flanged	28	.04	.72	4.37
328•	T-1¾	S.C. midget flanged	6	.20	.56	3.42
331	T-1¾	S.C. midget flanged	1.35	.06	.87	5.29
338	T-1¾	S.C. midget flanged	2.7	.06	.87	5.29
345	T-1¾	S.C. midget flanged	6	.04	1.50	9.25
363	G-4½	Min. bayonet	14	.20	.22	1.33
401	G-4½	Min. screw, flasher	1.25	.22	.35	1.99
405	G-4½	Min. screw, flasher	6.5	.50	.27	1.67
406	G-4½	Min. screw, flasher	2.6	.30	.22	1.33
407	G-4½	Min. screw, flasher	4.9	.30	.20	1.22
425	G-4½	Min. screw	5	.50	.20	1.22
428	G-4½	Min. screw	12.5	.25	.17	1.04
431R†	G-4½	Min. bayonet	14	.25	.27	1.67
432	G-4½	Min. screw	18	.25	.22	1.33
432G‡	G-4½	Min. screw	18	.25	.35	1.99
432R†	G-4½	Min. screw	18	.25	.27	1.67
433	G-4½	Min. bayonet	18	.25	.27	1.67
502	G-4½	Min. screw	5.1	.15	.17	1.04
509K	G-6	Candelabra screw	24	.18	.27	1.67
605	G-4½	Min. screw	6.15	.50	.20	1.22
965	T-4½	Min. screw	9.84	.50	.25	1.53
1000	RP-11	D.C. bayonet	6.2	3.87	1.14	6.95
1034•	S-8	D.C. indexing (2-pos. taillight)	12.8 14	1.80 .51	.35	2.10
1154•	S-8	D.C. indexing (2-pos. taillight)	6.4 7.0	2.63 .75	.39	2.36
1224K	G-6	Candelabra screw	32	.16	.54	3.30
1240	G-16½	D.C. prefocus	32	3.5	1.90	11.60
1404	G-6	S.C. bayonet	10	.09	.49	2.98
1408	T-3¼	Min. bayonet	10	.13	.27	1.67
1446	G-3½	Min. screw	12	.20	.25	1.53
1447	G-3½	Min. screw	8	.15	.20	1.22
1449	G-3½	Min. screw	14	.20	.16	.99
1458	G-5	Min. bayonet	20	.25	.27	1.67
1474	T-3	Min. screw	14	.17	.35	2.14
1476	T-3	Min. screw	18	.17	.44	2.65
1477	T-3	Min. screw	24	.17	.54	3.30
1487	T-3¼	Min. screw	14	.20	.25	1.53
1488	T-3¼	Min. bayonet	14	.15	.27	1.67
1490	T-3¼	Min. bayonet	3.2	.16	.18	1.12
1491	G-8	D.C. bayonet	2.4	.80	.49	2.98
1493	S-8	D.C. bayonet	6.5	2.75	1.05	6.42
1630	S-8	D.C. prefocus	6.5	2.75	1.40	8.55
1651	S-8	S.C. bayonet	5	.60	.65	3.98
1724	S-11	D.C. bayonet	6.2	4.50	.87	5.29
1763	S-11	S.C. prefocus	6.1	4.10	1.20	7.60
1767	T-1¾	Midget screw	2.5	.20	.65	3.98
1768	T-1¾	Midget screw	6	.20	.90	5.50
1769	T-1¾	Midget screw	2.5	.20	.87	5.29
1775	T-1¾	Midget screw	6.3	.075	.87	5.29
1809	T-3¼	Min. bayonet	2	.06	.54	3.30
1813	T-3¼	Min. bayonet	14.4	.10	.25	1.53
1815•	T-3¼	Min. bayonet	14	.20	.20	1.22
1819•	T-3¼	Min. bayonet	28	.04	.36	2.18
1822	T-3¼	Min. bayonet	36	.10	.60	3.67
1828	T-3¼	Min. bayonet	37.5	.05	.65	3.98
1829•	T-3¼	Min. bayonet	28	.07	.35	2.14
1835	T-3¼	Min. bayonee	55	.05	.65	3.98
1847•	T-3¼	Min. bayonet	6.3	.15	.18	1.12
1850	T-3¼	Min. bayonet	5	.09	.25	1.53
1855	T-4½	Min. bayonet	6.3	.80	.35	1.99
1866	T-3¾	Min. bayonet	6.3	.25	.22	1.33
1881	T-3¼	Min. bayonet	15.5	.24	.18	1.12
1891•	T-3¼	Min. bayonet	14	.24	.16	1.00
1892	T-3¼	Min. bayonet	14.4	.12	.25	1.53
1898	T-3¼	Min. bayonet	14	.33	.35	2.14

†Outside coated red. ‡Outside coated green. §S.C. indicates single contact; D.C., double contact; Min., miniature. **•Popular Types. *FET included where applicable.**

NEON INDICATING GLOW LAMPS

Gaseous-discharge type for use as indicators. Average useful life, 25,000 hours AC; Types NE-17, 45, 48, 57, 58, 7,500 hours; Types NE-30, 34, 56, 79, 10,000 hours; Type NE-51, 15,000 hours. DC is approximately 60% of AC values. **Ambient Temperature:** Not to exceed 300°F.

Lamp No.	Nom. Watts	Volts (Circ.)	Bulb (Clear)	Base	Res.¶ Ohms	Net Each*
A1B	1/25	110-125	T-2	Wire term.	200K	$0.14
A1Cπ	1/10	110-125	T-2	Wire term.	68K	.14
NE-2 (A1A)	1/17	110-125	T-2	Wire term.	150K	.10
NE-2A (A2A)	1/25	110-125	T-2	Wire term.	200K	.10
NE-2D (C7A)	1/15	110-125	T-2φ	SC Mid.Fig.	110K	.82
NE-2E (A9A)	1/15	110-125	T-2φ	Wire term.	100K	.10
NE-2H (C2A)π	1/4	110-125	T-2φ	Wire term.	30K	.12
NE-2J (C9A)π	1/4	110-125	T-2φ	SC Mid.Fig.	30K	.82
NE-2M (K2A)	1/17	110-125	T-2θ	Wire term.	150K	.34
NE-2P (K3A)π	1/4	110-125	T-2θ	Wire term.	33K	.34
NE-2V (A2B)	1/15	110-125	T-2	Wire term.	100K	.14
NE-17 (B5A)	1/4	110-125	T-4½	DC Bay.	30K	.90
NE-30 (J5A)	1	110-125	S-11	Med. Scr.#	None	1.20
NE-32 (L5A)	1	110-125	G-10	DC Bay.	7.5K	1.20
NE-34 (R2A)	2	110-125	S-14	Med. Scr.	None	1.85
NE-40 (R6A)	3	110-125	S-14	Med. Scr.	None	2.70
NE-45 (B7A)	1/4	110-125	T-4½	Cand. Scr.	None	.85
NE-48 (B9A)	1/4	110-125	T-4½	DC Bay.	30K	.70
NE-51 (B1A)	1/25	110-125	T-3¼	Min. Bay.	200K	.21
NE-51H (B2A)π	1/7	110-125	T-3¼	Min. Bay.	47K	.23
NE-56 (J9A)	1	220-250	S-11	Med. Scr.#	None	1.25
NE-57 (F3A)	1/4	110-125	T-4½	Cand. Scr.#	None	.99
NE-58 (F4A)	1/2	220-250	T-4½	Cand. Scr.	None	.95
NE-79 (R1A)	1	110-125	S-7	DC Bay.	7.5K	1.35
NE-84 (K1A)π	1/4	110-125	T-2φ	Tel. slide	30K	.64
AC-DC ARGON INDICATOR LAMPS						
AR-1 (W1A)	2	110-125	S-14	Med. Scr.	None	$1.90
AR-3 (J2A)π	1/4	110-125	T-4½	Cand. Scr.	None	.85
AR-4 (J3A)π	1/4	110-125	T-4½	DC Bay.	15K	.75
AR-9 (K4A)	1/25	110-125	T-2	Wire term.	200K	.20

¶Lamps with screw base have proper ballast built-in. Those with bayonet base or wire terminals do not have them, but are to be supplied and attached by user. Resistance shown for normal operation at indicated circuit volts. φFormed tip bulb. τUse 135 v. minimum for satisfactory DC operation. θRound end bulb. #Center electrode connected to base shell. ***FET included.**

CIRCUIT COMPONENT NEON LAMPS

For use as voltage indicators, regulators, switching, etc. All ratings below are DC; all bulb types are T-2 except: NE-51S, NE-67 (T-4½). All have parallel-post electrodes (W-11), except NE-16, fireman's hat electrodes (P-3). **Ambient Temperature:** —00° F +165° F, limit.

Lamp No.	Starting Volts DC	Operating Volts DC	DC Ma	Base	Net Each
NE-2AS△ (4AA)	60-90	55°	.03	Wire term.	$0.20
NE-2L (3AA)	65-85	50τ°	0.3	Wire term.	.17
NE-2S△ (5AA)	60-90	40-74	0.3	Wire term.	.20
NE-23 (5AB)	60-90	59τ	0.3	Wire term.	.16
NE-68△ (5AC)	60-90	52-65	0.3	Wire term.	.40
NE-68A△ (5AD)	60-90	52-65	.1-.3	Wire term.	.38
NE-75 (3AC)	60-90	55τ°	0.4	Wire term.	.50
NE-76△ (5AG-A)	68-76	50-60	0.4	Wire term.	.50
NE-77ω (5BA)	Triode	Avg. 85	0.5	Wire term.	.55
NE-80△ (5AF)	60-80	50-58	0.1	Wire term.	.63
NE-81△ (5AG)	64-80	50-60	0.3	Wire term.	.40
NE-83△ (5AH)	60-100	65τ	10.0	Wire term.	.20
NE-86△ (5AJ)	55-90	55τ	1.5	Wire term.	.16
NE-96 (4AB)	120-150	60-80	0.5	Wire term.	.20
NE-97 (4AC)	110-140	60-80	0.5	Wire term.	.20
NE-3 (8AA)	55-90	55τ△	0.3	Tel. Slide	.63
NE-4 (8AB)	60-90	59τ	0.3	Tel. Slide	.40
NE-5 (8AC)	120-150	60-80	0.5	Tel. Slide	.43
NE-51S (6AB)	55-90	55τ°	0.2	Min. Bay.	.30
NE-67 (6AC)	55-90	56τ	0.2	Min. Bay.	.20
NE-16 (7AA)	67-87	53-65	1.5	DC Bay.	.63

τAverage, after 100 hours burning at rated current. individual lots may vary from average. △Leads are tinned. °Average greater than indicated value. ωWith 140-180 v. DC on outer electrode, lamp trigger with 140 v. DC trigger to cathode.

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THE COMPLETE LINE OF

DIALCO® INDICATOR LIGHTS

Foremost Manufacturer of Indicator Lights

DIALIGHT CORPORATION • BROOKLYN, N.Y. 11237

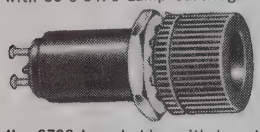
(Illustrations are approx. actual size)

DATALITES® – Ultra-Miniature Indicator Lights

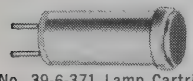
Mounts in 3/8" Clearance Hole



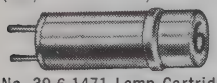
No. 7538 Lampholder complete with 39-6-1471 Lamp Cartridge



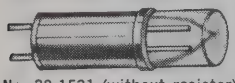
No. 8738 Lampholder with turret terminals



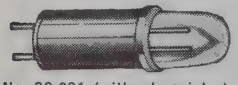
No. 39-6-371 Lamp Cartridge (flat, incandescent)



No. 39-6-1471 Lamp Cartridge (short cylind., incandescent)



No. 38-1531 (without resistor)
No. 45-56K-1531 (with resistor)



No. 38-931 (without resistor)
No. 45-56K-931 (with resistor)

HOT STAMPED LEGENDS

Short and Long Cylindrical lenses can be hot-stamped with one to three digits of standard size, as follows:
1 DIGIT, 11/64" high (14 pt. type)
2 DIGITS, 7/64" high (10 pt. type)
3 DIGITS, 5/64" high (8 pt. type)

These standard sizes of Legends will be provided in a uniform manner per order—i.e., the size of type will be determined by the longest legend indicated in each individual order.

With DIALCO'S Plug-in Lamp Cartridges or with Permanent Lamps (built-in)

Designed for the computer-automation industries

Datalites are made in 2 basic styles: *Lampholders* with DIALCO'S own plug-in *replaceable Lamp Cartridges*, or with *Built-in Neon Lamps*. Shown above: Lampholder No. 7538 which accommodates either the No. 38- or the No. 39- cartridges. A similar, slightly longer Lampholder — No. 7545 — accommodates the No. 45- cartridges. Single units mount in 3/8" clearance hole. Also available — *twin-lamp* assemblies which mount in 3/4" clearance hole . . . New long-life lamps are used in the plug-in cartridges. At most voltages, and for several current ratings, you may now specify 50,000 hour incandescent lamps. At higher voltages, where neon lamps may be used, 25,000 hour *minimum* may be attained with built-in resistors.

The **T-1¾ INCANDESCENT LAMPS** used in **DIALCO Lamp Cartridges** can be supplied in a wide range of voltages, including:

Voltage	Amperes	Hourly Rating
■ 1.35	0.06	500
■ 2.7	0.06	500
6♠	0.04	1000
6♠	0.20	1000
■ 6.3	0.20	3000
■10♠	0.014	6000+
■10♠	0.04	
14	0.08	750
18	0.04	1000
28	0.04	1000

■Should not be used with translucent lenses.

♠Since there are **three 6 volt lamps** and **two 10 volt lamps**, when ordering it is necessary to specify voltage and ampere rating from chart above; e.g. 39-**604**-1471, 39-**6**-1471, 39-**6.3**-1471, 39-**10**-1431, 39-**1004**-1431.

NEON CARTRIDGE Catalog Numbers—with NE-2E Lamps

LENS COLOR (Transparent)	STOVEPIPE (Without built-in resistor)	LONG CYL. (Without built-in resistor)	STOVEPIPE (With built-in resistor)	LONG CYL. (With built-in resistor)
Red	38-931	38-1531	45-56K-931	45-56K-1531

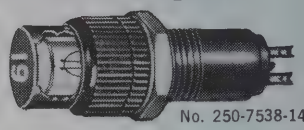
NOTE: To designate a unit with the **NE-2H** High Brightness lamp, add **H** to the Catalog Number; e.g., 38**H**-931 . . . 45**H**-22K-931 . . . 45**H**-33K-931.

INCANDESCENT CARTRIDGE Catalog Numbers

■LENS COLOR (Translucent)	■SHORT CYL. (Translucent)	■STOVEPIPE (Translucent)	■LONG CYL. (Translucent)	■FLAT (Translucent)
Red	39-6-1471	39-6-971	39-6-1571	39-6-371

■For **transparent** lenses, change next to last digit to **3**; e.g., 39-6-1431. For **Volts**, change mid digit (-6-) per lamp chart above; e.g., 39-**28**-1471.

LENS COLOR: The *final figure* in Catalogue Number indicates that the lens has RED color. When color other than red is desired, change this digit to a figure from the listing below . . . *Example:* 39-6-1476 (Light Yellow). Red — 1 . . . Green — 2 . . . Yellow (Amber) — 3 . . . Blue — 4 White Trans. — 5 . . . Light Yellow — 6 . . . Clear (Colorless) — 7.



No. 250-7538-1471

"Data Cap" Indicator Lights
Mount in 3/8" Clearance Hole

Series No. 250. Accommodates DIALCO'S own Lamp Cartridges — Short Cylindrical Incandescent, or Long Cylindrical Neon with or without built-in resistor.

Features: (1) A *rotatable* read-out Lens Cap Assembly with a cylindrical lens displaying a hot-stamped *legend* (see below) . . . (2) A Lampholder similar to *No. 7538* shown at left . . . (3) Accommodates a *clear* (colorless) Lamp Cartridge *without* a legend.

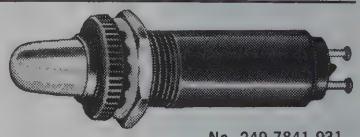
Advantages: If lamp fails, the Lamp Cartridge may be quickly replaced from front of panel. Since the Cartridge requires no hot-stamping, down time and costs are kept at a minimum . . . The Lens Cap is of the screw-on type. It is spring-mounted and *rotatable*, thus facilitating alignment of the legend *after* installation of the assembly. Choice of 7 lens colors; solder cup, turret, or Amp "53" terminals.

HOT STAMPED LEGENDS
(Digits, Letters or Symbols)

SHORT and LONG CYLINDRICAL lenses can be hot-stamped with one to three digits of standard size, as follows:
1 DIGIT, 13/64" high (18 pt. type) . . .
2 DIGITS, 11/64" high (14 pt. type) . . .
3 DIGITS, 9/64" high (12 pt. type) . . .
These standard sizes of Legends will be provided in a uniform manner per order —i.e., the size of type will be determined by the longest legend indicated in each individual order.
Standard—BLACK letters; but white, red, green, or blue letters can be supplied to order . . . Available—colored legends on black or gray lenses.

DATALITES with PERMANENT LAMPS

Built-in (not replaceable): Neon Lamps *NE-2E* or *NE-2H* (high brightness) *and* required current-limiting *resistor* . . . Units mount in 3/8" clearance hole from back of panel; two terminals; fully insulated; 5 lens colors; conform to applicable Mil. Specs. . . . Shown: No. 249-7841-931 *with built-in resistor* . . . Available—shorter unit, without resistor, No. 249-7840-931 . . . (For units with high brightness lamp, add *H* to Cat. No.; *Example:* 249-7841*H*-931)



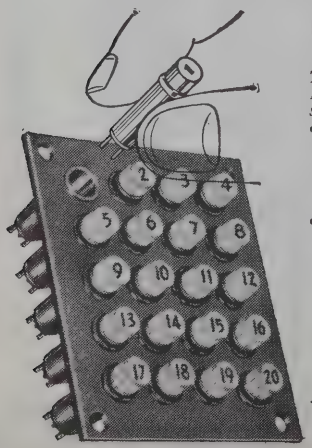
No. 249-7841-931
with built-in resistor

MULTIPLE INDICATORS in a Compact "Package"

Ready to install in a minimum of space

For Data-Processing Equipment, Computers, and Automation Applications

A Complete "Data Matrix" and "Data Strip" Manufacturing Service

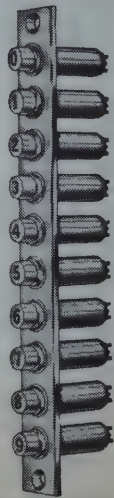


To expedite installation of multiple-indicators, let DIALCO perform the following manufacturing services for you:

- **Fabricate** a "Data Matrix" or "Data Strip" panel to your specifications . . . **Punch** the necessary holes therein for DIALCO Lamp Holders and your fuses, switches, screws, etc.
- **Mount** the required number of Lamp Holders on the panel for vertical or horizontal reading . . . **Lamp Holders** can be spaced on any center-to-center measuring from 7/16" up. (½" center-to-center spacing is standard, as shown on typical configurations illustrated) . . . **There is no basic or stock item;** we can supply from 2 to 40 Lamp Holders on a panel or strip.
- **Insert** required Lamp Cartridge into Lamp Holders.
- **Hot Stamp** or engrave legends on lenses (see above).

Lamp holders accommodate DIALCO'S Neon or Incandescent Lamp Cartridges (see above) . . . Each Lamp Holder has 2 Solder Cup terminals and is completely insulated (without the use of insulating shoulder washers); Turret, or AMP "53" Terminals can also be furnished.

MATERIALS AND FINISHES: Lamp Holder housing, panel or strip, and cartridge sleeve are aluminum with clear anodized finish . . . Option: black anodized finish or to specifications.



◀ "DATA MATRIX" No. DM-7538-20 (Approx. ½ actual size) **"DATA STRIP" No. DSV-7538-10 ▶**

For Complete Data, Request Catalog L-160E.

© U.C.P., Inc.

THE COMPLETE LINE OF

INDICATOR LIGHTS

DIALCO®

Foremost Manufacturer of Indicator Lights

DIALIGHT CORPORATION • BROOKLYN, N.Y. 11237

(Illustrations are approx. actual size)

When Connecting a Neon Light to a Circuit Having One Side Grounded, Always Connect the Hot Side of the Circuit to the Terminal Marked + (Center Contact).

Sub-Miniature Indicator Lights for NEON Lamps

NE-2D *(regular)*
NE-2J *(high brightness)*

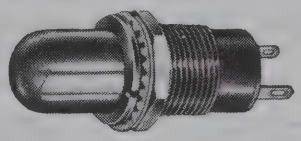
TWO TERMINALS — FULLY INSULATED . . . Meet or exceed environmental and operational requirements of MIL-L-6723 and MIL-L-3661.

For FRONT of Panel Insertion in 15/32" Clearance Hole

With Built-in Resistor

(A patented DIALCO feature—
U.S. Pat No. 2,421,321)

Conform to MS25257



Accommodates a T-2 Neon Glow Lamp: NE-2D (MS25252) for 105-125 Volts A.C. or D.C.; *for Catalog Numbers see below* . . . **NE-2J** (High Brightness) for 110-125 Volts A.C. only; *for Catalog Numbers, see* Catalog L-178

DIALCO Cat. No. WITHOUT LAMP	MS No. WITHOUT LAMP★	MS No. WITH LAMP★ MS25252-NE-2D	LENS COLOR
137-8836-933-552■	MS25257-2	MS25257-1	Aviation Yellow
137-8836-931-552■	MS25257-4	MS25257-3	Identification Red
137-8836-937-552■	MS25257-6	MS25257-5	Clear (Colorless)

■ With patented built-in resistor: 62K ± 10%.

★**MARKING:** The Part No. marked on the assembly is the Part No. for the complete assembly less lamp.

Also: Similar Series not covered by MS25257: For NE-2D lamp, with standard 62K built-in resistor . . . For NE-2J *(high brightness)* lamp, with standard 22K built-in resistor. See **Catalog L-178.**

The LIGHT SOURCE: Tiny Neon Glow Lamps NE-2D or NE-2J

Recommended resistor values:

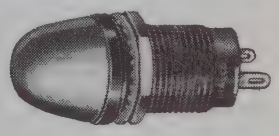
For NE-2D at 105-125 volts A.C. or D.C.
Bright light—62,000 ohms . . . . . Long life—100,000 ohms

For NE-2J (High Brightness) at 110-125 volts (A.C. only)
Bright light—22,000 ohms . . . . . Long life—33,000 ohms



For Front of Panel Mtg. in 15/32" Clearance Hole

ASSEMBLIES WITHOUT BUILT-IN RESISTOR LENS SHAPE	LENS FINISH	CATALOG NO.
Stovepipe	Transparent	137-8536-931-201
Cylindrical	Transparent	137-8536-1531-201



Without Built-in Resistor

The Series listed above is similar to the Series shown at the left, except that it has no built-in resistor or anti-rotation tab. Choice of 5 lens colors.

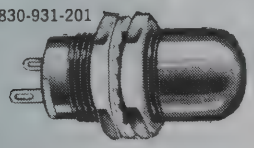
WATER-TIGHT ASSEMBLIES—Front Mtg. in 15/32" Clearance Hole

LENS COLOR	WITH BUILT-IN RESISTOR ACCOMMODATE NE-2D LAMP★	ACCOMMODATE NE-2J LAMP★★	WITHOUT BUILT-IN RESISTOR
Red	181-8836-931-553	181-8864-931-513	181-8536-931-503
Yellow (Amber)	181-8836-933-553	181-8864-933-513	181-8536-933-503
White Translucent	181-8836-935-553	181-8864-935-513	181-8536-935-503
Light Yellow	181-8836-936-553	181-8864-936-513	181-8536-936-503
Clear (Colorless)	181-8836-937-553	181-8864-937-513	181-8536-937-503

★62K standard ★★22K standard

Sub-Miniature Indicator Lights for T-1¾ Bulbs

101-3830-931-201

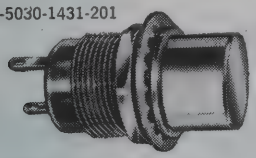


Mounts from Front or Back of Panel in a 15/32" Clearance Hole.

CAT. NO. with STOVEPIPE LENS LENS FINISH	Front or Back Mtg. in 15/32" hole	Front Mtg. in 17/32" hole
Transparent	101-3830-931-201	101-5030-931-201
Translucent	101-3830-971-201	101-5030-971-201
CAT. NO. with CYLINDRICAL LENS		
Transparent	140-3830-1431-201	140-5030-1431-201
Translucent	140-3830-1471-201	140-5030-1471-201

Water-tight Series (not illust.) also available:

140-5030-1431-201

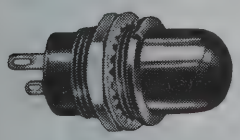


Mounts from Front of Panel in a 17/32" Clearance Hole.

Front Mtg. in 15/32" Clearance Hole

WATER-TIGHT ASSEMBLIES LENS SHAPE	LENS FINISH	CATALOG NO.
Stovepipe	Transparent	101-8430-931-203
	Translucent	101-8430-971-203
Cylindrical	Transparent	140-8430-1431-203
	Translucent	140-8430-1471-203

LENS COLOR:
See code at bottom right.



Front of Panel Insertion:
Requires a single 15/32" Clearance Hole

Anti-rotation Tab on face of flange prevents rotation of unit while nut is being tightened.

DIALCO Catalog No.	MS No. WITHOUT LAMP★	CAP COLOR
162-8430-933-502	MS25256-2	Aviation Yellow
162-8430-932-502	MS25256-4	Aviation Green
162-8430-931-502	MS25256-6	Identification Red
162-8430-937-502	MS25256-8	Aviation White
162-8430-975-502	MS25256-10	Translucent White
162-8430-934-502	MS25256-12	Aviation Blue

★**MARKING:** The Part No. marked on the assembly is the Part No. for the complete assembly less lamp.

Note: The inclusion of MS25237-327 lamp in MS25256 series of assemblies, formerly designated by the use of odd numbered suffixes –1 through –11 inclusive, is now superseded by the use of suffix –327 (28 volts at .04 amp) or –328 (6 volts at .20 amp) after the even numbered dash number.

Examples:
MS25256-2-**327**;
MS25256-10-**328**.



Sub-Sub-Miniatures

New . . . Series 252-9951-971

Conforms to Drawing MS25446 . . . Requires only .193" Panel Mounting Clearance Hole . . . For complete data, refer to Catalog L-168A.

MIDGET FLANGED BASE INCANDESCENT



MANUFACTURER'S RATINGS

LAMP NO.	MILITARY NO.	VOLTS	AMPS	LIFE HOURS
331★	———	1.35	.06	500
338★	———	2.7	.06	500
375★	———	3.0	.015	20000
328	MS25237	6.0	.20	1000
345	———	6.0	.04	1000
349	———	6.3	.20	3000
380★	———	6.3	.04	50000
381	———	6.3	.20	50000
344★	———	10.0	.014	50000
367★	———	10.0	.04	20000
330	———	14.0	.08	750
382	———	14.0	.08	50000
370	———	18.0	.04	1000
327	MS25237	28.0	.04	1000
387	———	28.0	.04	25000

★Low candlepower types.
Useful in special situations only.

Two Terminals — Fully Insulated

Meet or exceed environmental and operational requirements of MIL-L-6723 and MIL-L-3661.

RUGGED CONSTRUCTION

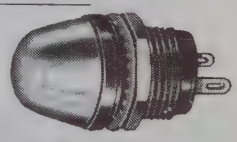
Lamp, socket, and all connections are completely insulated from the bushing and panel to which it is attached. The use of phenolic material for military specification grade assures permanent isolation from ground.

These assemblies are solidly made to withstand usual vibration and corrosion resistance tests.

Order Complete with Lamp. Specify Lamp Number.

New WATER-TIGHT *Series*

Series No. 177-8430-971-503, is designed to be water-tight, oil-tight, and dust-tight on face of panel. Mounts from front of panel in 15/32" clearance hole. Two 1/16" thick neoprene retained "O" rings assure absolute seal. Stovepipe lens; choice of 7 colors.



DIMMERS — MECHANICAL or POLAROID

Illustrated: Units for *Front* of Panel Insertion; require a 17/32" clearance hole. Units for *Back* of Panel Insertion require a 15/32" clearance hole.



DIMMING
Front of Panel Insertion



NON-DIMMING

CATALOGUE NUMBERS DIMMING	(Back insert.) Lens, unfrosted	(Front insert.) Lens, unfrosted
Semi-blackout	109-3830-131-201	109-5030-131-201
Blackout	108-3830-131-201	108-5030-131-201
Polaroid	112-3830-131-201	112-5030-131-201
NON-DIMMING	111-3830-131-201	111-5030-131-201

For "Lens, backfrosted," change the –131 to –111.
For "Lens, frosted all over," change the –131 to –121.

LENS COLOR: The *final figure before the last dash* in Catalog Number indicates that the lens has RED color. When color other than red is desired, change this digit to a figure from the listing below. Note that white lenses are translucent and are always furnished unfrosted.
(For example: 111-3830-135-201).

Red — 1 . . . Green — 2 . . . Yellow (Amber) — 3 . . . Blue — 4 . . . White Trans. — 5 . . . Light Yellow — 6 . . . Clear (Colorless) — 7

THE COMPLETE LINE OF

DIALCO® INDICATOR LIGHTS

Foremost Manufacturer of Indicator Lights

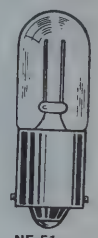
DIALIGHT CORPORATION • BROOKLYN, N.Y. 11237

(Illustrations are approx. actual size)

When Connecting a Neon Light to a Circuit Having One Side Grounded, Always Connect the Hot Side of the Circuit to the Terminal Marked + (Center Contact).

ASSEMBLIES with BUILT-IN RESISTORS (U. S. Patent No. 2,421,321)

For the T-3¼ NEON GLOW LAMP FOR VOLTAGES UP TO 250



NE-51 or NE-51H (High Brightness)

For operation on 105-125V. or 210-250V. . . . The required resistor is an integral part of the unit — BUILT IN. Also, simple external resistors for all higher voltages.

Assemblies Conform to All Applicable Military Specifications.

NOTE: The catalog numbers shown on this page designate complete assemblies accommodating the **standard brightness NE-51** neon glow lamp. To designate a unit to accommodate the **high brightness NE-51H** lamp, change "**08**" to "**63**" in the catalog number. ALSO NOTE—when so doing, it is necessary to change the **second digit** in the **catalog number suffix** from "**4**" to "**1**". This indicates a standard 22K resistor.

Example: 95463-931-311.

75W., 125V.
75W., 250V.

BUILT-IN RESISTOR VALUES for the NE-51 TYPE GLOW LAMPS (Values in ohms)

NE-51H (High Brightness)			NE-51 (Standard Brightness)	
Circuit volts applied to terminals	110–125 AC	210–250 AC-DC	Circuit volts applied to terminals	105–125 AC-DC
BRIGHT LIGHT	■ 22,000	68,000	BRIGHT LIGHT	■ 56,000
LONG LAMP LIFE	33,000	100,000	LONG LAMP LIFE	100,000

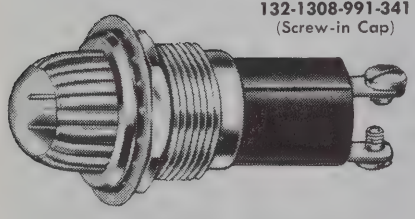
■ **Standard values of patented built-in resistors. (Other values optional).**

PROPER CHOICE OF LAMP AND BUILT-IN RESISTOR VALUES: The NE-51 glow lamp types are shown with resistor tables. Lamps are the *standard NE-51* and the *new NE-51H*. The *high brightness lamp* may be operated at about three times the level of current that may be applied to the standard lamp and it will produce more than eight times as much light.

* The **NE-51H** Neon Glow Lamp is not recommended for use on **DC** circuits under 160 V.

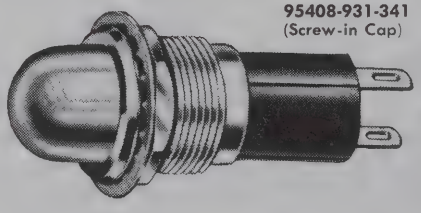
External resistors will be furnished which will permit use of these pilot lights on voltages higher than 250 volts.

For Mounting in 11/16" Clearance Hole *(For Front of Panel Insertion)*



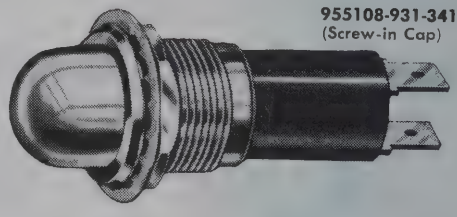
132-1308-991-341 (Screw-in Cap)

With SCREW TERMINALS



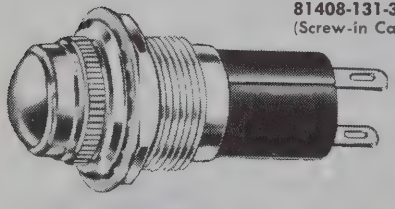
95408-931-341 (Screw-in Cap)

With SOLDERING TERMINALS

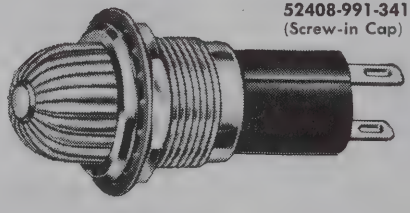


955108-931-341 (Screw-in Cap)

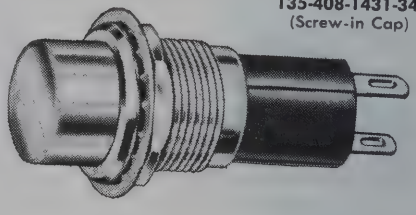
With QUICK-CONNECT TERMINALS



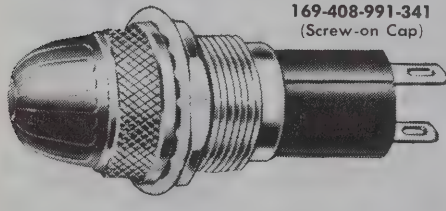
81408-131-341 (Screw-in Cap)



52408-991-341 (Screw-in Cap)



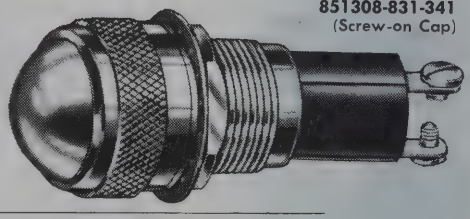
135-408-1431-341 (Screw-in Cap)



169-408-991-341 (Screw-on Cap)

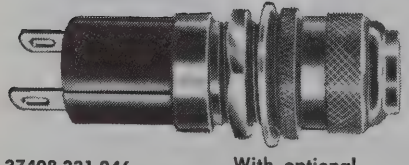
LENS COLOR: The *final figure before the last dash* in the Catalog Number indicates that the lens has RED color. When color other than red is desired, change this digit to a figure from the listing below. Note: White lenses are translucent and are always furnished unfrosted. (For example: 81408-135-341).

Red—1; Yellow (Amber)—3;
White Translucent—5;
Light Yellow—6; Clear (Colorless)—7.



851308-831-341 (Screw-on Cap)

9/16" Assemblies mount from BACK of panel only



37408-331-246 (Screw-on Cap)

With optional hardware

Assemblies which mount in a 9/16" clearance hole are useful where close center-to-center spacing is required.

Standard Hardware consists of 3 knurled rings . . . *Optional Hardware* consists of 1 ring, 1 lockwasher, and 1 mounting nut . . . Specify hardware desired.

For details, refer to Catalog L-161F.



With standard hardware

171308-931-245 (Screw-on Cap)

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ASSEMBLIES for T-3¼ INCANDESCENT LAMP

2 to 55V. (No Higher)

For details, refer to Catalog L-161F.

With Miniature Bayonet Base

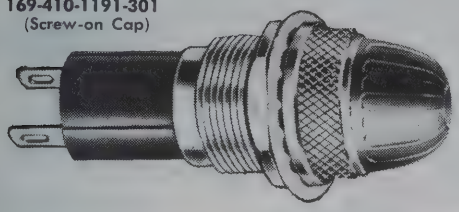
Conform to All Applicable Military Specifications

For Mounting in 11/16" Clearance Hole

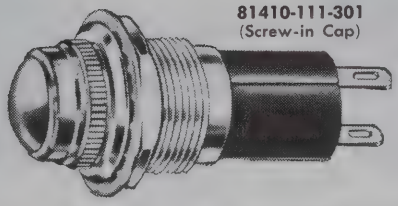
For Front of Panel Insertion

75W., 125V.

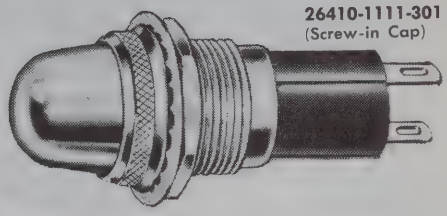
169-410-1191-301
(Screw-on Cap)



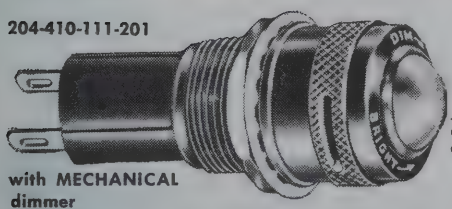
81410-111-301
(Screw-in Cap)



26410-1111-301
(Screw-in Cap)



204-410-111-201



with MECHANICAL dimmer

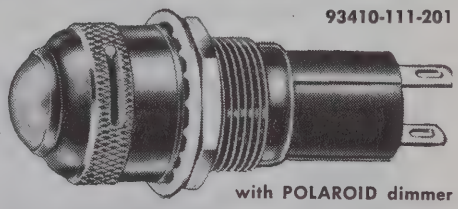
Mechanical and Polaroid Dimmers

Mount in 11/16" clearance hole

Any of the Dialco mechanical dimmers can be supplied either for *"Com,plete Blackout"* or for *"Semi-Blackout"*. Typical Catalogue Numbers are as follows:

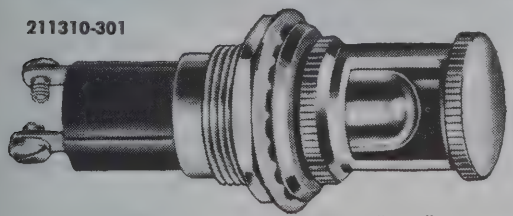
203-410-111-201 ("Complete Blackout")
204-410-111-201 ("Semi-Blackout")

93410-111-201



with POLAROID dimmer

211310-301



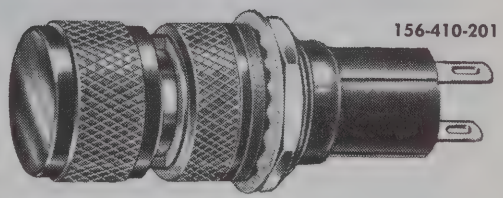
PUSH-IN CAP with opening ½" x ½"
Typical Assembly. Other Catalog Nos. are assigned to cover other optional features.

Assemblies with Light Shield Caps

Mount in 11/16" clearance hole

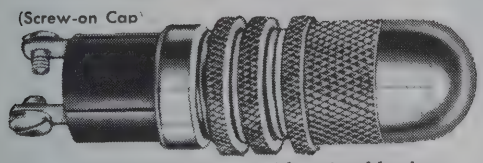
Complete Series available with the following Push-in Caps: With ONE opening 3/32" x 1/2", 3/16" x 1/2", 3/16" x 9/16", 1/2" x 1/2" . . . With TWO openings 1/2" x 1/2" . . . Also Screw-in Cap with opening 3/16" x 1/2", and Friction-Fit Cap with opening 1/8" x 1/2".

156-410-201



PUSH-PULL CAP
Variable Opening—from 0" to ¼" x ⅜"

(Screw-on Cap)



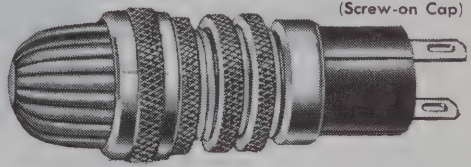
with standard hardware: **171310-931-205**
with optional hardware: **171310-931-206**

For Mounting in 9/16" Clearance Hole

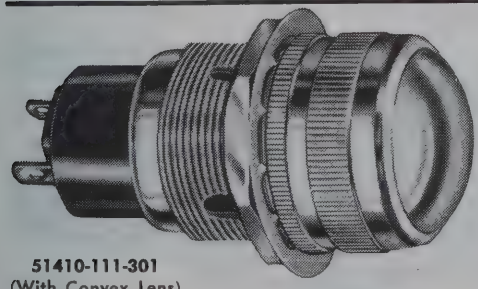
(from BACK of panel)

Standard Hardware consists of 3 knurled rings . . . *Optional Hardware* consists of 1 ring, 1 lockwasher, and 1 mounting nut.

(Screw-on Cap)



with standard hardware: **70410-1191-205**
with optional hardware: **70410-1191-206**

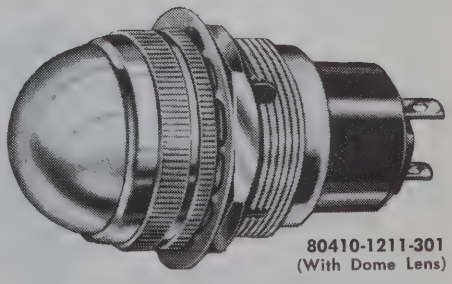


51410-111-301
(With Convex Lens)

For Mounting in 1" Clearance Hole

Complete Series available with Screw-on Caps (as illustrated), Friction-Fit Caps, or Bayonet Caps. Choice of 9 Lens Types: Flat, Dome, Stovepipe, Faceted, Torpedo Faceted, Torpedo, Large Torpedo, Small Convex, Large Convex. 7 Lens Colors (see below).

GLASS LENSES: Plastic lenses are not recommended for use with lamps rated over 2 watts.



80410-1211-301
(With Dome Lens)

LENS COLOR: The *final figure before the last dash* in the above numbers indicates that the lens has RED color. When color other than red is desired, change this digit to a figure from the listing below. Note that white lenses are translucent and are always furnished unfrosted. For example: 80410-1235-301).

Red—1; Green—2; Yellow (Amber)—3; Blue—4; White Translucent—5; Light Yellow—6; Clear (Colorless)—7.

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(Illustrations are approx. actual size)

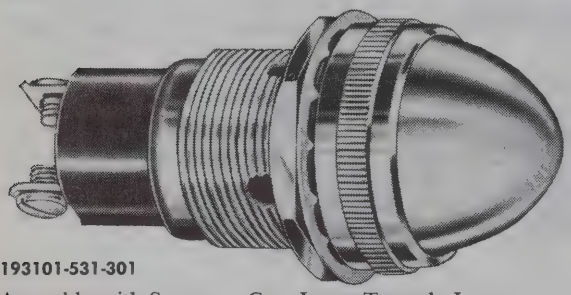
ASSEMBLIES for INCANDESCENT LAMPS

(with double contact bayonet base or candelabra screw base)

75W., 125V.

Range of Voltages at 6 watts) . . . **G-6** Double Contact Bayonet Base Lamps: 32 V. max.
S-6 Double Contact Bayonet Base Lamps, or Candelabra Screw Base Lamps:
6, 12, 24, 32, 48, 70-80, 125, 130, 135, and 145 volts.

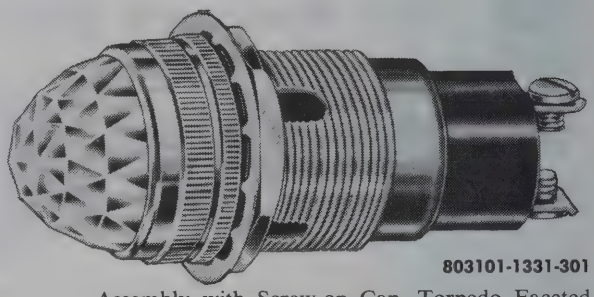
For details, refer to Catalog L-161F.



193101-531-301

Assembly with Screw-on Cap, Large Torpedo Lens, and Screw Terminals in protruding position.

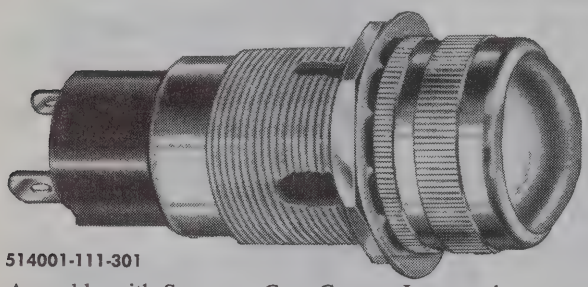
For Mounting in 1" Clearance Hole



803101-1331-301

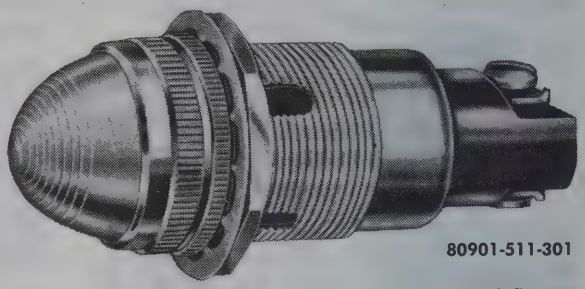
Assembly with Screw-on Cap, Torpedo Faceted Lens, and Screw Terminals in protruding position.

Typical assemblies for use with S-6 bulb with candelabra screw base



514001-111-301

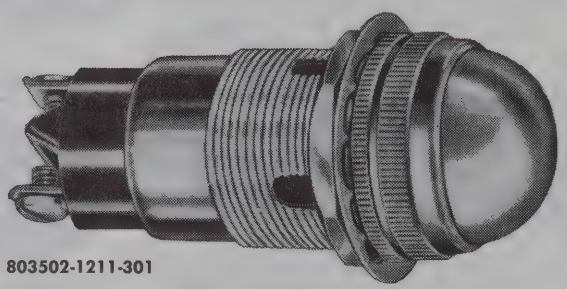
Assembly with Screw-on Cap, Convex Lens, and Soldering Terminals. Similar units available with Quick Connect Terminals.



80901-511-301

Assembly with Screw-on Cap, Torpedo Lens, and Screw Terminals in side position. Similar units available with screw terminals in protruding position (see above).

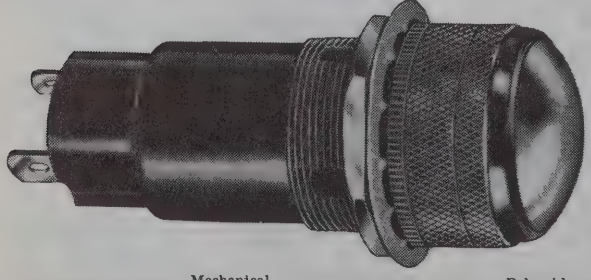
Typical assembly for use with S-6 double contact bayonet base incandescent lamps



803502-1211-301

Assembly with Screw-on Cap, Dome Lens, and Screw Terminals. Terminals may be specified as fixed type or moveable type.

DIMMERS and LIGHT SHIELDS



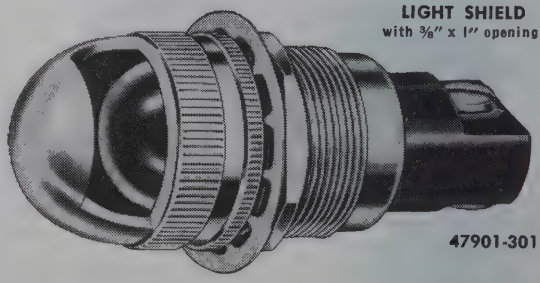
209-4001-111-201 Mechanical Dimmer

784001-111-201 Polaroid Dimmer

Typical assemblies for use with S-6 bulb with candelabra screw base

Shown are typical assemblies in a most extensive Series available only from DIALCO.

LIGHT SHIELD
with ⅜" x 1" opening



47901-301

LENS COLOR: The *final figure before the last dash* in the above numbers indicates that the lens has RED color. When color other than red is desired, change this digit to a figure from the listing below. Note that *white lenses* are translucent and are always furnished unfrosted. (For example: 80901-535-301).

Red—1; Green—2; Yellow (Amber)—3; Blue—4; White Translucent—5; Light Yellow—6; Clear (Colorless)—7.

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(Illustrations of indicator lights are approx. actual size)

OIL-TIGHT INDICATOR LIGHTS

75W., 125V.

OIL-TIGHT • WATER-TIGHT • DUST-TIGHT

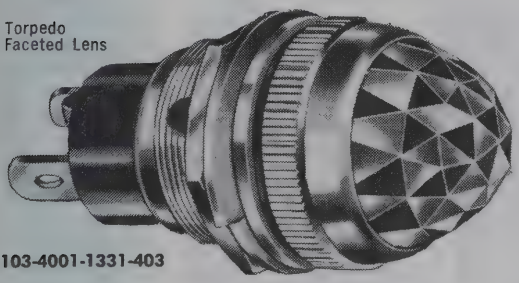
WITH RETAINED "O" RING SEAL CONSTRUCTION

•

For HEAVY DUTY INDUSTRIAL APPLICATIONS

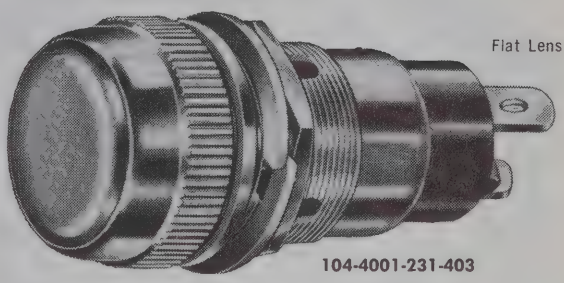
•

Torpedo Faceted Lens



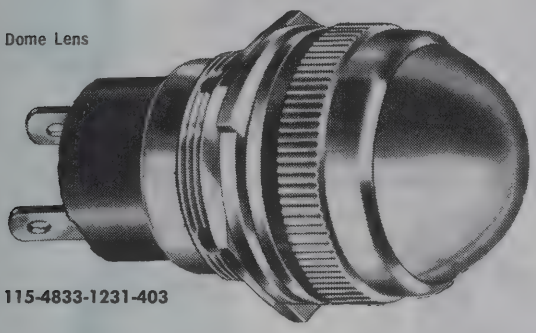
103-4001-1331-403

Flat Lens



104-4001-231-403

Dome Lens



115-4833-1231-403

For S-6 incandescent lamps with intermediate screw base.

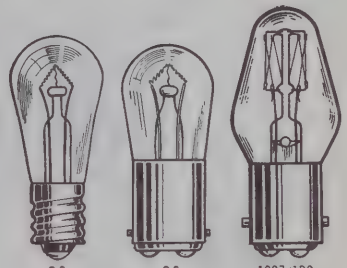
In this Series the larger base and socket offer adequate electrical clearance for 250 Volts. Large lens area provides stronger illumination and — with **flat** lens — more legible legend presentation. Also available with binding screw

Mount in 1" Clearance Hole

Rugged, designed for severe vibration conditions. Features include: One-piece solid brass mounting bushing . . . Three retained oil-proof elastomer seals (1 gasket and 2 "O" Rings) . . . Solid brass knurled lens holder with gasketed lens . . . High impact phenolic insulation . . . Rugged terminals—soldering or binding screw type . . . An Oil-Tight Adaptor Set (Cat. No. 1316-L) is available for mounting any 1" assembly in a 1 3/16" clearance hole.

Five lens types available: Torpedo, Torpedo Faceted, Dome, Stovepipe, or Flat lens. The **flat lens** can be used with **discs** inserted behind the lens to display a legend . . . 7 lens colors are available see bottom of Page 998.

For complete details, refer to Catalog L-200C.



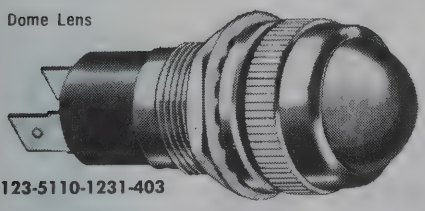
S-6 Cand. Screw | S-6 D.C. Bay. | 10C7/1DC D.C. Bay.

3 types of Incandescent Lamps may be used: Especially recommended is the 10C7/1DC lamp which is designed to WITHSTAND SEVERE VIBRATION and SHOCK. (Lamps shown approx. 2/3 actual size).

ASSEMBLIES for T-3¼ INCANDESCENT or NEON LAMPS

With Miniature Bayonet Base

Dome Lens

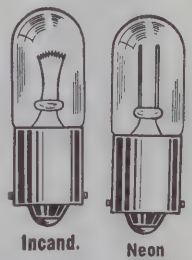


123-5110-1231-403

For Mounting in 11/16" Clearance Hole

In these Oil-Tight Indicator Lights, a high degree of resistance to shock and vibration is achieved by the use of the rugged *Neon* lamps on 120 and 240 V; and by choosing low voltage *Incandescent* lamps with short filaments, such as No. 44 or No. 1866 for circuits powered by transformers stepping down to 6.3 V.

Exclusive Features: Assemblies for use with NE-51 Neon Glow Lamps have *"built-in"* resistors—an exclusive *Dialco* feature (U.S. Pat. No. 2,421,321). *Options include:* binding screw, soldering or quick connect terminals. 7 lens colors are available; see bottom of page 997 for method of specifying color.



Incand. | Neon NE-51 NE-51H (High Bright.)

Assemblies for the **T-3¼ INCANDESCENT LAMP**

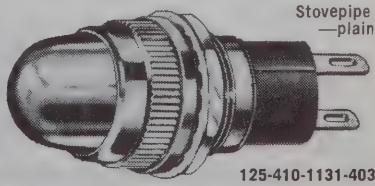
LENS TYPE	LENS SURFACE	CATALOG NO. with SCREW terminals	CATALOG NO. with SOLDERING terminals	CATALOG NO. with QUICK CONNECT terminals
DOME	unfrosted	123–1310–1231–403	123–410–1231–403	123–5110–1231–403
	back frosted	123–1310–1211–403	123–410–1211–403	123–5110–1211–403
STOVEPIPE	unfrosted	125–1310–1131–403	125–410–1131–403	125–5110–1131–403
	back frosted	125–1310–1111–403	125–410–1111–403	125–5110–1111–403
	inside fluted	125–1310–1191–403	125–410–1191–403	125–5110–1191–403

Also available with NE-51H (high brightness) Neon Lamps

Assemblies listed in the chart below may also be ordered for use with the NE-51H (High Brightness) Neon Glow Lamp on 110-125 V AC or 210-250 V AC-DC circuits. See page 996 for lamp data and chart of resistor values.

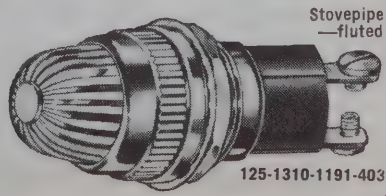
When Connecting a Neon Light to a Circuit Having One Side Grounded, Always Connect the Hot Side of the Circuit to the Terminal Marked + (Center Contact).

Stovepipe —plain



125-410-1131-403

Stovepipe —fluted



125-1310-1191-403

Assemblies with **Built-in Resistor** for the **NE–51 NEON GLOW LAMP****

LENS TYPE	LENS SURFACE	CATALOG NO. with SCREW terminals (105–125 V.)	CATALOG NO. with SOLDERING terminals (105–125 V.)	CATALOG NO. with QUICK CONNECT terminals (105–125 V.)	CATALOG NO. with SCREW terminals (210–250 V.)	CATALOG NO. with SOLDERING terminals (210–250 V.)	CATALOG NO. with QUICK CONNECT terminals (210–250 V.)
DOME	unfrosted	123–1308–1231–443	123–408–1231–443	123–5108–1231–443	123–9308–1231–483	123–9408–1231–483	123–8308–1231–483
STOVEPIPE	unfrosted	125–1308–1131–443	125–408–1131–443	125–5108–1131–443	125–9308–1131–483	125–9408–1131–483	125–8308–1131–483
	inside fluted	125–1308–1191–443	125–408–1191–443	125–5108–1191–443	125–9308–1191–483	125–9408–1191–483	125–8308–1191–483

For assemblies to accommodate the **NE–51H High Brightness Lamp, change **"08"** to **"63"** in the catalog number. ALSO NOTE—change **"4"** in the catalog number suffix to **"1"** to designate standard 22K resistor. Example: 123–1363–1231–413.

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A SELECTION OF OPEN TYPES

For T-3¼ Low Voltage Incandescent Lamps

Typical assemblies for bayonet base lamp.
Available also for screw base type. See listing below.



Min. Screw Base (2-48V.)

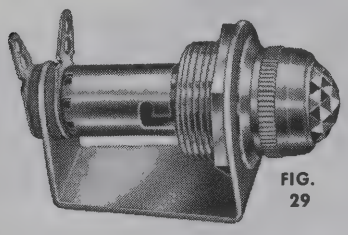


FIG. 29



Min. Bayonet Base (2-55V.)

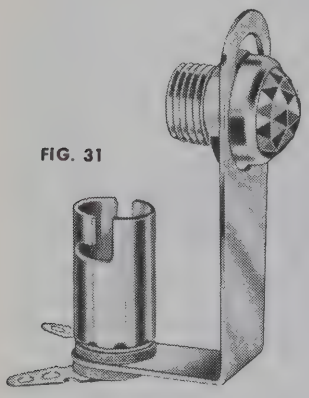


FIG. 31

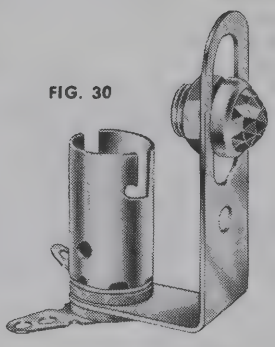


FIG. 30

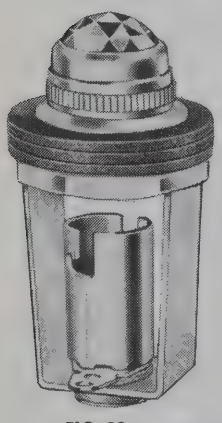


FIG. 32

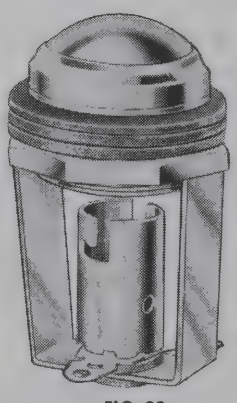


FIG. 33

CATALOGUE NUMBERS

Assemblies for T-3¼ miniature bayonet base lamps

No. 810B-431	Faceted	½" lens.	For 11/16" mounting hole.	Fig. 29
No. 710U-431	Faceted	½" lens.	For 7/16" mounting hole.	Fig. 31
No. 755U-431	Faceted	11/32" lens.	For 9/32" mounting hole.	Fig. 30
No. 857B-431	Faceted	½" lens.	For 11/16" mounting hole.	Fig. 32
No. 67B-111	Convex	¾" lens.	For 13/16" mounting hole.	Fig. 33

Assemblies for T-3¼ miniature screw base lamps

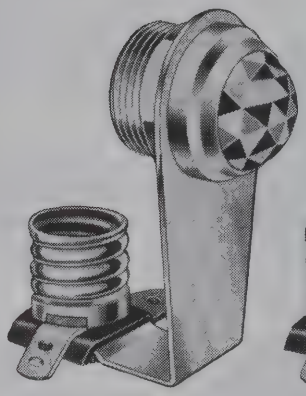
				Similar to
No. 810M-431	Faceted	½" lens.	For 11/16" mounting hole.	Fig. 29
No. 510-431	Faceted	½" lens.	For 7/16" mounting hole.	Fig. 31
No. 555-431	Faceted	11/32" lens.	For 9/32" mounting hole.	Fig. 30
No. 855-431	Faceted	½" lens.	For 11/16" mounting hole.	Fig. 32
No. 66M-111	Convex	¾" lens.	For 13/16" mounting hole.	Fig. 33

LENS COLOR: The final figure in the catalogue number indicates that lens has RED color. When color other than red is desired, change this digit to a figure from the listing below. Note that white lenses are translucent and are always furnished unfrosted.

Red—1 Green—2 Yellow (Amber)—3 Blue—4
White Translucent—5 Light Yellow—6 Clear (Colorless)—7

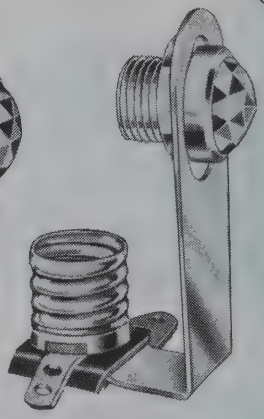
For Candelabra Screw Base Lamps

75W., 125V.



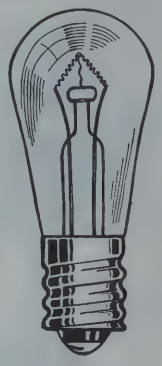
25-18-15-431-302

Tamper-proof lens holder. 5/8" Faceted Lens. Requires 11/16" mounting clearance hole.

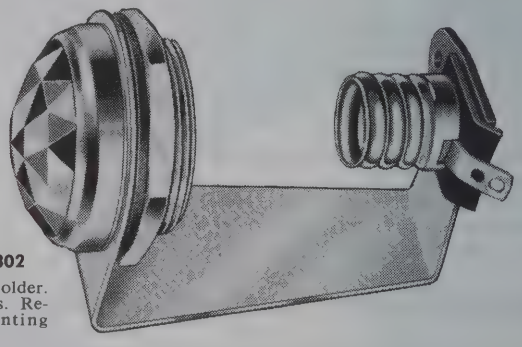


10-18-14-431-102

With elongated slot. 1/2" Faceted Lens. Requires 7/16" mounting clearance hole.

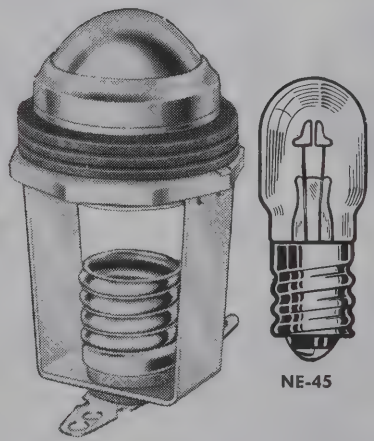


S-6 (6 to 145 V.)



31-18-16-431-302

Friction-fit lens holder. 1" Faceted Lens. Requires 1" mounting clearance hole.



NE-45

67BN-831

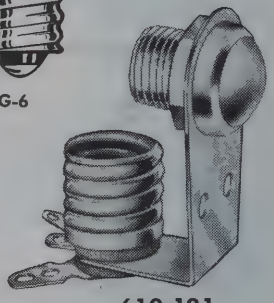
For NE-45 Neon Glow Lamps (105-125 V.)

Friction-fit lens holder. 3/4" Plastic Dome Lens. Requires 13/16" mounting clearance hole.

For details, refer to Catalog L-161F.



G-6



610-121

For G-6 Low Voltage Lamps (up to 32 V., no higher)

Tamper-proof lens holder. ½" Convex Lens. Requires 7/16" mounting clearance hole.

ORDER COMPLETE WITH LAMPS so that you will be assured of receiving the pilot lights and correct lamps at one time, ready for immediate use.

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Lens Holders with Lenses for Panel Mounting

For details, refer to Catalog L-161F.

FRICTION FIT PUSH IN TYPES



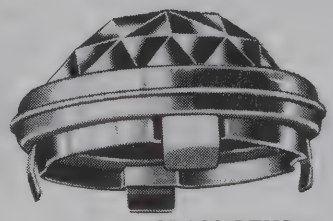
4004-431-100
9/32″ hole
1/4″ shank



6004-631-100
9/32″ hole
1/4″ shank

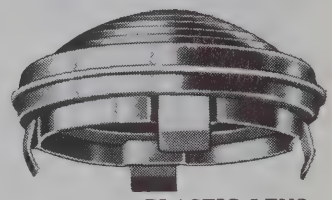


38003-631-100
3/8″ mtg. hole
3/16″ shank
Options: 1/8″, 3/32″

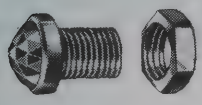


34-431-300 GLASS LENS

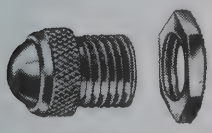
These Holders snap into a 1⅜″ hole



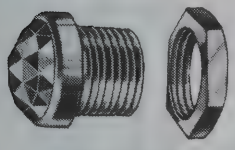
34-841-300 PLASTIC LENS



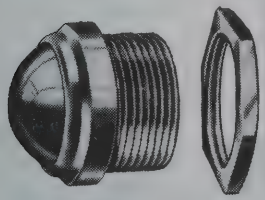
5006-431-102
9/32″—32 thread
3/8″ shank
(option 1/4″)



7005-631-102
3/8″—24 thread
5/16″ shank

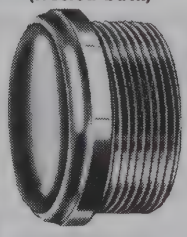


10006-431-102
7/16″—27 thread
3/8″ shank
(options: 1/4″, 5/8″)



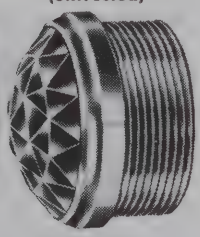
25006-111-102
11/16″—27 thread
3/8″ shank
(option 1/4″)

FLAT (frosted back)



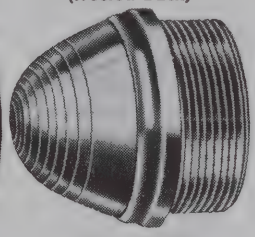
76006-211-302

FACETED (unfrosted)



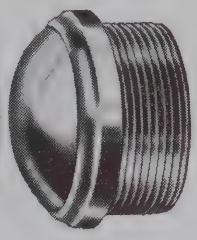
76006-431-302

TORPEDO (frosted back)



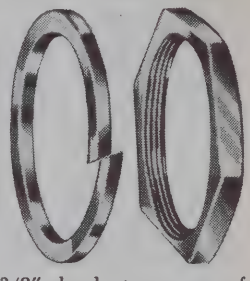
76006-511-302

CONVEX (frosted back)



1″—27 thread

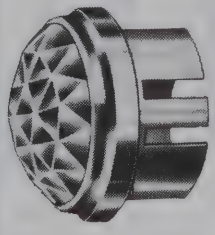
76006-111



3/8″ shank—tamper proof

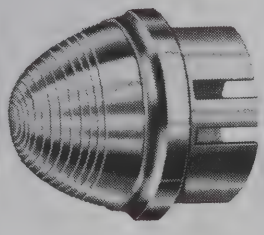
Mount in 1″ clearance hole

FACETED (unfrosted)



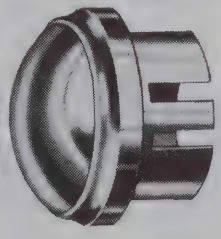
31-431-300

TORPEDO (frosted back)



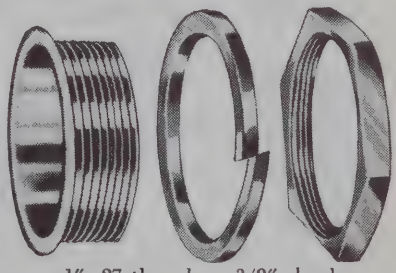
31-511-300

CONVEX (frosted back)



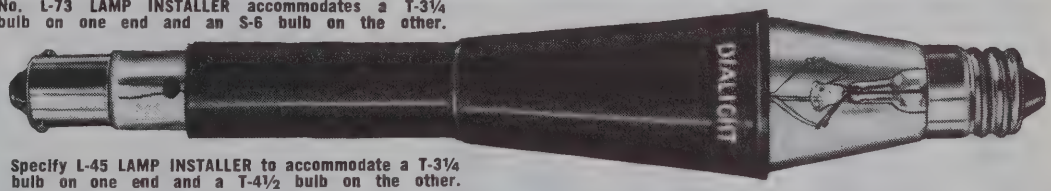
31-111-300

BUSHING 31246



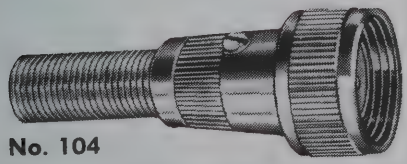
1″—27 thread 3/8″ shank

No. L-73 LAMP INSTALLER accommodates a T-3¼ bulb on one end and an S-6 bulb on the other.

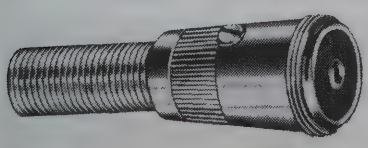


Specify L-45 LAMP INSTALLER to accommodate a T-3¼ bulb on one end and a T-4½ bulb on the other.

CONNECTORS FOR SINGLE CONDUCTOR CABLE

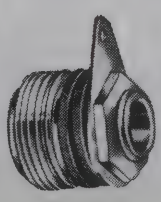


No. 104

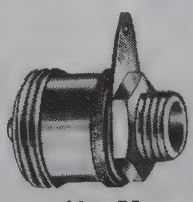


No. 101

For Microphones, Speakers, Pick-ups, Jacks (using cable shield for second conductor). Female Cable Connector, Catalog **No. 104.** This unit has a spring protector to prevent sharp bending of cable. It solders to cable sheath, and is secured by a set screw. **Catalog No. 101** has the same general characteristics, but is a **male** connector.



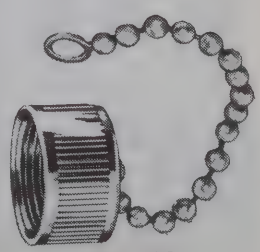
No. 50



No. 51

Male Chassis Connectors . . . No. 50. Shell grounds to panel, or may be insulated by washers. Fits a ⅜″—24 threaded hole, or may be secured by nut. **No. 50P** is similar to No. 50, but is designed to force fit in hole in panel. Does not require a nut to fit in place. **No. 51 Connector** has a sprung center contact which grounds before cable connection is broken, preventing open circuit howls.

Cap and Chain, Catalog No. 103. To protect unused male connectors. Chain secured by screw prevents loss when removed to make connection.

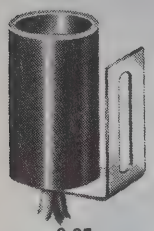


No. 103

LEECRAFT LAMPHOLDERS — PILOT LIGHT SOCKETS — SPECIAL ASSEMBLIES

MINIATURE BAYONET

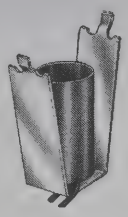
3-00 SERIES



3-05

See Figure 2 for typical mountings.

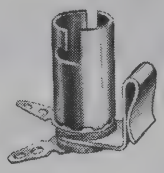
2-00 SERIES



2-15

See Figure 1 for typical mountings.

7-00 SERIES



7-01



7-35
For P.C. Boards.

*Sockets can be supplied with one lead or one terminal for use in grounded circuits.

Example: To specify grounded socket 7-01 becomes 7-01-1, 2-15 becomes 2-15-1, etc.

2-00-1 SERIES*

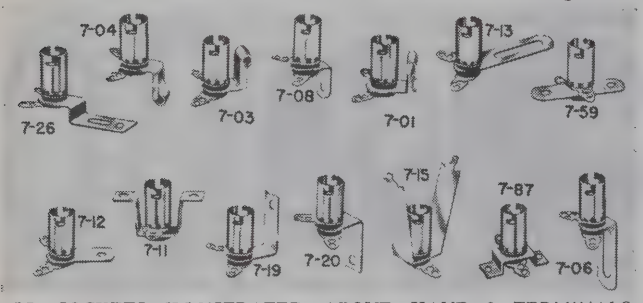


2-90-1



2-40-1

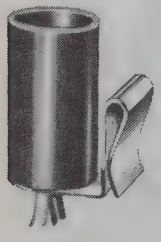
Brackets are applicable to Series 2-00, 5-00, 6-00, 7-00, 10-00, and 17-00. (Figure 1)



ALL SOCKETS ILLUSTRATED ABOVE HAVE 2 TERMINALS. EXAMPLE: If bracket attached to 7-12 **is required** with series mentioned, **specify:** 2-12, 5-12, 6-12, 7-12, 10-12, 17-12.

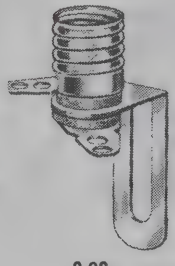
CANDELABRA SCREW

4-00 SERIES



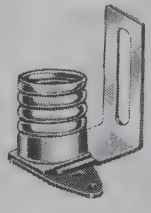
4-45

6-00 SERIES



6-06

18-00 SERIES



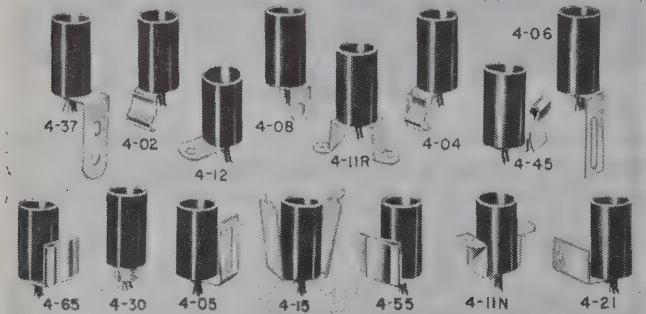
18-79



S-6
7C7-120V
10C7-120V

4-00 SERIES — CAND. SCREW • 3-00 SERIES — MIN. BAY.

Brackets are applicable to both series. (Figure 2)



When 3-00 Series Min. Bay. is required, specify 3-37, 3-02, etc.

MIDGET SCREW

16-00 SERIES
SOLDER. TERM.
•
16-200 SERIES
WIRE LEADS

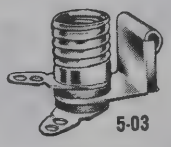


16-08

MINIATURE SCREW

5-00 SERIES
SOLDER TERMINALS or WIRE LEADS

See Figure 1 for typical mountings.



5-03

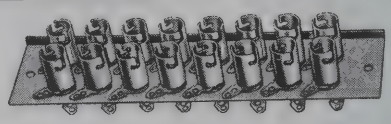
MIDGET GROOVED

25-200 SERIES
WIRE LEADS
•
25-00 SERIES
SOLDERING TERMINALS



25-212-1

Used in data processing and automation fields with **Lens-End** Lamp Nos. **253, 253X,** and **261.** Send for Data Sheet No. 25A.

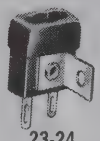


No. 7M-16

MULTIPLE ASSEMBLIES can be made to your specifications.

WEDGE BASE

23-00 SERIES



23-24

23-200 SERIES



23-223

24-00 SERIES



24-07A



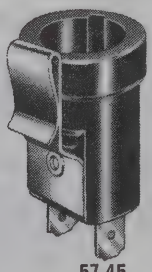
#159-6V
#161-12V
#158-12V
#259-6.3V

20-00 SERIES — Molded housing, terminal.
23-200 SERIES — Molded housing with wire leads.
24-00 SERIES — Wafer type terminals.

CANDELABRA BAYONET

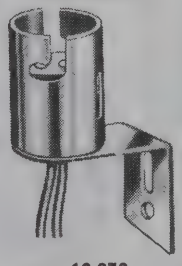
DOUBLE CONTACT — SINGLE CONTACT

57-00 SERIES



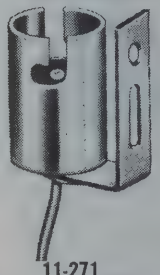
57-45

12-200 SERIES



12-272

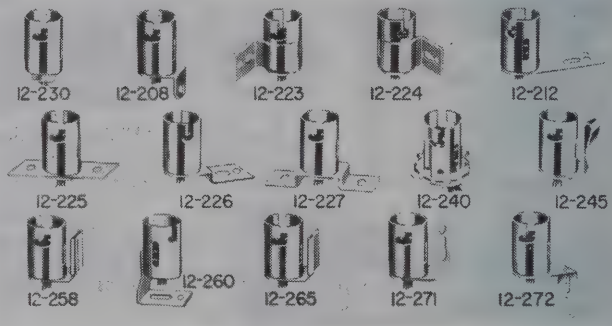
11-200 SERIES



11-271

See Figure 3 for typical mountings.

12-200 SERIES — DOUBLE CONTACT CAND. BAY.
11-200 SERIES — SINGLE CONTACT CAND. BAY. (Fig. 3)



Mounting Brackets shown above can also be used with 11-200 and 12-00 Series. If the bracket attached to 12-272 is required, **specify** 11-272 for 11-200 Series, or 12-72 for 12-00 Series.

LEECRAFT MANUFACTURING CO., Inc.

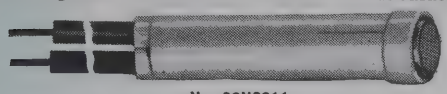
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INDICATOR LIGHTS
NEON PILOT LIGHTS and SPECIAL ASSEMBLIES

SNAPLITE® LEECRAFT®

TINEON INDICATOR LIGHTS

• Long life High Brightness Neon Lamps • Press fit into 5/16" hole • Rated 110-250V • Nylon housing in colors (white standard) • Speed nut furnished • Plastic lens in colors • Legends • Built-in Resistor • Insulated Leads.



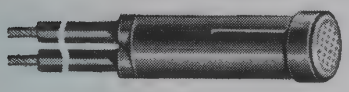
No. 36N2311

3600 SERIES (with built-in resistor)

STANDARD 3600 SERIES — 110-125 VOLTS*

Nylon Housing Color	Lens Color Red	Amber	White	Clear
Black	36N1311	36N1313	36N1315	36N1317
White	36N2311	36N2313	36N2315	36N2317
Red	36N3311	36N3313	36N3315	36N3317
Yellow	36N6311	36N6313	36N6315	36N6317
Gray	36N7311	36N7313	36N7315	36N7317

* If 210-250 V. is required, add H after second digit in catalog number, Example: 36HN3311



No. 41N1315

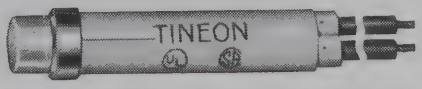
4100 SERIES (less resistor)

STANDARD 4100 SERIES

Nylon Housing Color	Lens Color Red	Amber	White	Clear
Black	41N1311	41N1313	41N1315	41N1317
White	41N2311	41N2313	41N2315	41N2317
Red	41N3311	41N3313	41N3315	41N3317
Yellow	41N6311	41N6313	41N6315	41N6317
Gray	41N7311	41N7313	41N7315	41N7317

with ALUMINUM BEZEL

All Tineons may be furnished with aluminum bezel. Please specify when ordering.

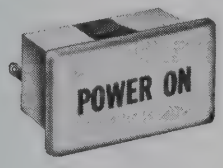


No. 36EN2111 (Hi-Hat red lens) With aluminum bezel

RECTANGULAR INDICATOR LIGHTS

• Long Life High Brightness Neon Lamps • Snap into panel securely without additional hardware • Choice of lens colors • Series 3100 has chrome bezel and plastic lens • Series 47 has one-piece plastic lens and body • Complete range of voltages • UL and CSA listed.

No. 47-3P
For 1 3/16" x 5/8" hole

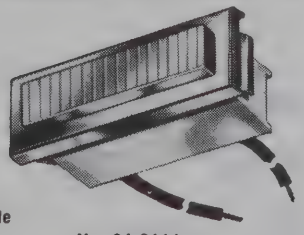


Cat. Nos. for Series 47 have solder terminals. Other terminals available. Ask for *Catalog 47A.*

VOLTAGE	RED	AMBER (Orange)	WHITE	CLEAR (Colorless)
110-125	47-3	47-6	47-2	47-8
210-250	47H-3	47H-6	47H-2	47H-8
250 MAX. (Less Resistor)	47X-3	47X-6	47X-2	47X-8



No. 31-2115TL



For 1 3/32" x 13/32" hole

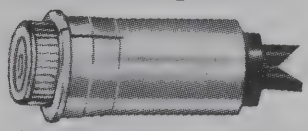
No. 31-2111

Lens Color	3100 Series 110 V Wire Leads	3100H Series 250 V Wire Leads	3100T Series 110 V 1/4" Tabs	3100HT Series 250 V 1/4" Tabs
Red	31-2111	31H2111	31-2111T	31H2111T
Amber	31-2113	31H2113	31-2113T	31H2113T
Clear	31-2117	31H2117	31-2117T	31H2117T
White (Translucent)	31-2115	31H2115	31-2115T	31H2115T

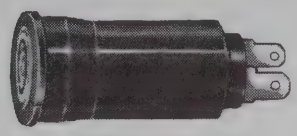
Write for catalog. Prototype samples available on request.

SNAPLITE INDICATOR LIGHTS

SNAPLITES contain long life neon lamps of the high brightness types. Within the housing are resistors chosen to suit the applied circuit voltage and to provide the required lamp life so that replacement of the lamp will be unnecessary during the life of the equipment.



CYLINDRICAL LENS — No. 32-2111



FLUSH LENS — No. 32-1315T



STOVEPIPE LENS
No. 32-2217

FEATURES: Snaps into place in 1/2" hole with no additional hardware ... Wide variety of Lens and Housing colors ... Incandescent-like brightness ... Tab or Solder Terminals; or Wire Leads.

HOUSING COLORS: The standard housing color is **white** as indicated by the third digit in the Catalog Number. When color other than white is desired, **change** this digit to a number from the listing below:

Black—1, White—2, Red—3, Green—4, Blue—5, Yellow—6, Gray—7. Example: 32-5111 (Blue housing).

CHROME RINGS

These units are also available with chrome rings for those applications where a decorative ring, or bezel, is desired instead of a specific housing color.

HOW TO ORDER SNAPLITES WITH RINGS:

For Hole Size .500 to .513: Add letter **"R"** after Series Number in place of the dash (—) ... Example: 32-2111 with Ring becomes 32**R**2111.

For Hole Size .514 to .519: Add letters **"CR"** after Series Number in place of the dash (—) ... Example: 35-2131T with Ring becomes 35**CR**2131T.

INCANDESCENT LAMPS: All Leecraft Indicator Lights can be furnished with Incandescent Lamps in place of Neon for low voltage requirements. Specify your voltage.

Leecraft Series	Volts	Terminations
3200	110-125	insulated wire leads
3500	210-250	insulated wire leads
3200T	110-125	.187 tab terminals
3500T	210-250	.187 tab terminals

UL CSA

1/3W, 125V
1/3W, 250V

CATALOG NUMBERS with CYLINDRICAL LENS

Lens Color	3200 Series Wire Leads	3500 Series Wire Leads	3200T Series .187 Tabs	3500T Series .187 Tabs
Red	32-2111	35-2111	32-2111T	35-2111T
Amber	32-2113	35-2113	32-2113T	35-2113T
Clear	32-2117	35-2117	32-2117T	35-2117T
White (Translucent)	32-2115	35-2115	32-2115T	35-2115T

CATALOG NUMBERS with FLUSH LENS

Lens Color	3200 Series Wire Leads	3500 Series Wire Leads	3200T Series .187 Tabs	3500T Series .187 Tabs
Red	32-2311	35-2311	32-2311T	35-2311T
Amber	32-2313	35-2313	32-2313T	35-2313T
Clear	32-2317	35-2317	32-2317T	35-2317T
White (Translucent)	32-2315	35-2315	32-2315T	35-2315T

CATALOG NUMBERS with STOVEPIPE LENS

Lens Color	3200 Series Wire Leads	3500 Series Wire Leads	3200T Series .187 Tabs	3500T Series .187 Tabs
Red	32-2211	35-2211	32-2211T	35-2211T
Amber	32-2213	35-2213	32-2213T	35-2213T
Clear	32-2217	35-2217	32-2217T	35-2217T
White (Translucent)	32-2215	35-2215	32-2215T	35-2215T

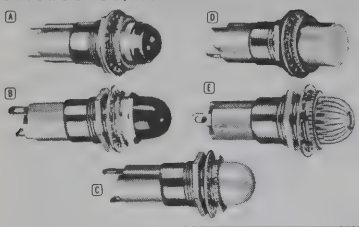
LEECRAFT MANUFACTURING CO., Inc.

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1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625

DRAKE
CHICAGO 31, ILLINOIS

INDICATOR LIGHTS



"DELUXE MOLDED" Series
MINIATURE BAYONET BASE INDICATOR LIGHTS

Polished chrome finish (MIL units are black nickel plated), molded Glaskyd housing give fine appearance, assure dependability. All "DELUXE MOLDED" units have Drake's E-Z-Tite flange for quick assembly with Drake No. 32 wrench. Install lamps and mount units from front of panel up to 13/16" thick, in 11/16" dia. mounting hole on 21/32" centers. Units with built-in ¼ watt series resistors take neon lamps.

(ALL ILLUSTRATIONS APPROX. 3/8 ACTUAL SIZE)

Fig. No.	Drake Number	Mil. Style Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Lugs	Built-in Resistor (Ohms)	Net Each Lots Of 1-9	10-24	25-99
A	5200-222-101		1/4"	11/64"	13/64"	Solder		$ .97	$ .87	$ .81
B	5200-222-301		5/16"	11/64"	13/64"	Solder		1.19	1.07	.99
C	5200-222-304		5/16"	1/2"	13/64"	Solder		.83	.73	.67
D	5200-222-604		5/16"	7/64"	13/64"	Solder		.79	.73	.67
	5200-228-101	LM75-LC14	1/4"	11/64"	13/64"	Solder		1.33	1.19	1.10
B*	5200-228-301	LM75-LC15	5/16"	11/64"	13/64"	Solder		1.57	1.41	1.30
	5200-229-101	LM62-BR2	1/4"	11/64"	13/64"	Solder		1.27	1.14	1.05
C*	5200-229-303	LM62-PR5	5/16"	1/2"	13/64"	Solder		1.04	.93	.86
	5200-232-103		1/4"	11/64"	13/64"	Solder	22K	1.07	.97	.89
E	5200-232-323		5/16"	1/2"	13/64"	Solder	22K	.98	.88	.81
	5200-232-623		5/16"	7/64"	13/64"	Solder	22K	.98	.88	.81
	5200-242-103		1/4"	11/64"	13/64"	Solder	100K	1.07	.97	.89
E	5200-242-323		5/16"	1/2"	13/64"	Solder	100K	.98	.88	.81
	5200-242-623		5/16"	7/64"	13/64"	Solder	100K	.98	.88	.81
	5200-248-100	LM76-LC14	1/4"	11/64"	13/64"	Solder	100K	1.52	1.37	1.27
	5200-249-103	LM64-PR2	1/4"	11/64"	13/64"	Solder	100K	1.39	1.25	1.15
C*	5200-249-303	LM64-PR5	5/16"	1/2"	13/64"	Solder	100K	1.23	1.11	1.02

T-3¼ BULB 6.3 to 28V

LAMP NO. NE51H —125V and 250V

LEN DESCRIPTION CODE (last three Drake Number digits): See explanation—"DRAKE LENS CODE NUMBER DATA"
*Black Finish.



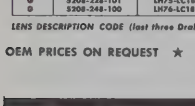
"DELUXE MOLDED" MINIATURE BAYONET BASE INDICATOR LIGHTS

with Friction Fit Lens Shank, for Easy Legend Alignment
Other features are same as those of units listed above.

Fig. No.	Drake Number	Mil. Style Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Lugs	Built-in Resistor (Ohms)	Net Each Lots Of 1-9	10-24	25-99
F	5203-222-530		1/4"	11/64"	13/64"	Solder		$1.13	$1.02	$ .94
F	5203-222-544		1/4"	11/64"	13/64"	Solder	22K	1.35	1.21	1.12

LAMPS SAME AS ABOVE

LENS DESCRIPTION CODE (last three Drake Number digits): See explanation—"DRAKE LENS CODE NUMBER DATA"



"DELUXE MOLDED" MINIATURE BAYONET BASE INDICATOR LIGHTS

with Mechanical Dimmer Lens Assembly: Type 5207 for Complete Blackout, Type 5208 for Partial Blackout
Other features are same as those of units listed above.

Fig. No.	Drake Number	Mil. Style Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Lugs	Built-in Resistor (Ohms)	Net Each Lots Of 1-9	10-24	25-99
G	5207-228-101	LM75-LC17	1/4"	17/64"	13/64"	Solder		$1.69	$1.52	$1.40
G	5207-248-100	LM76-LC17	1/4"	17/64"	13/64"	Solder	100K	2.49	2.24	2.07
G	5208-228-101	LM75-LC18	1/4"	17/64"	13/64"	Solder		1.69	1.52	1.40
G	5208-248-100	LM76-LC18	1/4"	17/64"	13/64"	Solder	100K	2.49	2.24	2.07

LAMPS SAME AS ABOVE

LENS DESCRIPTION CODE (last three Drake Number digits): See explanation—"DRAKE LENS CODE NUMBER DATA"

OEM PRICES ON REQUEST ★ UNITS CAN BE ORDERED WITH LAMP INSTALLED ★ SPECIFY LENS COLOR

INDICATOR LIGHTS

DRAKE
CHICAGO 31, ILLINOIS

DRAKE LENS CODE NUMBER DATA

On all units illustrated and described, the last three digits of the DRAKE NUMBER identify the lens shape and other variants. These types are described below.

100 : Convex glass clear	305 : Macrodome Lexan diffusing	544 : Flush plastic translucent, imprinted
101 : Convex glass diffusing	320 : Macrodome glass fluted	550 : Flush glass clear, printed disc
103 : Convex plastic clear	323 : Macrodome plastic fluted	603 : Cylindrical plastic clear
110 : Convex glass faceted	410 : Beehive glass faceted	604 : Cylindrical plastic translucent
113 : Convex plastic faceted	430 : Beehive glass signal lined	623 : Cylindrical plastic fluted transparent
203 : Dome plastic clear	431 : Beehive glass diffusing	
204 : Dome plastic translucent	500 : Flush glass clear	624 : Cylindrical plastic fluted semi-transparent
301 : Macrodome glass diffusing	503 : Flush plastic clear	
303 : Macrodome plastic clear	504 : Flush plastic translucent	644 : Cylindrical plastic imprinted
304 : Macrodome plastic translucent	523 : Flush plastic fluted	703 : Long Macrodome plastic clear

LENS COLORS: incandescent and neon—Red, Yellow (amber), White or Colorless;—incandescent only—Green or Blue



"DELUXE MOLDED" Series INDICATOR LIGHTS
MINIATURE BAYONET BASE
with 3/8" GLASS MACRODOME LENS (JEWEL)

Lens holder with female thread permits neon lamp to project all the way up into macrodome lens for maximum visibility. Other "DELUXE MOLDED" features as previous.

Fig. No.	Drake Number	Mil. Style Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Lugs	Built-in Resistor (Ohms)	Net Each Lots Of 1-9	10-24	25-99
H	5204-222-301		5/16"	11/64"	13/64"	Solder		$1.29	$1.16	$1.07
J*	5204-232-320		5/16"	11/64"	13/64"	Solder	22K	1.46	1.31	1.21
J	5204-238-320	LM78-LC30	5/16"	11/64"	13/64"	Solder	27K	1.87	1.68	1.56
J*	5204-242-320		5/16"	11/64"	13/64"	Solder	100K	1.46	1.31	1.21
J	5204-248-320	LM77-LC30	5/16"	11/64"	13/64"	Solder	100K	1.87	1.68	1.56

LAMPS SAME AS FOR OTHER "DELUXE MOLDED" TYPES

LENS DESCRIPTION CODE (last three Drake Number digits): See explanation—"DRAKE LENS CODE NUMBER DATA"
*Polished Chrome Finish.



"STANDARD" INDICATOR LIGHTS
MINIATURE BAYONET BASE

Serviceable series, with nickel plated lens holder and flange. Lamp installed and units mounted from front of panels up to 13/16" thick, in 11/16" dia. mounting hole on 21/32" centers. Built-in ½ watt series resistors for neon lamps.

Fig. No.	Drake Number	Mil. Style Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Lugs	Built-in Resistor (Ohms)	Net Each Lots Of 1-9	10-24	25-99
K	5100-192-101		1/4"	11/64"	17/64"	Solder		$ .70	$ .63	$ .58
	5100-192-304		5/16"	1/2"	17/64"	Solder		.60	.54	.50
K	5100-192-103		1/4"	11/64"	17/64"	Solder	25K	.77	.69	.64
L	5100-192-323		5/16"	1/2"	17/64"	Solder	25K	.71	.64	.59
K	5100-202-103		1/4"	11/64"	17/64"	Solder	100K	.77	.69	.64
L	5100-202-323		5/16"	1/2"	17/64"	Solder	100K	.71	.64	.59

.AMP NOS. NE51—125V NE51H — 125 and 250V

LENS DESCRIPTION CODE (last three Drake Number digits): See explanation—"DRAKE LENS CODE NUMBER DATA"



MINIATURE BAYONET BASE
INSTRUMENT LIGHT

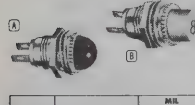
Uses T-3¼ bulbs, inserted from front of panel up to 13/64" thick, in 11/64" dia. hole on 31/32" centers.

Fig. No.	Drake Number	Mil. Style Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Lugs	Built-in Resistor (Ohms)	Net Each Lots Of 1-9	10-24	25-99
M	168E			11/64"	1 5/64"	Solder		$1.55	$1.40	$1.29

T-3¼ BULB 6.3 to 28V

(ALL ILLUSTRATIONS APPROX. 3/8 ACTUAL SIZE)

OEM PRICES ON REQUEST ★ UNITS CAN BE ORDERED WITH LAMP INSTALLED ★ SPECIFY LENS COLOR



"TINYLITE" MIDGET SCREW BASE INDICATOR LIGHTS
SMALLEST INDICATOR LIGHTS WITH REPLACEABLE LAMP

Fully enclosed. Supplied with midget lamp installed. Lamps replaced and units mounted from front of panels up to 1/16" thick, in 1/16" dia. mounting hole on 11/32" centers. Friction device prevents lamps from loosening in use.

Fig. No.	Drake Number	Mil. Style Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Lamp Voltage	Replacement Lamp No.	Net Each Lots Of 1-9	10-24	25-99
A	121- 7-204		5/16"		13/64"	7	765	$ .79	$ .71	$ .66
B*	121- 7-604		5/16"		13/64"	7	765	.79	.71	.66
B	121- 7-644		5/16"	21/64" on all numbers	13/64"	7	765	.87	.78	.73
A	121-14-204		5/16"		13/64"	14	1445	.80	.72	.67
B*	121-14-604		5/16"		13/64"	14	1445	.80	.72	.67
B	121-14-644		5/16"		13/64"	14	1445	.88	.79	.73
A	121-28-204		5/16"		29/64"	28	333	1.34	1.20	1.11
B*	121-28-604		5/16"		29/64"	28	333	1.34	1.20	1.11
B	121-28-644		5/16"		29/64"	28	333	1.42	1.27	1.18

LAMP NO. 765 7V
NO. 1445 14V
LAMP NO. 333 28V

LENS DESCRIPTION CODE (last three Drake Number digits): See explanation—"DRAKE LENS CODE NUMBER DATA"
*Unprinted

REPLACEMENT LAMPS
NO. 333 (28V) NO. 765 (7V). NO. 1445 (14V)

(ALL ILLUSTRATIONS APPROX. 3/8 ACTUAL SIZE)



"MF" INDICATOR LIGHTS
FOR USE WITH MIDGET FLANGE BASE LAMPS IN MIL STANDARD OR COMMERCIAL APPLICATIONS

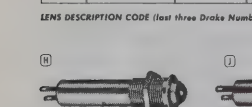
Small but sturdy—only 5/16" max. dia. MIL units, black anodized finish; other units, clear finish. Lamps replaced and units mounted from front of panel, in 15/64" dia. mounting hole on ¾" centers. Built-in series resistor takes NE2D neon lamp; other units take T-1¾ bulb.

Fig. No.	Drake Number	Mil. Style Number	MS Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Built-in Resistor (Ohms)	Max. Panel Thickness	Net Each Lots Of 1-9	10-24	25-99
C	5131-028-303	LM73-LC12	MS25256	5/16"	7/64"	9/64"		1/2"	$1.09	$ .98	$ .90
C	5131-038-304	LM73-LC13		5/16"	7/64"	9/64"		1/2"	1.09	.98	.90
D	5131-038-544	LM73-LC11		15/64"	33/64"	9/64"		5/8"	1.49	1.34	1.24
E	5133-048-703	LM74-LC13	MS25257	5/16"	7/64"	1 1/64"	62K	15/32"	.84	.76	.70
F	5133-032-101			5/16"	1/32"	1 1/64"		15/32"	1.06	.95	.88
G	5133-032-504			5/16"	5/64"	1 1/64"		15/32"		To Order	

LAMP NO. NE2D 115V

Bulb No. T-1¾ 1.2 to 28V

LENS DESCRIPTION CODE (last three Drake Number digits): See explanation—"DRAKE LENS CODE NUMBER DATA"



"TELESLIDE" INDICATOR LIGHTS
FOR USE WITH TELEPHONE SLIDE BASE LAMPS

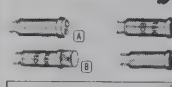
Recommended for voltages from 24 to 55. Lamps replaced from front of panel. Mount in 11/32" dia. hole on 31/32" centers. No. 135 replaces more expensive lampjack assembly.

Fig. No.	Drake Number	Lens Dia.	Length in Front of Panel	Length Behind Panel Face	Max. Panel Thickness	Mounting	Lens Fitting	Finish	Net Each Lots Of 1-9	10-24	25-99
H,	135-101	5/16"	1/4"	2 7/32"	11/32"	Front	Friction	Plain Brass	$1.17	$1.05	$ .97
J	136-624	5/16"	11/64"	1 5/8"	7/32"	Front or Rear	Threaded	Nickel Plate	.98	.88	.81
K	137-101	1/2"	11/32"	1 21/32"	5/16"	Front or Rear	Threaded	Nickel Plate	1.21	1.08	1.00

LENS DESCRIPTION CODE (last three Drake Number digits): See explanation—"DRAKE LENS CODE NUMBER DATA"

OEM PRICES ON REQUEST ★ UNITS CAN BE ORDERED WITH LAMP INSTALLED ★ SPECIFY LENS COLOR

BI-PIN CARTRIDGE LAMPS



REPLACEABLE BI-PIN CARTRIDGE LAMPS
FOR COMPUTER AND READOUT USES

Save space on crowded panels. Wide choice of filter shapes and colors (Red, Yellow, Green, Blue, White, Colorless). Neon types with or without built-in resistors. Incandescent types available in wide range of low voltages. Selected units have low power drain, can be driven with transistors.

Lamps fit DRAKE or any other cartridge base lampholders. Easily replaced from front of panel. Lamps sealed into clear anodized aluminum casings. Two stainless steel terminals; Nylon insulation. Low cost printing of 1, 2 or 3 digits, letters or symbols on flat face filters, up to 12 pt. type. Legends are pin-indexed for fast installation and replacement, with automatic line-up. These and other Bi-Pin Cartridge Lamps available in single units or multiple-unit blocks. Built to withstand environmental requirements of MIL-STD-202B per MIL-L-3661A.

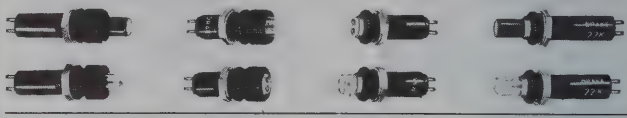
NEON LAMPS

Fig. No.	Drake Number	Starting Volts AC	Starting Volts DC	Design Current (MA.)	Watts	C.P. at Design Current	Average Life at Des. Cur. (Hrs.)	Resist. Req. for Des. Cur. at Norm. Circ. V.	Built-in Resistor	Net Each Lots Of 1-9	10-24	25-99
A	1-503	65	90	0.3	1/25	.003	25M	220K		$ .79	$ .72	$ .66
B	1-603	"	"	0.3	1/25	.003	25M	220K		.79	.72	.66
C	1-703	"	"	0.6	1/15	.006	25M	100K		.64	.57	.53
D	1-803	"	"	0.6	1/15	.006	25M	100K		.64	.57	.53
C	2-703	65	90	1.1	1/8	.010	10M	56K	x	.79	.71	.66
D	2-803	"	"	1.1	1/8	.010	5M	56K	x	.79	.71	.66
A	4-503	95	135	0.8	1/10	.012	25M	68K		.79	.71	.66
B	4-603	"	"	0.8	1/10	.012	25M	68K		.79	.71	.66
C	5-703	"	"	2.6	1/3	.034	10M	22K	x	.79	.71	.66
D	5-803	"	"	2.6	1/3	.034	10M	22K	x	.79	.71	.66

INCANDESCENT LAMPS

Fig. No.	DRAKE NUMBER Transparent Filter	DRAKE NUMBER Translucent Filter	Design Volts	Design Current (Amps.)	Average Life (Hrs.)	Candle Power (C.P.)	Net Each Lots Of 1-9	10-24	25-99
B	6-603	6-604	6	.20	500	.63	$ .97	$ .88	$ .81
C	6-703	6-704	6	.20	500	.63	.97	.88	.81
B	11-603	11-604	28	.04	1000	.34	1.07	.97	.90
C	11-703	11-704	28	.04	1000	.34	1.07	.97	.90

★ COMPLETE CARTRIDGE UNITS (ORDER LAMPS AND LAMPHOLDERS SEPARATELY) ★





CARTRIDGE LAMPHOLDERS

Exclusive advanced design for "D" hole mounting cuts costs, saves assembly time, provides standardized legend alignment. Extra savings by using DRAKE Lampholder *without collars.*

Small size—mount in 3/8" dia. hole on 21/32" centers. Sturdy black anodized aluminum body, collar and facing nut—cadmium and Cronak plated steel lockwasher and hex nut—molded phenolic insulation—silver plated-gold flashed spring brass terminals, identified with letters A and B for DC operation with seasoned lamps. Exclusive DRAKE *E-Z-Tite* knurled facing nut (#20 wrench) for fast, secure panel installation. Both contacts insulated from mounting. Max. Amps.: 1—Max. Watts: 75—Test Voltage: 1,000 AC @ 60 cps. Available with or without built-in 1/10 watt current limiting resistor for use with neon cartridges.

DRAKE Cartridge Lampholders accept all Bi-Pin Cartridge Lamps now on the market.

Filter Shapes: (#1) Flush (#2) Short Cylindrical (#3) Long Cylindrical (#4) Long Macrodome

Fig. No.	Without Collar	Net Each Lots Of 1-9	10-24	25-99	Fig. No.	With Collar	Net Each Lots Of 1-9	10-24	25-99	Built-in Resistor (Ohms) ±10%	Max. Current (MA.)
E	4428-000	$ .84	$ .76	$ .70	G	4428-001	$1.00	$ .90	$ .83		1.0
F	4438-000	1.13	1.02	.94	H	4438-001	1.25	1.12	1.04	22K	2.04
	4438-002	1.13	1.02	.94		4438-003	1.25	1.12	1.04	47K	1.40
	4438-004	1.13	1.02	.94		4438-005	1.25	1.12	1.04	56K	1.27
	4438-006	1.13	1.02	.94		4438-007	1.25	1.12	1.04	100K	.93

PROJECTIONS FROM PANEL FACE-LAMP INSTALLED				
Filter Shape	Without Collar Front	Without Collar Rear	With Collar Front	With Collar Rear
(#1)	3/32"	13/64"	3/64"	29/64"
(#2)	3/64"	19/64"	11/64"	17/32"
(#3)	15/32"	19/64"	3/64"	15/32"
(#4)	25/64"	19/64"	43/64"	15/32"

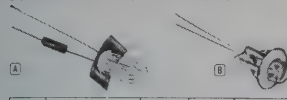
OEM PRICES ON REQUEST ★ UNITS CAN BE ORDERED WITH LAMP INSTALLED ★ SPECIFY LENS COLOR

Miniature Lighting Specialists

© U.C.P., Inc.

DRAKE
CHICAGO 31, ILLINOIS

INDICATOR LIGHTS

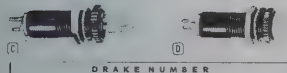


"ECONOGLO" NEON GLOW INDICATOR LIGHTS

Excellent for LOW COST 115V applications or as D.C. circuit components. Available with or without series resistors. Mount from front of panel. Equipped with 2" wire leads. Plain macrodome also available; substitute lens code 303 for 323 when ordering.

Fig. No.	Drake Number	Lens Dia.	Length In Front of Panel	Length Behind Panel Face	Built-in Resistor (Ohms)	Mounting Hole Dia.	Max. Panel Thickness	Mounting Centers	Net Each Lots Of 1-9	10-24	25-99
A*	116-323 or 303		3/8"	11/32"		3/16"	1/8"	17/32"	$ .22	$ .20	$ .18
	116-603		3/8"	11/32"		3/16"	3/16"	17/32"	.22	.20	.18
A	R116-323 or 303	11/32"	3/8"	11/32"	100K	3/16"	1/4"	17/32"	.28	.25	.23
	R116-603	on	3/8"	11/32"	100K	3/16"	3/16"	17/32"	.28	.25	.23
	117-323 or 303	all	7/16"	13/32"		1/2"	1/4"	11/16"	.29	.26	.24
B	117-603	numbers	3/8"	3/8"		1/2"	3/16"	11/16"	.29	.26	.24
	R117-323 or 303	on	7/16"	13/32"	100K	1/2"	1/4"	11/16"	.34	.31	.28
B**	R117-603		3/8"	3/8"	100K	1/2"	3/16"	11/16"	.34	.31	.28

LENS DESCRIPTION CODE (last three Drake Number digits): See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"
For HI-BRIGHTNESS Lamps, prefix Drake Number with letter "H". * 470 Resistor ** With Resistor



"MINEON" NEON GLOW INDICATOR LIGHTS

Similar to "ECONOGLO" types, except mounted in black anodized aluminum body with solder lugs or turret terminals. Drake E-Z-Tite facing nut, and No. 20 wrench, make assembly fast.

Fig. No.	DRAKE NUMBER Pin Plugs	Net Each Lots Of 1-9	10-24	25-99	Turret Lugs	Net Each Lots Of 1-9	10-24	25-99	Lens Dia.	Panel Projection Front	Rear	Built-in Resistor (Ohms)	Mtg. Hole Dia.	Max. Panel Thickness	Mtg. Centers
C	118-323	$ .72	$ .65	$ .60	118T-323	$ .89	$ .80	$ .74	11/32"	13/32"			3/8"	3/8"	5/8"
D	118-604	.72	.65	.60	118T-604	.89	.80	.74	11/32"	13/32"			3/8"	3/8"	5/8"
C	R118-323	.92	.83	.76	R118T-323	1.09	.98	.91	11/32"	13/32"	13/16"	100K	3/8"	3/8"	5/8"
D	R118-604	.92	.83	.76	R118T-604	1.09	.98	.91	11/32"	5/16"	13/16"	100K	3/8"	3/8"	5/8"

LENS DESCRIPTION CODE (last three Drake Number digits): See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"
For HI-BRIGHTNESS Lamps, prefix Drake Number with letter "H".

DRAKE TURRET LUGS

DRAKE STOCKING DISTRIBUTORS

INSURE BETTER SERVICE

You can purchase most items for immediate delivery and for the same price you would pay the factory.



"POSTLITE" INDICATOR LIGHTS

Unique all polystyrene neon indicator light wit built-in series resistor. Extremely decorative.

Fig. No.	Drake Number	Lens Dia.	Length In Front of Panel	Length Behind Panel Face	Built-in Resistor (Ohms)	Lamp	Max. Panel Thickness	Mounting Centers	Net Each Lots Of 1-9	10-24	25-99
F	105	3/8" (Sq.)	3/8"	11/16"	100K	Std.	5/16"	3/8"	$ .60	$ .61	$ .56
F	106-025 (Hi-Brite)	3/8" (Sq.)	3/8"	11/16"	33K	Hi-Brite	5/16"	3/8"	.60	.61	.56



"FLUSHLITE" INDICATOR LIGHT

"One-of-a-kind" neon unit—all nylon with built-in series resistor. Exceptional appearance

Fig. No.	Drake Number	Lens Size	Length In Front of Panel	Length Behind Panel Face	Built-in Resistor (Ohms)	Lamp	Max. Panel Thickness	Mounting Centers	Net Each Lots Of 1-9	10-24	25-99
G	110	13/32" x 13/16"	11/32" or 3/16"	11/32" or 3/16"	100K	NE2E	11/32" (Rear Mtd.) 11/32" (Rear Mtd.)	7/16" or 13/16" 5/16" or 13/16"	$ .50	$ .45	$ .41
G	110-025 (Hi-Brite)	13/32" x 13/16"	11/32" or 3/16"	11/32" or 3/16"	22K	NE2H			.50	.45	.41

OEM PRICES ON REQUEST ★ *UNITS CAN BE ORDERED WITH LAMP INSTALLED* ★ SPECIFY LENS COLOR

DRAKE
CHICAGO 31, ILLINOIS

INDICATOR LIGHTS



"MINISPACE" 5/16" Lens
MONEY SAVER INDICATOR LIGHTS

For practical economy. Lamp replacement from behind panel. Cadmium plated lens holder has Drake E-Z-Tite knurl, for fast assembly with Drake No. 14 wrench.

MIN SCREW BULB NO. G-3½ 1.3 to 6.3V

MIN. BAY. BULB NO. G-3½ 63 to 28V

Fig. No.	Drake Number	Lens Dia.	Base	Length In Front of Panel	Length Behind Panel Back	Built-in Resistor (Ohms)	Bulb Size	Mounting Hole Dia.	Max. Panel Thickness	Mounting Centers	Net Each Lots Of 1-9	10-24	25-99
	5-113	5/16"	Min. Screw	7/32"	25/32"		G-3½	3/16"	1/8"	13/32"	$ .19	$ .17	$ .16
J	5B-103	5/16"	Min. Bay.	7/32"	25/32"		G-3½	3/16"	1/8"	3/8"	.20	.18	.16
H	2005-IL-113	5/16"	Min. 2-Pin	7/32"	11/16"		G-3½	3/16"	1/8"	3/8"	.22	.19	.18
	5005-272-113	5/16"	Min. Wedge	7/32"	11/16"		T-3¼	3/16"	1/8"	3/8"	.19	.17	.16

LENS DESCRIPTION CODE (last three Drake Number digits): See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"



MONEY SAVER INDICATOR LIGHTS—1/2" Lens

Popular low cost units. Lamps replaced from behind panel. Nickel plated lens holder.

LAMP NO. 656 120V

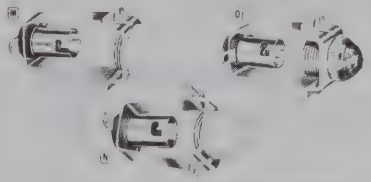
WEDGE BASE BULB NO. T-3¼ 6.3 to 14V

Fig. No.	Drake Number	Lens Dia.	Base	Length In Front of Panel	Length Behind Panel Back	Built-in Resistor (Ohms)	Bulb Size	Mounting Hole Dia.	Max. Panel Thickness	Mounting Centers	Net Each Lots Of 1-9	10-24	25-99
	10-113	1/2"	Min. Screw	5/16"	31/32"		T-3¼	3/16"	1/4"	21/32"	$ .24	$ .22	$ .20
K	10C-113	1/2"	Cand. Screw	5/16"	1"		S6	3/16"	1/4"	25/32"	.29	.26	.24
	10G-113	1/2"	Min. Bay.	5/16"	31/32"		G-3½	3/16"	1/4"	23/32"	.25	.23	.21
	10T-113	1/2"	Min. Bay.	5/16"	17/32"		T-3¼	3/16"	1/4"	21/32"	.25	.23	.21
L	5010-272-113	1/2"	Min. Wedge	5/16"	31/32"		T-3¼	3/16"	1/4"	23/32"	.25	.23	.21

LENS DESCRIPTION CODE (last three Drake Number digits): See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"
Drake No. 10C-113 is UL and CSA Listed.

(ALL ILLUSTRATIONS APPROX. 3/8 ACTUAL SIZE)

MIN. BAY. BULB NO. T-3¼ 6.3 to 28V



MONEY SAVER
MINIATURE BAYONET BASE
INDICATOR LIGHTS
with Snap-in Brackets

Available with attached ½ watt series resistor for NE51H Hi-Brightness neon lamp. Specify 100 K resistor for NE51 lamp. Lamps replaced from behind panel. No. 54 has nickel plated lens holder with Drake E-Z-Tite knurl for Drake No. 24 wrench.

Fig No.	Drake Number	Lens Dia	Length In Front of Panel	Length Behind Panel Back	Built-in Resistor (Ohms)	Mounting Hole Dia.	Max. Panel Thickness	Mounting Centers	Net Each Lots Of 1-9	10-24	25-99
M	52-504	11/16"	1/4"	1 1/2"		7/16"	3/8"	23/32"	$ .21	$ .19	$ .17
	N252-IL-503	1/16"	1/8"	1 1/2"	22K	5/16"	3/8"	23/32"	.45	.40	.37
N	53-304	1/8"	7/16"	1 7/32"		7/16"	3/8"	23/32"	.21	.19	.17
	N253-IL-323	1/8"	7/16"	1 7/32"	22K	5/16"	3/8"	23/32"	.45	.40	.37
O	54-113	1/2"	11/32"	1 11/32"		5/16"	3/8"	25/32"	.33	.30	.27
	N254-IL-103	1/2"	11/32"	1 11/32"	22K	5/16"	3/8"	25/32"	.59	.53	.49

LENS DESCRIPTION CODE (last three Drake Number digits): See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"
N252, N253, N234 are UL and CSA Listed.

LAMP NO. NE51H 125 V

OEM PRICES ON REQUEST ★ *UNITS CAN BE ORDERED WITH LAMP INSTALLED* ★ SPECIFY LENS COLOR

INDICATOR LIGHTS



MONEY SAVER INDICATOR LIGHTS
HORIZONTAL MOUNTING

Plastic lens. Lamps replaced from front of panel. Nickel plated lens holder. Rated at 2 watts.

MIN. BAY. BULB NO. T-3¼ 6.3-28V

Fig. No.	Drake Number	Lens Dia.	Base	Length In Front of Panel	Length Behind Panel Back	Mounting Hole Dia.	Max. Panel Thickness	Mounting Centers	Net Each Lots Of 1-9	10-24	25-99
A	20-113	1/2"	Min. Bay.	17/32"	31 15/32"	11/16"	3/8"	1"	$ .35	$ .31	$ .29
	20S-113	1/2"	Min. Screw	17/32"	1 15/32"	11/16"	13/32"	1"	.35	.31	.29
B	21C-304	5/8"	Min. Bay.	1/2"	1 15/32"	11/16"	13/32"	1"	.28	.25	.23

LENS DESCRIPTION CODE (last three Drake Number digits): See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"



MONEY SAVER INDICATOR LIGHTS
FOR EASY PANEL THICKNESS ADJUSTMENT

Supplied with three fiber spacing washers. Sturdily built. Plastic lens. Nickel plated lens holder. Lamps replaced from front of panel. Rated at 2 watts.

MIN. SCREW BULB NO. T-3¼ 2.5-6.3V

MIN. BAY. AS ABOVE

Fig. No.	Drake Number	Lens Dia.	Base	Length In Front of Panel	Length Behind Panel Face	Mounting Hole Dia.	Max. Panel Thickness	Mounting Centers	Net Each Lots Of 1-9	10-24	25-99
C	50-113	1/2"	Min. Screw	17/32"	1 15/32"	11/16"	1/4"	1"	$ .46	$ .42	$ .38
D	51-304	5/8"	Min. Bay.	1/2"	1 15/32"	11/16"	1/4"	1"	.39	.35	.32

LENS DESCRIPTION CODE (last three Drake Number digits): See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"



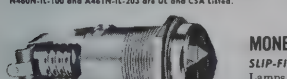
"STANDARD" INDICATOR LIGHTS
FRONT LAMP REPLACEMENT

Smallest diameter units with front lamp replacement for 120 V incandescent lamps. Polished chrome friction lamp holder.

LAMP NO. NE45 125V

Fig. No.	Drake Number	Lens Dia.	Base	Length In Front of Panel	Length Behind Panel Face	Mounting Hole Dia.	Max. Panel Thickness	Mounting Centers	Net Each Lots Of 1-9	10-24	25-99
E	A-101	3/8"	Min. Bay.	3/16"	1 1/32"	13/64"	1/8"	11/16"	$ .90	$ .81	$ .75
	A460N-IL-100	3/8"	Cand. Screw	3/16"	1 13/32"	13/64"	1/8"	11/16"	.91	.82	.76
F	A461N-IL-203	5/16"	Cand. Screw	11/64"	1 1/64"	13/64"	1/8"	11/16"	.87	.78	.72

LENS DESCRIPTION CODE (last three Drake Number digits): See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"
N460N-IL-100 and A461N-IL-203 are UL and CSA Listed.



MONEY SAVER INDICATOR LIGHT
SLIP-FIT BEZEL FOR EASY INSTALLATION

Lamps may be replaced from front or rear of panel. Polished chrome friction lens holder.

LAMP NO. 656 120V

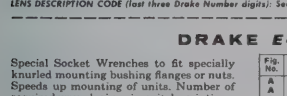
Fig. No.	Drake Number	Lens Dia.	Base	Length In Front of Panel	Length Behind Panel Face	Mounting Hole Dia.	Max. Panel Thickness	Mounting Centers	Net Each Lots Of 1-9	10-24	25-99
G	75-110	1"	Cand. Screw	7/16"	2 1/16"	1"	1/2"	1 5/16"	$1.00	$ .90	$ .83

LENS DESCRIPTION CODE (last three Drake Number digits): See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"

DRAKE *E-Z-TITE* WRENCHES

Special Socket Wrenches to fit specially knurled mounting bushing flanges or nuts. Speeds up mounting of units. Number of required wrench given in unit descriptions.

Fig. No.	Drake Number	Size Dia.	Net Each 1-99
A	651-14	7/16"	$1.50
A	651-20	1/2"	1.50
A	651-24	9/16"	2.00
B	652-32	13/16"	3.00





INDICATOR LIGHTS



"STANDARD" INDICATOR LIGHTS

Practical, good-looking—polished chrome plated lens holder. Special feature: easy front replacement of pop-forward lamps. Snap-in lens assembly. Mount from front of panels up to ½" thick, in 1" dia. hole on 1⅝" centers.

LAMP NO. 656 120V

Fig. No.	Drake Number	MIL Style Number	Lens Dia.	Base	Length In Front of Panel	Length Behind Panel Face	Lamps	Net Each Lots Of 1-9	10-24	25-99
L	B1476L-ISE-110		1"	Cand. Screw	5/16"	25/32"	656 or 10C7	$1.46	$1.31	$1.21
M	B1476L-ISE-410		1"	Cand. Screw	3/8"	25/32"	656 or 10C7	1.48	1.33	1.23

LENS DESCRIPTION CODE (last three Drake Number digits): See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"



"TITELITE"
OIL-WATER-DUST PROOF
INDICATOR LIGHTS

Neoprene gaskets seal out oil, water, dust, dirt. Ruggedly made for severe duty. Polished chrome plated screw-on lens holder (MIL types, black nickel plated); octagon nut for easier mounting. Pop-forward lamp on screw base units, easily replaced from front of panel. Mount from front or rear of panels up to 1/16" thick, in 1" dia. hole on 1¾" centers. No. 5205-233 has built-in ⅛ watt series resistor for NE51H lamp. Mounts from front or rear of panels up to ¾" thick, in 1 1/16" dia. hole on 2 1/32" centers.

LAMP NO. 654DC 120V

LAMP NO. NE51 120V

Fig. No.	Drake Number	MIL Style Number	Lens Dia.	Base	Length In Front of Panel	Length Behind Panel Face	Built-in Resistor (Ohms)	Net Each Lots Of 1-9	10-24	25-99
N	B979S-IBE-305		1"	D.C. Cand. Bay.	1 7/8"	1 7/8"		$1.95	$1.75	$1.62
	B979S-IBE-410		1"	D.C. Cand. Bay.	1 7/8"	2 1/8"		1.95	1.75	1.62
O	B979S-IBE-430		1"	D.C. Cand. Bay.	1 7/8"	2 1/8"		1.95	1.75	1.62
P	B979S-IBE-550		1"	D.C. Cand. Bay.	1 7/8"	2 1/8"		2.17	1.95	1.80
	B1479S-IBE-305		1"	Cand. Screw	1 7/8"	1 7/8"		2.06	1.86	1.72
	B1479L-IBE-410		1"	Cand. Screw	1 7/8"	1 7/8"		2.05	1.84	1.70
	B1479L-IBE-430		1"	Cand. Screw	1 7/8"	1 7/8"		2.05	1.84	1.70
	B1479L-IBE-550		1"	Cand. Screw	1 7/8"	2 1/8"		2.24	2.02	1.87
	5205-223-301		7/8"	Min. Bayonet	7/16"	1 7/8"		1.53	1.38	1.27
Q	5205-223-320		7/8"	Min. Bayonet	7/16"	1 7/8"	33K	1.69	1.52	1.40

LENS DESCRIPTION CODE (last three Drake Number digits): See earlier page for explanation—"DRAKE LENS CODE NUMBER DATA"

LAMP NO. T-3¼ 6.3 to 28V



CANDELABRA SCREW BASE INSTRUMENT LIGHT

For 120V, 6S6 lamp. Nickel plated friction hood. Mounts from front or rear of panels up to ⅜" thick, in 1" dia. hole on 1⅝" centers.

LAMP NO. NE51H 125 to 250V

Fig. No.	Drake Number	MIL Style Number	Lens Dia.	Base	Length In Front of Panel	Length Behind Panel Face	Lamps	Net Each Lots Of 1-9	10-24	25-99
R	900-006			Cand. Screw	1 7/32"	1 7/32"	656	$1.35	$1.31	$1.21

LAMP SAME AS 656 ABOVE

(ALL ILLUSTRATIONS APPROX. 3/8 ACTUAL SIZE)

OEM PRICES ON REQUEST ★ *UNITS CAN BE ORDERED WITH LAMP INSTALLED* ★ SPECIFY LENS COLOR

Miniature Lighting Specialists

DRAKE

MINIATURE LIGHTING SPECIALISTS

"NEWMLITE"

SUB-MIDGET INDICATOR LIGHT

HERE'S MAXIMUM EFFICIENCY IN MINIMUM SIZE— WITH THE ADVANTAGES OF NEW LONG-LIFE INCANDESCENT LAMPS!

"GEMLITES" combine practicality, convenience, economy for all kinds of instruments, control panels and other applications. Specially DRAKE-designed to fill growing needs for soundly constructed extra-small units, for low voltage operation and convenient lamp replacement. For rapid installation in round holes, they have E-Z Tite flanges—use No. 12 wrench.

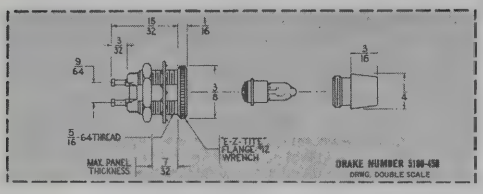
SPECIFICATIONS . . . Mounts in ¾" diameter "D" hole from front of panel . . . Maximum panel thickness: 7/32". . . Minimum center-to-center spacing: 1 1/32". . . Secured with hexagon nut . . . Nickel plated brass hardware, black body . . . Lens: translucent Butyrate . . . COLORS: AMBER, BLUE, COLORLESS, GREEN, RED and YELLOW . . . Phenolic insulation . . . Turret type solder lugs . . . Torque: 20 lb. inch . . . BUILT TO PERFORM AS *PRESCRIBED IN MIL-L-3661A.*



"GEMLITE" 5160-458
9.7 carat Diamond Ring
Courtesy of C. D. Peacock Jewelers
Est. 1837—Chicago
PHOTOS ACTUAL SIZE

Drake Number	Net Each Lots Of 1-9	10-24	25-99
5160-458-604	$1.75	$1.58	$1.46
*5160-458-644	1.84	1.66	1.53

*Imprinted Lenses see photo.





SUB MIDGET T-1 INCANDESCENT LAMP

FEATURES

- Houses new 60,000 hour, 5 V., 300 milliwatt lamp.
- Only ¾" long—⅜" maximum diameter (0.09 cubic inches).
- Flat on thread means easy economical mounting in 5/16" diameter "D" hole.
- 180° Visibility.
- Replaceable lamp from front of panel.
- Flat face lens for READOUT applications.

LAMP DATA

Lamp No.	Design Voltage	Design Current amp.	Average Life hr.	Candle Power c.p.
682	5.0	.06	60M	.029
685	5.0	.06	60M	.048
714	5.0	.075	16M	.080
718	5.0	.115	16M	.132

OEM PRICES ON REQUEST ★ *UNITS CAN BE ORDERED WITH LAMP INSTALLED* ★ SPECIFY LENS COLOR

DRAKE

MINIATURE LIGHTING SPECIALISTS

"ANEWROLITE"

MILITARY INDICATOR LIGHT

ANOTHER SUB-MIDGET INDICATOR LIGHT— THIS ONE BUILT TO MILITARY DRAWING MS25446

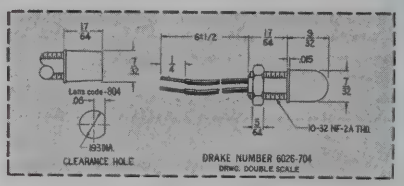
DRAKE'S *"ASTROLITE"* was aptly named because its primary use is in missile work, but has other instrumentation applications as well. The built-in 60,000 hour incandescent lamp affords maximum life in an Indicator Light built to meet *Military Standard MIL-L-6723*—particularly useful where space is at a premium.



"ASTROLITES"
6026-704
6026-804
PHOTOS ACTUAL SIZE

FEATURES . . .

- Per Military Standard Drawing MS25446.
- Micro-miniature unit (0.028 Cubic Inches).
- Built-in long life T-1 incandescent lamp—60,000 hours life.
- Built-in Teflon insulated lead wires.
- 180° Visibility.
- Flat on thread for "D" hole easy economical mounting.
- Optional flat face lens for READOUT applications.



SPECIFICATIONS . . .

Mounts in 0.191" diameter "D" hole.
Maximum panel thickness: 3/16".
Minimum center-to-center spacing: 1 1/32".
Secured with hexagon nut.
Nut: chromated zinc over brass.
Body: Stainless Steel.
Lens: Translucent Butyrate.
COLORS: AMBER, BLUE, COLORLESS, GREEN, RED, YELLOW and WHITE.
Termination: Two 26 ga. stranded Teflon insulated 6" Lead Wires.
Lamp potted in with epoxy resin.
Net weight per thousand: 5 lbs.
Test Voltage: 500AC to ground.
Maximum operating voltage: 6 V.
Design current: 0.06 amps. at 5 volts.

MILITARY TABLE

DRAKE NUMBER *With Macrodome Lens	†COLOR Diffusing Lens	MILITARY STYLE NUMBER	Net Each Lots Of 1-9	10-24	25-99
6026-704	Blue	MS 25446-2	$2.95	$2.85	$2.46
6026-704	Green	MS 25446-3	2.95	2.85	2.46
6026-704	Red	MS 25446-4	2.95	2.85	2.46
6026-704	White	MS 25446-5	2.95	2.85	2.46
6026-704	Yellow	MS 25446-6	2.95	2.85	2.46
	Non-Diffusing Lens				
6026-703	Colorless	MS 25446-6	$2.95	$2.85	$2.46

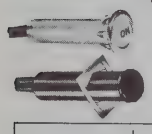
*For READOUT application, order cylindrical lens Lens code—804.
†Always specify color with Drake Number.

OEM PRICES ON REQUEST ★ *UNITS CAN BE ORDERED WITH LAMP INSTALLED* ★ SPECIFY LENS COLOR

NEON "GLO-LITES"

DRAKE
CHICAGO 31, ILLINOIS

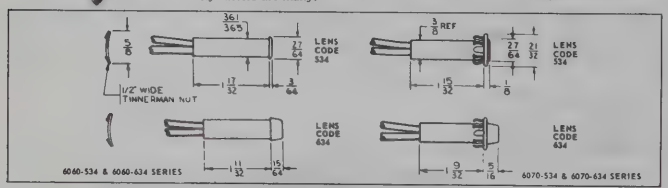
THE NEW LOOK IN NEON INDICATOR LIGHTS



SAVE MONEY WITH ONE-PIECE NYLON BODY and LENS

"Glo-Lites" are best suited for use in appliances . . . instruments . . . specialties . . . and other products where line voltage is available. Positive quality factors are many.





TINNERMAN NUT					PLUG IN					CIRCUIT VOLTAGE (AC)†	BUILT-IN RESISTANCE (ohms)
FLUSH	CYLINDRICAL (Tapered)	NET EA. LOTS OF 1-9	10-24	25-99	FLUSH	CYLINDRICAL (Tapered)	NET EA. LOTS OF 1-9	10-24	25-99		
6063-534	6063-634	.46	.42	.38	6073-534	6073-634	.50	.45	.42	125	25K
6065-534	6065-634	.50	.45	.42	6075-534	6075-634	.54	.49	.45	250	100K

*External series resistance required which will limit current to 0.6ma.
†Starting Voltages: NE2E lamp; AC 65V, DC 90 V. NE2H lamp (with bullets preceding part No.) AC 95V, DC 135V.

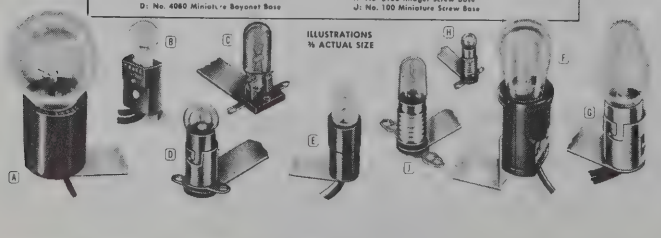
Choose between red, white or amber colors and between flush or tapered cylindrical lens styles — both are translucent and signal lined on the inside.

HI-BRIGHTNESS UNITS ARE RECOMMENDED FOR GREATER ILLUMINATION. (See chart above where bullet • precedes part number.)

A FEW DRAKE LAMPHOLDERS

Ask for additional information about these and other styles

A: No. A1700 Intermediate Screw Base with Phenolic Housing
B: No. 1900 Miniature 2-Pin Base with Phenolic Housing
C: No. 4272 "WEDGE-GRIP" Miniature Wedge Base
D: No. 4080 Miniature Bayonet Base
E: No. N500 Miniature Bayonet Base with Nylon Housing
F: No. B1400 Candelabra Screw Base with Phenolic Housing
G: No. A1100 Double Contact Bayonet Base
H: No. 2100 Midget Screw Base
J: No. 100 Miniature Screw Base



OEM PRICES ON REQUEST ★ *UNITS CAN BE ORDERED WITH LAMP INSTALLED* ★ SPECIFY LENS COLOR

DRAKE
CHICAGO 31, ILLINOIS

LENSES & LENS SHAPES

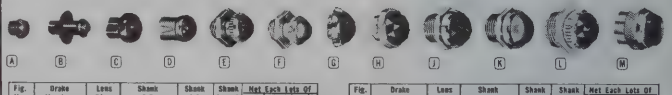


Fig. No.	Drake Number	Lens Diam.	Shank O.D.	Shank I.D.	Shank Length	Net Each Lots Of 1-9	10-24	25-99
A	8155-113	3/32"	.218	Solid	1/16"	$.07	$.06	$.05
B	815L/1-113	3/32"	.218	Solid	1/16"	.08	.07	.07
C	24-113	3/16"	.278/.282	1/8"	1/16"	.07	.06	.05
D	35-101	3/16"	.324/.330	1/8"	3/32"	.30	.27	.25
E	14L-13-113	3/16"	3/16"—32 Thd.	1/8"	3/16"	.13	.12	.11
F	14L-15-103	3/16"	3/16"—32 Thd.	1/8"	3/16"	.13	.12	.11

Fig. No.	Drake Number	Lens Diam.	Shank O.D.	Shank I.D.	Shank Length	Net Each Lots Of 1-9	10-24	25-99
G	31-113	1/8"	.373/.377	13/64"	1/8"	$.13	$.12	$.11
H	23-113	1/8"	.373/.377	13/64"	3/16"	.12	.11	.10
J	16-17-113	1/8"	3/16"—27 Thd.	13/64"	3/8"	.15	.14	.13
K	16-17-183	1/8"	3/16"—27 Thd.	13/64"	3/8"	.15	.14	.13
L	30-528-118	1/8"	3/16"—27 Thd.	3/16"	3/8"	.30	.27	.25
M	183A-508	1/8"	.483/.485	1/8"	3/16"	.31	.28	.26

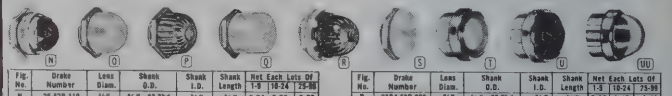


Fig. No.	Drake Number	Lens Diam.	Shank O.D.	Shank I.D.	Shank Length	Net Each Lots Of 1-9	10-24	25-99
N	25-528-110	1/8"	3/16"—27 Thd.	3/16"	3/16"	$.24	$.22	$.20
O	25P-528-304	3/16"	3/16"—27 Thd.	3/16"	3/16"	.12	.11	.10
P	25P-528-323	3/16"	3/16"—27 Thd.	3/16"	3/16"	.12	.11	.10
Q	25P-528-604	3/16"	3/16"—27 Thd.	3/16"	3/16"	.12	.11	.10

Fig. No.	Drake Number	Lens Diam.	Shank O.D.	Shank I.D.	Shank Length	Net Each Lots Of 1-9	10-24	25-99
R	2564-528-328	1/8"	3/16"—27 Thd.	3/16"	3/16"	$.52	$.47	$.43
S	52A-B-564	13/64"	3/16"—27 Thd.	13/64"	3/16"	.12	.11	.10
T	80A-181	5/16"	.685/.687	1/4"	3/16"	.43	.39	.36
U	80A-118	3/8"	.685/.687	5/16"	1/4"	.43	.39	.36
UU	80A-203	3/8"	.685/.687	5/16"	1/4"	.43	.39	.36



Fig. No.	Drake Number	Lens Diam.	Shank O.D.	Shank I.D.	Shank Length	Net Each Lots Of 1-9	10-24	25-99
V	60A3-27-116	3/8"	13/16"—27 Thd.	25/64"	3/8"	$.58	$.51	$.47
W	75A-101	1"	.887/.889	25/64"	3/8"	.47	.42	.39

Fig. No.	Drake Number	Lens Diam.	Shank O.D.	Shank I.D.	Shank Length	Net Each Lots Of 1-9	10-24	25-99
X	75A-110	1"	.887/.889	25/64"	3/8"	$.47	$.42	$.39
Y	75A-205	1"	.887/.889	25/64"	3/8"	.57	.51	.47
Z	75A-431	1"	.887/.889	25/64"	1/2"	.47	.42	.39
AA	75A3-C-101	1"	1"—27 Thd.	25/64"	3/8"	.68	.61	.56
BB	75A3-C-110	1"	1"—27 Thd.	25/64"	3/8"	.68	.61	.56
CC	75A3-C-500	1"	1"—27 Thd.	25/64"	5/16"	.68	.61	.56



(ALL ILLUSTRATIONS APPROX. 3/8 ACTUAL SIZE)

A FEW FEATURES ABOUT DRAKE PRODUCTS

RELIABILITY . . .

DRAKE'S primary business, for more than three decades, has been the design and production of Miniature Lighting components. This long experience assures you of the most advanced design, the most practical and serviceable construction, and the most expert manufacture. Here are just a few typical DRAKE "plus" features:

1. Seamless drawn bayonet shells. Will not open up as lockseam shells do.
2. All resin impregnated fibre insulation, "Vulcoid".
3. Brass center contact rivets.
4. Molded phenolic or nylon shell housings.
5. Coil springs for center contact support that do not take a set.
6. Guaranteed to meet specifications as listed.
7. All steel parts protected with a suitable noncorrosive finish, such as cadmium.
8. 100% test of all units rated at 115 volts breakdown.

This outstanding quality has been a major factor in satisfying the thousands of customers, including the "giants" as well as smaller manufacturers, whom we have supplied for many years. And you'll find DRAKE's traditional *"Personalized Service"* an added asset of inestimable value.

OEM PRICES ON REQUEST ★ *UNITS CAN BE ORDERED WITH LAMP INSTALLED* ★ SPECIFY LENS COLOR

© U.C.P., Inc.

DRAKE EXCLUSIVE DRAKE "MF" PRESS-TO-TEST

The exclusive construction of DRAKE'S 5131, 5138, 5141 and 5148 Series "MF" "Press-to-Test" Indicator Lights provides an instantaneous and highly reliable check of indicator lamp condition—the most common cause of indication failure.

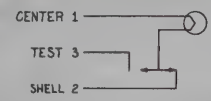
A slight pressure on the lens cap of the indicator light "breaks" the normal signal circuit to the lamp, and connects the lamp to a test circuit (see wiring schematic at right). This simple procedure immediately informs the operator that:

1. *If indicator lamp lights, the lamp is OK.*
2. *If indicator lamp fails to light, it is burned out and should be replaced.*
3. *If indicator lamp lights in test circuit, but failed to light in the signal circuit when it should have, the signal activating switching should be checked.*

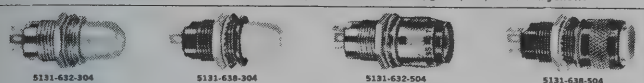
General features of "MF" indicator lights will be found at the top of Pages 2 and 3 in Folder 6304. Data at the top of Page 4 does not apply.

Lamps that may be used and their characteristics will be found in the table "Lamp Data—Incandescent Lamps" at the top of Page 3 in Folder 6304.

WIRING SCHEMATIC



LENS COLORS: For Incandescent Lamps: amber, blue, clear, green, red, white and yellow.

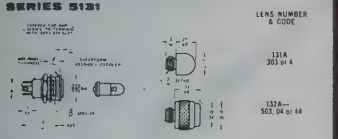


SERIES 5131 For a secure fit, the lens shanks are threaded. Lamps are replaceable from front. Units mount from front of panels up to 5/16" thick in 15/32" hole on 3/4" minimum centers. Commercial units are clear finish; MIL units are black anodized. On Special Order, this series is available with a 1/2"-32 thread for mounting in a 1/2" diameter hole to replace similar units now in use. Weight per unit approximately 0.0165 lb.

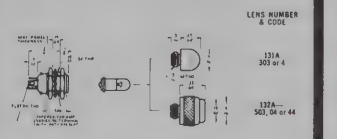
DRAKE NUMBER		LENS DESCRIPTION	LENS DIA.	PROJECTION From face of panel		NET EACH LOTS OF		
COMMERCIAL Natural Finish	MILITARY Black Finish			FRONT	REAR	1-9	10-24	25-99
5131-632-303	5131-638-303	Macrodome, Transparent	3/8"	31/64"		1.91	1.72	1.59
5131-632-304	**5131-638-304**	Macrodome, Translucent	3/8"	31/64"		1.91	1.72	1.59
5131-632-504	**5131-638-504**	Flush, Translucent	15/32"	31/64"	13/16"	2.24	2.02	1.87
*5131-632-544	5131-638-544	Flush, "Read-out"	15/32"	31/64"		2.33	2.09	1.94

*Lens can be rotated within the holder for legend alignment.

SERIES 5131



SERIES 5141





SERIES 5141 Same as Series 5131 except mount from front or rear of panel. No option for mounting in 1/2" diameter hole. Weight per unit approximately 0.0175 lb.

DRAKE NUMBER		MILITARY STANDARD NUMBER*	LENS DESCRIPTION	LENS DIA.	PROJECTION From face of panel		NET EACH LOTS OF		
COMMERCIAL Natural Finish	MILITARY Black Finish				FRONT	REAR	1-9	10-24	25-99
5141-632-303	5141-638-303	MS25041-5 thru 11	Macrodome, Transparent	3/8"	35/64"	3/4"	1.98	1.78	1.65
5141-632-304	**5141-638-304**		Macrodome, Translucent	3/8"	35/64"		1.98	1.78	1.65
5141-632-503	**5141-638-503**		Flush, Transparent	15/32"	41/64"		2.30	2.07	1.92
**5141-632-544	5141-638-544		Flush, "Read-Out"	15/32"	41/64"		2.39	2.15	1.99

*The dash numbers call out colors. DRAKE numbers don't include color. Specify with order
**Lens can be rotated within holder for legend alignment.

DRAKE NUMBERS IN BOLD DESIGNATE UNITS PICTURED

★ ABOVE UNITS MAY BE ORDERED WITH LAMP INSTALLED ★ ALWAYS SPECIFY LENS COLOR ★

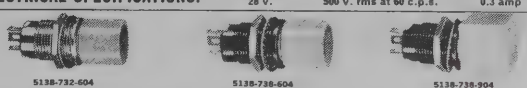
DATA FOR PRESS-TO-TEST "MF" LIGHTS

DRAKE

- Compact for minimum space requirements. Mount in 13/32" diameter hole, with minimum 3/4" center-to-center spacing. 5141 and 5148 Series mount from either front or rear of panel; 5131 and 5138 Series mount from front only.
- "Glaskyd" and grade XXX phenolic insulation. All electrical connections insulated from ground.
- Electro-tinned solder lugs (tapered to accept AMP Series 98 female solderless connectors) mechanically locked in position to prevent rotation (see Figure 2 at top of Page 3 in Folder 6304).
- Hardware is steel protected with 0.0002" cadmium plate plus dichromate dip; body is anodized aluminum.
- Items listed in "Military Standard Number" column are built to meet the requirements of MIL-L-7961B.

ELECTRICAL SPECIFICATIONS:

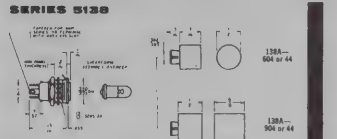
Rated Voltage: 28 v. | Test Voltage: 500 v. rms at 60 c.p.s. | Maximum Current: 0.3 amp



SERIES 5138 Similar to Series 5131 but have friction fit lens shanks for easy "Read-Out" legend alignment. Lamps are replaceable from front. Units mount from front of panels up to 5/16" thick in 15/32" hole on 3/4" centers. Commercial units are clear finish; MIL units are black anodized. Weight per unit approximately 0.0155 lb.

DRAKE NUMBER		LENS DESCRIPTION	LENS SIZE	PROJECTION From face of panel		NET EACH LOTS OF		
COMMERCIAL Natural Finish	MILITARY Black Finish			FRONT	REAR	1-9	10-24	25-99
5138-732-604	**5138-738-604**	Cylindrical, Translucent	1/2" D	1/2"		2.33	2.10	1.94
5138-732-644	5138-738-644	Cylindrical, "Read-Out"	1/2" D	1/2"		2.33	2.17	2.01
5138-732-904	**5138-738-904**	Square, Translucent	3/8" Sq.	9/16"	13/16"	2.42	1.96	1.82
5138-732-944	5138-738-944	Square, "Read-out"	3/8" Sq.	9/16"		2.18	2.05	1.90

SERIES 5138



SERIES 5148



SERIES 5148 Same as Series 5138 except mount from front or rear of panel. Weight per unit approximately 0.0155 lb.

DRAKE NUMBER		LENS DESCRIPTION	LENS SIZE	PROJECTION From face of panel		NET EACH LOTS OF		
COMMERCIAL Natural Finish	MILITARY Black Finish			FRONT	REAR	1-9	10-24	25-99
5148-732-604	**5148-738-604**	Cylindrical, Translucent	1/2" D	9/16"		2.38	2.14	1.98
5148-732-644	5148-738-644	Cylindrical, "Read-out"	1/2" D	9/16"		2.46	2.22	2.05
5148-732-904	**5148-738-904**	Square, Translucent	3/8" Sq.	3/8"	3/4"	2.23	2.01	1.86
5148-732-944	5148-738-944	Square, "Read-out"	3/8" Sq.	3/8"		2.32	2.08	1.93

DRAKE NUMBERS IN BOLD DESIGNATE UNITS PICTURED

★ ABOVE UNITS MAY BE ORDERED WITH LAMP INSTALLED ★ ALWAYS SPECIFY LENS COLOR ★

A COMPLETE SELECTION OF DRAKE'S NEW 120 VOLT INCANDESCENT, MIDGET AND MINIATURE INDICATOR LIGHTS

new Now available indicator lights to use the new 120 Volt incandescent lamps — Bi-Pin Cartridge base and Miniature Bayonet base — long lasting, brighter and without need of transformers or resistors. These lamps are being used in more and more installations each day.

To keep pace with the popularity of these 120 Volt incandescent lights, Drake has adapted its popular Bi-Pin Cartridge and Deluxe Molded indicator lights to permit a wider application of these new lights in the computer and controls field. *new*

BI-PIN CARTRIDGE 120 VOLT INCANDESCENT INDICATOR LIGHTS

FEATURES: For Bi-Pin Cartridge Indicator Lights

Operation on standard 110-125 volt series.
Houses a 3 watt incandescent lamp with 3000 hour rating.
Light rating of 1500 "end foot candles."
Minute in size.
Easy, from front of panel lamp replacement.
Flat on thread for easy mounting in a "D" shaped hole.

SPECIFICATIONS: Bi-Pin Cartridge Indicator Lights

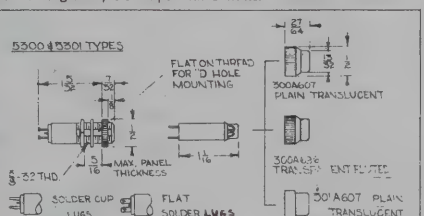
Mounts in 3/4" diameter (round "D" hole) from rear of panel . . . Maximum panel thickness 5/16" . . . Minimum center to center spacing—31/32" . . . secured with a hexagon nut . . . black anodized aluminum hardware and body . . . with or without plastic lenses . . . COLORS: BLUE, COLORLESS, GREEN, RED AND YELLOW . . . Phenolic Insulation . . . 3 choices of lugs.

ELECTRICAL: Test Voltage is 1000 AC to ground, 0.5 amps with 3 watts.



BI-PIN CARTRIDGE 120 VOLT INCANDESCENT INDICATOR LIGHT

Note:
1. Exposed panel hardware is black, other color anodizing to order.
2. #300A lens assembly has metal bezel. #301A is one piece, plastic cap.

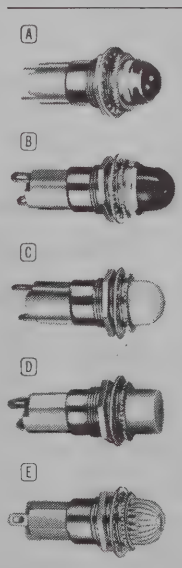


DRAKE NUMBER	NET EACH LOTS OF			LAMPHOLDER NUMBER	LUGS	LENS NUMBER
	1-9	10-24	25-99			
5300-422-607	.85	.76	.70	4422-006	Flat	300A607
5300-422-696	.85	.76	.70	4422-006	Flat	300A696
5300-428-607	1.07	.96	.89	4428-006	Turret	300A607
5300-428-696	1.07	.96	.89	4428-006	Turret	300A696
5300-429-607	1.15	1.04	.96	4429-006	Solder Cup	300A607
5300-429-696	1.15	1.04	.96	4429-006	Solder Cup	300A696
5301-422-607	.63	.57	.52	4422-006	Flat	301A607
5301-428-607	.85	.77	.71	4428-006	Turret	301A607
5301-429-607	.94	.84	.78	4429-006	Solder Cup	301A607

DELUXE MOLDED MINIATURE BAYONET BASE INDICATOR LIGHTS



INCANDESCENT 120 VOLT LAMP
Long life — 3000 hrs. Light rating — 1500 End foot candles



AVAILABLE IN COLORS, BLUE, COLORLESS, RED, GREEN, AND YELLOW. PLEASE ALWAYS SPECIFY LENS COLORS.

Polished chrome finish (MIL units are black nickel plated), molded Plastic housing give fine appearance, assure dependability. All "DE-LUXE MOLDED" units have Drake's E-Z Tite flange for quick assembly with Drake No. 32 wrench. Install lamps and mount units from front of panel up to 13/32" thick, in 3/16" dia. mounting hole on 3/32" centers. Units with built-in 1/4 watt series resistors take neon lamps.

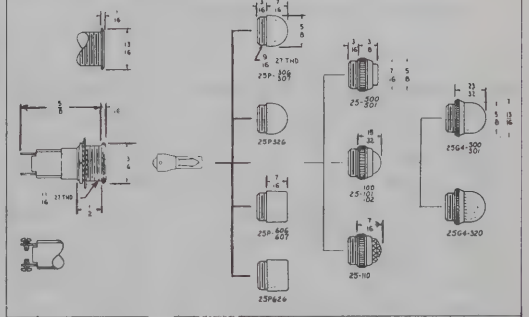


FIG. NO.	DRAKE NUMBER	MIL. STYLE NUMBER	LENS DIA.	PROJECTION FRONT	PROJECTION REAR	LUGS	NET EACH LOTS OF 1-9	10-24	25-99
A	5200-222-101		1/2"	17/32"	1 5/16"	Solder	.97	.87	.81
B	5200-222-301		5/8"	1 1/16"	1 5/16"	Solder	1.19	1.07	.99
C	5200-222-307		5/8"	1/2"	1 5/16"	Solder	.88	.79	.73
E	5200-222-326		5/8"	1/2"	1 5/16"	Solder	.88	.79	.73
D	5200-222-607		5/8"	3/16"	1 5/16"	Solder	Price to Order		
A	5200-228-101	LH75-LC14	1/2"	17/32"	1 5/16"	Solder	1.33	1.19	1.10
B	5200-228-301	LH75-LC15	5/8"	1 1/16"	1 5/16"	Solder	1.57	1.41	1.30
A	5200-229-101	LH62-BR2	1/2"	17/32"	1 5/16"	Solder	1.27	1.14	1.05

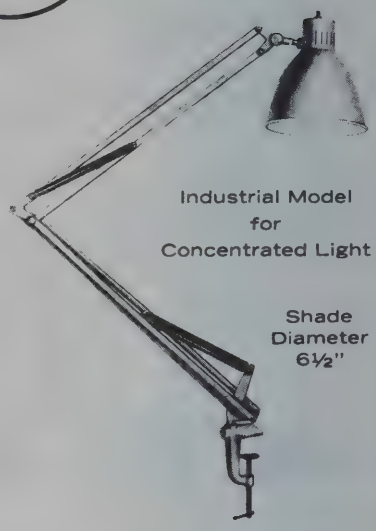
FOR QUALITY INDICATOR LIGHTS . . . CONTACT YOUR DRAKE DISTRIBUTOR

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1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625

Z-Lyte Lamps—

Model		ARM SIZE	RETAIL	1 to 5	6 to 11	12 & up
INCANDESCENT LAMPS	**3 Strut Lower Arm, 2 Strut Upper Arm**					
145	Without Bracket	45"	16.25	12.18	10.73	9.75
145	With B, C, or D	45"	18.50	13.88	12.20	11.10
145	With E	45"	19.75	14.81	13.04	11.85
145	With A	45"	23.75	17.81	15.68	14.25
135	Without Bracket	35"	15.50	11.63	10.23	9.30
135	With B, C, or D	35"	17.75	13.31	11.72	10.65
135	With E	35"	19.00	14.25	12.54	11.40
135	With A	35"	23.00	17.25	15.18	13.80
125	Without Bracket	25"	14.75	11.05	9.75	8.85
125	With B, C, or D	25"	17.00	12.75	11.20	10.20
125	With E	25"	18.25	13.75	12.05	10.95
125	With A	25"	22.25	16.70	14.70	13.35

Colors: Grey, Green, Tan, Black, White



Industrial Model for Concentrated Light

Shade Diameter 6½"

Model		ARM SIZE	RETAIL	1 to 5	6 to 11	12 & up
INCANDESCENT LAMPS	**3 Strut Lower Arm, 2 Strut Upper Arm**					
245	Without Bracket	45"	16.75	12.55	11.05	10.05
245	With B, C, or D	45"	19.00	14.25	12.50	11.40
245	With E	45"	20.25	15.20	13.35	12.15
245	With A	45"	24.25	18.20	16.00	14.55
235	Without Bracket	35"	16.00	12.00	10.55	9.60
235	With B, C, or D	35"	18.25	13.75	12.05	10.95
235	With E	35"	19.50	14.65	12.85	11.70
235	With A	35"	23.50	17.70	15.50	14.10
225	Without Bracket	25"	15.25	11.45	10.05	9.15
225	With B, C, or D	25"	17.50	13.10	11.55	10.50
225	With E	25"	18.75	14.05	12.40	11.25
225	With A	25"	22.75	17.05	15.00	13.65

Colors: Grey, Green, Tan, Black, White

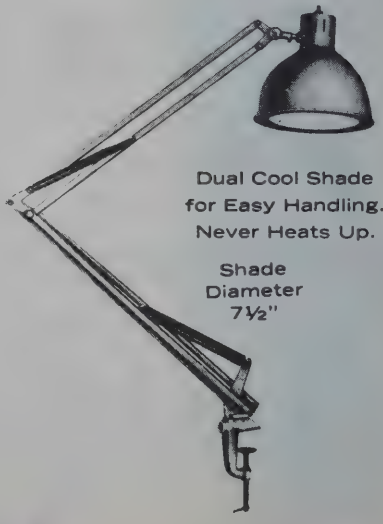


Deluxe Z-Lyte for Desks or Lighting Large Areas

Shade Diameter 8½"

Model		ARM SIZE	RETAIL	1 to 5	6 to 11	12 & up
INCANDESCENT LAMPS	**3 Strut Lower Arm, 2 Strut Upper Arm**					
345	Without Bracket	45"	17.00	12.75	11.20	10.20
345	With B, C, or D	45"	19.25	14.45	12.70	11.55
345	With E	45"	20.50	15.40	13.50	12.30
345	With A	45"	24.50	18.40	16.20	14.70
335	Without Bracket	35"	16.25	12.18	10.73	9.75
335	With B, C, or D	35"	18.50	13.88	12.20	11.10
335	With E	35"	19.75	14.81	13.04	11.85
335	With A	35"	23.75	17.81	15.68	14.25
325	Without Bracket	25"	15.50	11.63	10.23	9.30
325	With B, C, or D	25"	17.75	13.31	11.72	10.65
325	With E	25"	19.00	14.25	12.54	11.40
325	With A	25"	23.00	17.25	15.18	13.80

Colors: Grey, Green, Tan, Black, White



Dual Cool Shade for Easy Handling. Never Heats Up.

Shade Diameter 7½"

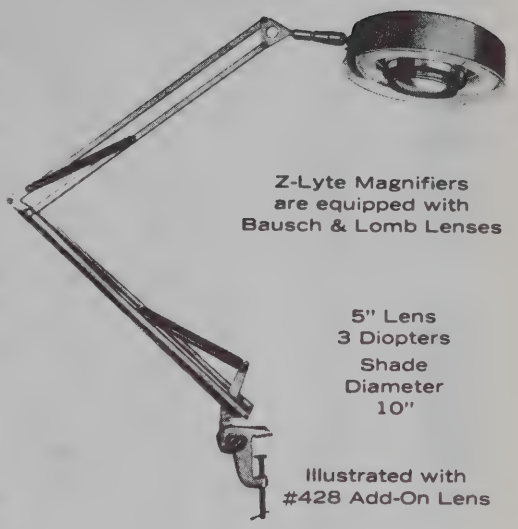
UL ALL Z-LYTE LAMPS ARE APPROVED BY UNDERWRITERS LABORATORIES, INC.

ZL-1

Z-LYTE CORPORATION

Model		ARM SIZE	RETAIL	1 to 5	6 to 11	12 & up
FLUORESCENT MAGNIFIER		**3 Strut Lower Arm, 2 Strut Upper Arm**				
445	Without Bracket	45"	30.25	22.69	19.68	18.15
445	With B, C, or D	45"	32.50	24.38	21.45	19.50
445	With E	45"	33.75	25.31	22.28	20.25
445	With AA	45"	40.25	30.18	26.56	24.15
435	Without Bracket	35"	29.50	22.13	19.47	17.70
435	With B, C, or D	35"	31.75	23.81	20.95	19.05
435	With E	35"	33.00	24.75	21.78	19.80
435	With AA	35"	39.50	29.62	26.07	23.70
425	Without Bracket	25"	28.75	21.85	19.00	17.25
425	With B, C, or D	25"	31.00	23.25	20.46	18.60
425	With E	25"	32.25	24.20	21.30	19.35
425	With AA	25"	38.75	29.00	25.50	23.25

Color: Grey Only
Requires One T9 Fluorescent Tube - 22 Watt Circline



Z-Lyte Magnifiers are equipped with Bausch & Lomb Lenses

5" Lens
3 Diopters
Shade Diameter 10"

Illustrated with #428 Add-On Lens

ADD - ON LENSES for Greater Magnification

424	Doubles Magnification	7.55	5.66	4.98	4.53
428	Triples Magnification	8.55	6.41	5.64	5.13

Z - LYTE ACCESSORIES

A	Weighted Base, Incandescent	7.50	5.62	4.95	4.50
AA	Weighted Base, Fluorescent	10.00	7.50	6.65	6.00
B	Wall Mount	2.25	1.68	1.48	1.35
C	C Clamp	2.25	1.68	1.48	1.35
D	Desk Mount	2.25	1.68	1.48	1.35
E	Adjustable Clamp	3.50	2.63	2.31	2.10
F	Inner Reflector	2.00	1.50	1.30	1.20
G	Heavy Floor Stand	19.00	14.25	12.54	11.40



TUBES AND BULBS

60 Watt Bulb	.25
15 Watt, T8 Fluorescent Tube	1.08
22 Watt, T9 Fluorescent Tube	3.50

ALL Z - LYTES PURCHASED MAY BE ASSORTED FOR MAXIMUM DISCOUNTS.

ALL PRICES F.O.B. BROOKLINE, MASSACHUSETTS

PRICES SLIGHTLY HIGHER ON WEST COAST

FREIGHT PREPAID ON SHIPMENTS OF 24 OR MORE UNITS.

TERMS: 1% TEN E.O.M.

NO MERCHANDISE MAY BE RETURNED WITHOUT AUTHORIZATION.

REPAIRS SHOULD BE MADE LOCALLY TO SAVE FREIGHT AND FURTHER DAMAGE.

Z - LYTES MAY BE PURCHASED WITH BULBS OR TUBES INSTALLED.

ALL Z - LYTES ARE GUARANTEED AGAINST DEFECTS OF MATERIAL OR MANUFACTURE.

ZL-2

©

Z-LYTE CORPORATION

481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351

BURGESS BATTERIES



P6



2U6



Hg-9



2



Y15



4FH

BURGESS Number	NEDA Number	Other	Volts	Terminal Type	Overall Dimensions L	W	H	Unit Package Quantities	Weight of Unit Package in Pounds	Sugg. Dealer Each	List Price Each
BURGESS ACTIVATORS FOR TRANSISTOR CIRCUITS											
130	14	635	1½	Flashlight	63/64 (diam.)		1 15/16	12	1 3/8	$.155	$.25
1306	1306	333	4½	Flat Contacts	43/64 (diam.)		1 31/32	1	1 oz.	.62	.89
2MN6	.....	216	9	Snap Type	1	39/64	1 7/8	12	1	.65	.98
2N6	1602	246	9	Snap Type	1 3/8	1 3/8	2 3/4	1	3/10	1.30	1.85
2U6	1604	216	9	Snap Type	1	39/64	1 7/8	12	1	.48	.69
2Z3	1610	243	4½	Snap Type	1 3/8	1 3/8	2 3/4	1	3/10	1.36	1.95
230	13	A100	1½	Flashlight	1 21/64 (diam.)		2 25/64	24	5¼	.19	.30
930	15	1015	1½	Flashlight	35/64 (diam.)		1 31/32	12	½	.155	.25
A4	.....	.....	6	Flat Contacts	1 9/32	1 9/32	2 11/32	1	¼	.78	1.15
C6X	1612	2356	9	Snap Type	2 5/16	1 1/32	6 1/16	1	5/8	1.23	1.75
D5	26	707	7½	Snap Type	2 9/16	2	2 23/32	1	7/8	1.15	1.65
D6	1603	276	9	Snap Type	2 9/16	2	3 5/32	1	1	1.36	1.95
D6PI	1601	2506	3, 6, 9	Socket	2 19/32	1 7/16	7 27/32	1	1 3/8	1.92	2.75
D6S	1608	2761	9	Socket	2 1/4	1 1/4	7 29/32	1	1 1/8	1.75	2.50
J6	1611	206	9	Flat Contacts	47/64 (diam.)		1 31/32	6	½	.62	.89
M6	1605	266	9	Snap Type	1 13/16	1 13/16	2 7/16	1	2/5	1.36	1.95
NE	.....	.....	1½	Flashlight	7/16 (diam.)		1 11/64	6	1/8	.08	.125
P6	1600	226	9	Snap Type	1 (diam.)		1 15/16	6	3/8	.62	.89
PM6	.....	226	9	Snap Type	1 (diam.)		1 15/16	6	5/8	.80	1.19
PM8	1810	228	12	Snap Type	1 (diam.)		2 7/16	1	1/8	.95	1.35
XX9	1900	239	9, 13½	Socket	1 9/32	29/32	2 17/32	1	1/8	1.77	2.55
Y6 (YL6)	1606	E177	9	Snap Type	3/5	3/5	1 9/10	12	½	.83	1.20
BURGESS MERCURY ACTIVATORS Information on additional Mercury Batteries not listed below is available.											
Hg-1		E1	1.4	Flat	5/8 (diam.)		21/32	4	.13	.52	.75
Hg-1R		E1N	1.35	Flat	5/8 (diam.)		21/32	4	.13	.64	.95
Hg-3R		E3	1.35	Flat	1 (diam.)		21/32	4	.30	1.05	1.50
Hg-4R		E4	1.35	Flat	1 13/64 (diam.)		21/32	4	.45	1.31	1.95
Hg-9		E9	1.4	Flat	17/32 (diam.)		1 31/32	12	.90	.64	.95
Hg-12		E12	1.4	Flat	5/8 (diam.)		2	2	.25	.87	1.25
Hg-12R		E12N	1.35	Flat	5/8 (diam.)		2	2	.25	1.05	1.50
Hg-42R		E42N	1.35	Flat	1 13/64 (diam.)		2 3/8	1	.50	2.76	3.95
H113R		E113	4.05	Flat	43/64 (diam.)		27/32	2	.15	1.72	2.50
H114R		E114	5.4	Flat	43/64 (diam.)		1 3/32	2	.15	1.85	2.65
H115R		E115N	6.75	Flat	43/64 (diam.)		1 21/64	2	.15	2.06	2.75
H126		E126	8.4	Flat	41/64 (diam.)		1 63/64	12	1.00	1.31	1.95
H132R		E132N	2.7	Flat	43/64 (diam.)		1 5/16	2	.15	1.17	1.65
H133		E133	4.2	Flat	21/32 (diam.)		2	12	1.20	1.17	1.75
H133R		E133N	4.05	Flat	21/32 (diam.)		2	2	.20	1.35	1.95
H134R		E134N	5.4	Flat	43/64 (diam.)		2 5/8	2	.25	1.72	2.50
H135R		E135N	6.75	Flat	43/64 (diam.)		3 9/32	2	.30	2.00	2.95
H136R		E136N	8.1	Flat	43/64 (diam.)		3 15/16	2	.35	2.40	3.50
H137R		E137N	9.45	Flat	43/64 (diam.)		4 19/32	1	.20	2.76	3.95
H145		E145	7.0	Flat	21/32 (diam.)		1 13/64	2	.15	1.72	2.50
H146X		E146X	8.4	Snap	1 1/32	21/32	1 3/4	6	.75	1.31	1.95
H152R		E152N	2.7	Flat	31/32 (diam.)		1 9/64	2	.075	1.05	1.50
H153R		E153N	4.05	Flat	31/32 (diam.)		1 45/64	2	.075	1.35	1.95
H162R		E162	2.7	Flat	43/64 (diam.)		57/64	2	.15	1.05	1.50
H163		E163	4.2	Flat	21/32 (diam.)		1 5/16	2	.15	1.17	1.65
H163R		E163N	4.05	Flat	21/32 (diam.)		1 5/16	2	.15	1.29	1.89
H164		E164	5.6	Flat	21/32 (diam.)		1 3/4	12	.80	1.31	1.95
H164R		E164N	5.4	Flat	21/32 (diam.)		1 3/4	2	.20	1.57	2.25
H165		E165	7.0	Flat	21/32 (diam.)		2 13/64	2	.20	1.70	2.50
H165R		E165N	6.75	Flat	21/32 (diam.)		2 13/64	2	.20	1.90	2.75
H177		.....	9.8	Snap	35/64 (diam.)		1 29/32	12	.30	1.31	1.95
H233		E233	4.2	Flat	1 1/64 (diam.)		1 31/32	1	.20	2.27	3.25
Hg-312		E312	1.4	Flat	5/16 (diam.)		9/64	6	.024	.24	.35
Hg-400		E400	1.4	Flat	29/64 (diam.)		9/64	6	.024	.24	.35
Hg-400R		E400N	1.35	Flat	29/64 (diam.)		9/64	6	.024	.35	.50
Hg-401		E401	1.4	Flat	29/64 (diam.)		1 1/8	3	.09	.44	.65
Hg-401R		E401N	1.35	Flat	29/64 (diam.)		1 1/8	2	.05	.60	.85
Hg-450R		E450	1.35	Flat	29/64 (diam.)		9/16	4	.01	.53	.75
Hg-502R		E502	1.35	Flat	17/32 (diam.)		1 31/32	2	.16	.87	1.25
Hg-520		E520	1.40	Flat	1/2 (diam.)		9/32	6	.024	.17	.25
Hg-575		.....	1.4	Flat	29/64 (diam.)		1/8	6	.05	.24	.34
Hg-601R		E601	1.35	Flat	5/8 (diam.)		1 9/64	2	.16	.83	1.30
Hg-625		E625	1.4	Flat	5/8 (diam.)		1/4	4	.05	.42	.60
Hg-625R		E625N	1.35	Flat	5/8 (diam.)		1/4	4	.05	.53	.75
Hg-630		E630	1.4	Flat	5/8 (diam.)		1/4	4	.05	.42	.60
Hg-630R		E630N	1.35	Flat	5/8 (diam.)		1/4	4	.05	.53	.75
Hg-640		E640	1.4	Flat	5/8 (diam.)		7/16	4	.15	.42	.60
Hg-640R		E640N	1.35	Flat	5/8 (diam.)		7/16	4	.15	.53	.75
Hg-675		E675	1.4	Flat	29/64 (diam.)		13/64	6	.022	.32	.45
302157		.....	1.35	Socket	2 7/16	1 5/16	4 3/16	1	.844	12.50	17.75

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BURGESS BATTERIES

BURGESS Number	NEDA Number	Other	Volts	Terminal Type	Overall Dimensions L	W	H	Unit Pkg. Quant.	Wgt. Unit Pkg. in Lbs.	Sugg. Dealer Each	List Price Each
BURGESS SEALED RECHARGEABLE NICKEL CADMIUM CELLS AND BATTERIES											
Information on additional Nickel Cadmium Batteries not listed below is available.											
CD1			1.25		.460 (diam.)		.225	1		$ 1.05	$ 1.50
CD2			1.25		.610 (diam.)		.236	1		.74	1.06
CD8			1.25		.984 (diam.)		.232	1		.85	1.21
*CD8L	*(L indicates types		1.25		.984 (diam.)		.257	1		.95	1.36
CD3			1.25		.984 (diam.)		.275	1		.87	1.24
*CD3L	with solder lugs		1.25		.984 (diam.)		.300	1		.97	1.39
CD4			1.25		.984 (diam.)		.350	1		.88	1.26
*CD4L	on terminals).		1.25		.984 (diam.)		.375	1		1.03	1.47
CD5			1.25		1.700 (diam.)		.300	1		1.47	2.10
*CD5L			1.25		1.700 (diam.)		.325	1		1.60	2.29
CD6(AA)			1.25		.560 (diam.)		1.950	1		1.82	2.60
*CD6L(AA)			1.25		.560 (diam.)		2.275	1		1.92	2.74
CD9			1.25		.550 (diam.)		3.680	1		3.01	4.30
CD7(D)			1.25		1.310 (diam.)		2.425	1		4.03	5.76
*CD7L(D)			1.25		1.310 (diam.)		2.775	1		4.09	5.84
CD10(D)			1.25		1.300 (diam.)		2.425	1		5.71	8.16
*CD10L(D)			1.25		1.300 (diam.)		2.775	1		5.84	8.34
CD11(D)			1.25		1.300 (diam.)		2.425	1		4.53	6.50
CD12 (short C)			1.25		.876 (diam.)		1.672	1		2.51	3.59
CD12L(short C)			1.25		.876 (dia.)		1.672+L	1		2.57	3.67
CD13 (half D)			1.25		1.273 (diam.)		1.440	1		4.03	5.76
CD13L(half D)			1.25		1.273 (dia.)		1.440+L	1		4.16	5.94
CD14			1.25		1.01 (diam.)		1.945	1		3.40	4.85
CD21			6		1.065 (diam.)		1.525	1		5.32	7.60
CD22			6		1.065 (diam.)		2.650	1		5.32	7.60
CD23			6		1.800 (diam.)		1.725	1		9.48	13.54
CD24			9.6		1.065 (diam.)		3.200	1		9.22	13.17
CD25			9.6		1.065 (diam.)		1.975	1		9.16	13.09
*CD25L			9.6		1.065 (diam.)		3.200	1		9.09	12.99
CD26			9.6		1.800 (diam.)		2.575	1		15.52	22.17
CD27			12		1.065 (diam.)		2.925	1		11.04	15.77
CD28			12		1.065 (diam.)		3.600	1		11.82	16.89
CD29			12		1.800 (diam.)		3.100	1		17.86	25.51
CD30			6		1½	1½	3 13/16	1		19.96	28.51
CD31			6		3 13/16	1 17/32	3⅝	1		25.65	36.64
CD100			1.25		1.36	.75	3.36	1		6.43	9.19
CD101			1.25		1.36	1.36	2.40	1		6.05	8.64
CD102			1.25		1.36	1.36	3.36	1		7.12	10.17
CD104			1.25		1.93	1.67	3.13	1		9.35	13.36
CD105			1.25		1.93	1.67	3.65	1		10.19	14.56
CD106S			1.25		1.57	1.48	4.01	1		13.43	19.19
CD107			1.25		1.93	1.67	4.25	1		11.17	15.96
CD108			1.25		3.56	1.05	4.90	1		13.83	19.76
CD109			1.25		3.56	1.34	4.90	1		16.56	23.66
CD110			1.25		3.56	1.66	4.90	1		19.87	28.39
CD111			1.25		3.56	1.97	4.90	1		22.92	32.70
BURGESS INDUSTRIAL - ELECTRONIC - TRANSISTOR - RADIO "A" BATTERIES											
2BBP	...	...	1½	Binding Post	1 3/32	27/32	2 11/16	1	¼	$1.16	$1.65
2D	18	720	1½	Socket	2 9/16	1 9/32	2 31/32	1	⅖	1.15	1.65
2F	11	W353	1½	Socket	2 13/32	1 3/8	4¼	1	¾	1.22	1.75
2F2BP	...	...	3	Binding Post	5 3/16	1 5/16	4 3/32	1	1⅘	5.35	7.65
2F2H	703	W356	3	Binding Post	2 5/8	2 5/8	4 1/16	5	7	1.64	2.35
2FBP	700	W354	1½	Binding Post	2 21/32	1 3/8	4 3/32	5	3½	.79	1.15
2F4	1	718	6	Socket	4	2 13/16	5 1/16	1	2½	2.87	4.10
2R	813	950	1½	Flashlight	1 23/64	(diam.)	2 25/64	48	11	.13	.20
2Z	...	1016E	1½	Flashlight	1⅛	13/32	1 13/64	1	1 oz.	.65	.95
20F	719	740	1½	Socket	7 5/8	2 9/16	6 13/16	1	6⅘	7.65	10.95
21R	20	964	1½	Flashlight	1 23/64	(diam.)	4⅛	1	⅖	.42	.60
37	...	...	1½	Flashlight	1 5/16	(diam.)	6⅛	1	5/16	.97	1.40
4D	...	...	1½	Socket	2 5/8	2 5/8	2 11/16	1	⅞	1.35	1.93
4D4	1400	274	6	Snap	2 17/32	2	7 5/16	1	2½	3.88	5.60
4F	4	742	1½	Socket	2 5/8	2 5/8	4 3/32	1	1⅖	1.15	1.65
422	704	750	3	Brass Straps	1 11/32	23/32	2 5/16	1	2 ozs.	.79	1.15
432	705	751	4½	Brass Straps	1 31/32	21/32	2¼	1	3 ozs.	.87	1.25
5R	...	...	1½	Flashlight	4 9/64	(diam.)	2 15/64	12	¾	.48	.69
532	706	703	4½	Brass Straps	2 15/32	13/16	2 23/32	1	3/10	1.36	1.95
6F	5	743	1½	Socket	4 3/32	2¾	4 1/16	1	2 1/16	2.69	3.85
8F	17	741	1½	Socket	3 29/32	2 23/32	5½	1	3	2.76	3.95
8R	23	960P	1½	Socket	1 3/32	(diam.)	3 15/16	1	¼	.87	1.25
B2BP	...	...	3	Binding Post	1 5/8	13/16	2 11/16	1	¼	2.42	3.45
B5	8	713	7½	Socket	3 29/32	⅞	2 27/32	1	½	2.27	3.25
C5	9	717	7½	Socket	2 7/32	1 15/16	3 1/32	6	4¾	1.23	1.75
D3	19	726	4½	Socket	3⅞	1 5/16	2 15/16	1	¾	1.23	1.75
F2BP	701	W352	3	Binding Post	2 21/32	1 3/8	4 3/32	5	4	1.33	1.90
F3	3	736	4½	Socket	4	1 1/16	4⅛	1	1	1.23	1.75
F4BP	915	510S	6	Binding Post	2 5/8	2 5/8	4	1	1⅖	.85	1.29
F4PI	6	744	6	Socket	2 21/32	2 21/32	4⅛	1	1½	1.15	1.65
G3	7	746	4½	Socket	4 1/16	1⅞	4 11/16	1	1⅕	1.36	1.95
Z4	2	724	6	Flat Contacts	1 3/16	1 3/16	2 3/32	1	⅕	.87	1.25


CD3



CD7



CD25



2R



C5



XX45



P45

(Continued on next page)

BURGESS BATTERIES



F6A60



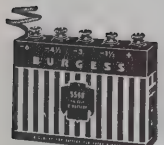
F2BP



XX30PI



5308



5540



5360

BURGESS Number	NEDA Number	Other	Volts	Terminal Type	Overall Dimensions L	W	H	Unit Pkg. Quant.	Wgt. Unit Pkg. in Lbs.	Sugg. Dealer Each	List Price Each
BURGESS INDUSTRIAL - ELECTRONIC - TRANSISTOR - RADIO "B" BATTERIES											
10308PI or SC	726 or 716	W363P or F	45	Socket or Spring Clip	8 1/32	4 1/32	7 3/16	1	11 1/2 or 12	$6.96	$9.95
21308PI or SC	727 or 715	W364P or F	45	Socket or Spring Clip	8 1/8	4 15/32	7 9/32	1	12 4/5	6.96	9.95
2308PI or SC	717 or 723	W365P or F	45	Socket or Spring Clip	8 3/32	2 31/32	7 1/4	1	7 4/5 or 7 1/2	6.96	9.95
4156	710	763	22 1/2	Binding Post	3 17/32	2 1/8	2 29/32	1	1	1.61	2.35
5156PI	721	768	22 1/2	Socket	4 7/64	2 3/8	2 55/64	1	1 3/5	4.16	5.95
5156SC	708	778	22 1/2	Spring Clip	4 1/8	2 1/2	2 3/4	5	8	4.16	5.95
5308	709	762S	45	Binding Post	4 1/16	2 9/16	5 1/8	1	2 1/2	3.05	4.35
A30	206	W359	45	Socket	3 9/16	2 1/4	4 5/16	2	3 1/2	2.92	4.19
A60	...	...	90	Socket	4 7/16	3 3/8	4 1/2	1	3 1/3	14.50	20.75
B30	207	484	45	Socket	4 1/16	2 17/32	5 5/16	2	4 1/2	3.47	4.95
D30	...	487	45	Socket	5 1/16	2 1/32	7 5/16	1	4 1/2	3.84	5.50
K10	224	417	15	Flat Contact	1 1/4	7/8	1 17/32	1	2 ozs.	1.28	1.75
K15	225	420	22 1/2	Flat Contact	1 1/4	7/8	2 9/32	1	2 ozs.	1.44	1.95
K20	226	430	30	Flat Contact	1 1/4	15/16	2 23/32	1	3 ozs.	1.72	2.35
K45	203	457	67 1/2	Snap Type	2 11/16	1 5/16	2 1/4	1	1/2	2.70	3.85
M30	202	482	45	Socket	3 9/16	1 3/4	5 1/2	1	2	2.97	4.25
N60X	216	495	90	Snap Type	1 7/8	1 11/32	7 1/8	1	1	3.47	4.95
P45	211	477	67 1/2	Snap Type	1 29/32	1	5 9/32	6	3 3/4	2.70	3.85
P60	214	479	90	Snap Type	1 29/32	1	7 13/32	1	4/5	2.97	4.25
U10	208	411	15	Flat Contact	1	39/64	1 7/16	1	1 oz.	.81	1.15
U15	215	412	22 1/2	Flat Contact	1	39/64	1 31/32	1	1 oz.	1.05	1.50
U20	210	413	30	Flat Contact	1	39/64	2 17/32	1	2 ozs.	1.23	1.75
U200	722	493	300	Pin Jacks	2 3/4	2 9/32	3 7/8	1	1	8.37	11.95
U30	213	415	45	Snap Type	1 3/32	19/32	3 17/32	1	1/8	1.75	2.50
UX45	217	416	67 1/2	Snap Type	1 7/32	31/32	3 31/32	1	1/4	2.07	2.95
V45	200	468	67 1/2	Snap Type	2 3/4	1 11/32	3 43/64	6	4 1/2	2.77	3.95
V60	204	490	90	Snap Type	3 23/32	1 9/32	3 11/16	1	1-3/10	3.15	4.50
W20PI	...	...	30	Socket	1 5/16	1 13/16	3 7/32	1	1/2	5.15	7.35
W30	...	...	45	Binding Post	3	1 1/4	3 25/32	1	3/5	2.62	3.75
W30BPX	...	W358	45	Binding Post	3	1 1/4	3 25/32	1	3/5	6.05	8.65
XX15	...	425P	22 1/2	Socket	1 11/32	15/16	3 7/8	1	1/4	1.37	1.95
XX22	...	433P	33	Socket	2 17/32	31/32	3 1/8	1	1/3	2.25	3.25
XX30	201	455	45	Snap Type	2 17/32	31/32	3 21/32	1	1/2	2.27	3.25
XX30PI	...	455P	45	Socket	2 17/32	31/32	4 1/32	1	1/2	2.27	3.25
XX45	200	467	67 1/2	Snap Type	2 3/4	1 11/32	3 43/64	1	3/4	2.70	3.85
XX50	212	437	75	Snap Type	1 27/32	1 5/16	6 5/16	1	9/10	3.15	4.50
XX69	227	W361	103 1/2	Flashlight	1 11/32	1 11/32	11 23/32	1	1	4.86	6.95
Y10	220	504	15	Flat Contact	19/32	19/32	1 23/64	1	1 oz.	.81	1.15
Y15	221	505	22 1/2	Flat Contact	19/32	19/32	1 31/32	1	1 oz.	1.05	1.50
Y20	223	506	30	Flat Contact	1 3/16	19/32	1 13/32	1	1 oz.	1.30	1.85
Y20S	222	507	30	Flat Contact	19/32	19/32	2 9/16	1	1 oz.	1.30	1.85
Z30	205	738	45	Socket	3	2 5/16	4 1/16	2	1 1/4	2.76	3.95
Z30NX	711	W350	45	Binding Post	3 1/32	1 7/8	4 19/32	5	7 3/5	2.69	3.85
Z30T	...	...	45	Socket	3	2 5/16	4 1/8	1	1 3/10	2.62	3.75
BURGESS INDUSTRIAL AND ELECTRONIC "C" BATTERIES											
2156	702	766	22 1/2	Spring Clips	6 21/32	4 1/16	2 31/32	1	3	9.20	13.25
2370	712	761T	4 1/2	Binding Post	3 15/16	1 3/8	2 7/8	5	3 7/10	1.76	2.50
2370PI	718	771	4 1/2	Socket	4 1/64	1 27/64	2 63/64	1	3/4	2.14	3.05
5360	714	781	4 1/2	Binding Post	2 13/32	27/32	2 21/32	1	1/4	1.23	1.75
5540	713	773	7 1/2	Bndg Post Neg	4	7/8	2 3/4	5	1 9/10	1.80	2.50
A3BPX	----	----	4 1/2	Binding Post	1 31/32	23/32	2 1/4	1	1/4	4.60	6.60
A8BP	----	----	12	Binding Post	2 25/32	1 25/64	2 15/32	1	1/2	10.20	14.60
W5BP	----	W362	7 1/2	Binding Post	2 31/32	23/32	1 3/4	6	4/5	2.05	2.95
BURGESS "A & B" PACKS FOR RADIO AND OTHER ELECTRONIC APPLICATIONS											
17GD60	413	759	1 1/2A, 90B	Socket	15 11/16	4 3/8	7 1/16	1	19	7.95	10.65
4TZ60	425	729	1 1/2A, 90B	Socket	7 5/8	2 1/8	3 3/4	1	3 4/5	5.33	7.65
6TA60	410	W369	1 1/2A, 90B	Socket	9 31/32	2 1/4	4 7/16	1	4 4/5	6.35	9.25
F6A60	401	753	7 1/2, 9A, 90B	Socket	9 5/16	2 21/32	4 3/16	1	5 2/5	6.22	8.95
F6A60P	406	757	9A, 90B	Recessed Plug	9 7/16	2 3/4	4 11/32	1	5 3/10	6.35	9.25
G6B60	400	752	9A, 90B	Recessed Plug	13 29/32	2 13/16	4 21/32	1	6 3/10	6.35	9.25
T5Z50	403	755	6, 7 1/2A, 75B	Socket	8 1/2	3 11/32	2 3/8	1	3 1/2	6.22	8.95
T5Z50P	431	785	7 1/2A, 75B	Recessed Plug	8 1/2	3 11/32	2 3/8	1	3 1/2	6.22	8.95
T6Z60	405	756	7 1/2, 9A, 90B	Socket	8 15/16	2 3/16	3 13/16	1	4 3/10	6.35	9.25
T6Z60P	428	727	9A, 90B	Recessed Plug	8 15/16	2 3/16	3 13/16	1	4 3/10	6.35	9.25
BURGESS POCKET TAPE RECORDER BATTERIES											
2VT8	.....	.....	12	Flat Contact	1 5/16	1 5/16	3 19/32	1	3/8	2.00	3.00
2X62X	.....	.....	1 1/2, 9	Snap Type	2 1/2	1 25/32	2 11/32	1	1/2	3.20	4.60
2X7	.....	.....	10 1/2	Snap Type	2 1/2	1 25/32	2 11/32	1	1/2	1.82	2.60
BURGESS ALKALINE BATTERIES											
AL-1	814	E93	1 1/2	Flat Contact	63/64 (diam.)		1 15/16	6	1	.50	.75
AL-133	1306	333	4 1/2	Flat Contact	21/32 (diam.)		2	12	1	.84	1.25
AL-2	----	E95	1 1/2	Flat Contact	1 21/64 (diam.)		2 13/32	24	8	.65	.95
AL-7	----	----	1 1/2	Flat Contact	13/32 (diam.)		1 3/4	12	1/4	.33	.50
AL-9	815	E91	1 1/2	Flat Contact	17/32 (diam.)		1 31/32	12	1	.33	.50
AL-N	910	E90	1 1/2	Flat Contact	29/64 (diam.)		1 1/8	3	1 oz.	.27	.40
APX-19	----	531	4 1/2	Snap Type	21/32 (diam.)		2 13/32	2	3/8	.84	1.25
APX-21	----	532	4 1/2	Flat Contact	21/32 (diam.)		2 1/32	2	3/8	.84	1.25

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BURGESS BATTERIES

BURGESS FLASHLIGHT AND LANTERN BATTERIES

BURGESS Number	NEDA Number	Other	Volts	Terminal Type	Overall Dimensions L	W	H	Unit Pkg. Quant.	Wgt. Unit Pkg. in Lbs.	Sugg. Dealer Each	List Price Each
2 (24V)	13	950	1½	Flashlight	1 21/64 (diam.)		2⅜	48	10½	$ .13	$ .20
2 (50 Bulk)	13	950	1½	Flashlight	1 21/64 (diam.)		2⅜	50	10½	.13	.20
210 (24V)	.....	1050	1½	Flashlight	1 21/64 (diam.)		2⅜	48	11	.155	.25
210 (50 Bulk)	.....	1050	1½	Flashlight	1 21/64 (diam.)		2⅜	50	10¾	.155	.25
2MB(12 Pack)	.....	.....	1½	Flashlight	1 21/64 (diam.)		2⅜	216	46	.13	.20
1	14	935	1½	Flashlight	63/64 (diam.)		1 15/16	24	2⅝	.13	.20
Z	15	915	1½	Flashlight	35/64 (diam.)		1 31/32	12	½	.095	.15
7	24	912	1½	Flashlight	13/32 (diam.)		1¾	12	¼	.095	.15
N (Bare)	910	904	1½	Flashlight	7/16 (diam.)		1 11/64	12	⅕	.08	.125
F4M (Metal)	908	509	6	Spring	2⅝	2⅝	4⅜	12	19	.85	1.29
F4BP	915	510S	6	Binding Post	2⅝	2⅝	4	1	1 2/5	.85	1.29
F4SC	917	510F	6	Spring Clip	2⅝	2⅝	4½	1	1¼	.85	1.29
TW1	918	731	6	Binding Post	5⅜	2⅞	4 15/16	1	3⅕	1.96	2.95
TW1-X	.....	.....	6	Binding Post	5⅜	2⅞	4 15/16	1	3⅕	2.40	3.75
TW2	926	.....	12	Binding Post	5⅜	2⅞	4 15/16	1	3⅕	1.96	2.95



TW1



No. 6 Ignition

BURGESS IGNITION - TELEPHONE AND PROTECTIVE SYSTEM BATTERIES

* Battery also available with spring clip terminals ** Battery also available with screw terminals

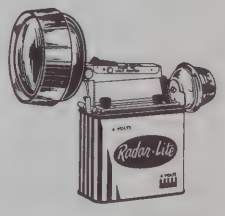
2F8H	.....	.....	12	Binding Post	8 5/16	2 13/16	5 13/16	1	6¼	4.25	6.35
2G8H	.....	.....	12	Binding Post	10½	2¾	7 13/32	1	7½	4.01	5.98
4FH	900	735	1½	Screw Terminal	2⅝	2⅝	4	12	16	.84	1.25
4F2H	901	W357	3	Spring Clip	3 29/32	2 11/16	5 13/32	1	2⅗	1.75	2.50
4F4H	902	706	6	Binding Post	8 5/16	2 13/16	5 13/16	1	6⅕	3.34	4.98
4F5H	903	715	7½	Binding Post	7 5/16	3 31/32	5 13/16	1	7⅖	4.86	7.25
4F6H	904	716	9	Binding Post	8½	3 31/32	5 13/16	1	9	5.53	8.25
*6 Ign.	905	6 Ign.	1½	Screw Terminal	2½ (diam.)		6⅝	12	21 3/10	.91	1.35
**6 Tel.	906	6 GL	1½	Spring Clip	2½ (diam.)		6⅝	12	24⅗	.91	1.35
6 Ind.	911	6 Ind.	1½	Screw Terminal	2½ (diam.)		6⅝	12	25	.90	1.35
S461	907	1461	6	Binding Post	10½	2¾	7 13/32	4	37½	3.34	4.98



220

BURGESS PHOTO-FLASH BATTERIES

120	...	835	1½	Flashlight	1	(diam.)	1 15/16	24	2¼	.16	.25
220	...	850	1½	Flashlight	1 11/32	(diam.)	2 25/64	12	2½	.16	.25
720	.....	.....	1½	Flashlight	13/32	(diam.)	1¾	24	2⅘	.13	.20
920	...	815	1½	Flashlight	35/64	(diam.)	1 31/32	24	1	.13	.20
U15	215	412	22½	Flat Contact	31/32	9/16	1 31/32	1	1 oz.	1.05	1.50
Y10	220	504	15	Flat Contact	19/32	19/32	1 23/64	1	1 oz.	.81	1.15
Y15	221	505	22½	Flat Contact	19/32	19/32	1 31/32	1	1 oz.	1.05	1.50
U10	208	411	15	Flat Contact	1	31/64	1 7/16	1	1 oz.	.81	1.15
U20	210	413	30	Flat Contact	1	39/64	2 17/32	1	2 ozs.	1.23	1.75
XX150	...	489	225	Pin Jacks	4¼	2⅝	4¼	1	2½	6.96	9.95
U160	...	491	240	Flat Contact	2 9/16	1 5/16	4 13/32	1	⅘	5.56	7.95
N150	...	492	225	Pin Jacks	3 5/16	2¾	4¾	1	2½	7.65	10.95
U320	...	497	510	Flat Contact	2 15/16	1 17/32	5 7/16	1	1½	11.16	15.95
K30P-K			45	Battery & Bulb				1	⅖	1.67	2.50

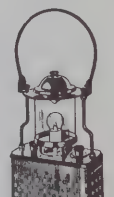


TW3

BURGESS RADAR LIGHTS

NOTICE: All Radar Lights are packed in individual cartons complete with battery.

BURGESS Number	Description	Unit Pkg. Quan.	Wt. of Un. Pkg. in Lbs.	Sugg. Dealer Ea. Complete	LIST PRICE EACH Head Only	Battery	Complete
TW3	Radar-Lite Spot-Flasher (Lamp 4546, 407)	1	5 1/10	$8.41	$10.20	$2.95	$13.15
TW4	Radar-Lite Spot-Without Flasher (Lamp 4546)	1	4¾	6.76	7.75	2.95	10.70
TW7	Radar-Lamp Chrome-Finish (Lamp 1651)	1	4⅕	5.86	6.50	2.95	9.45
TW8	Radar-Lamp Copper-Finish (Lamp 1651)	1	4⅕	5.86	6.50	2.95	9.45
TW9	Radar Bearcat Focusing Lantern (Lamp 425 or 502)	1	4⅛	4.67	4.50	2.95	7.45
TW11	Radar-Lite (Bulb Reflector Model) (Lamp 425)	1	4¾	5.68	6.20	2.95	9.15
TW12	12 Volt Radar-Lite (Uses TW2 Battery) (Lamp 965)	1	5	6.88	8.20	2.95	11.15
TW4E	Power Failure Operated Lantern (Spot Beam) (Lamp 4546)	1	6	13.61	17.50	2.95	20.45
TW6E	Power Failure Operated Lantern (Flood Beam) (Lamp 4512)	1	6	13.61	17.50	2.95	20.45
TW34	Radar-Flash (Lamp 407)	1	4	4.49	3.95	2.95	6.90


TW7

BURGESS RADAR-MATE, DOLPHIN and FLASHLIGHTS (less batteries)

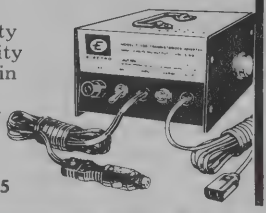
BURGESS Number	Description (Batteries not included)	Unit Pkg. Quan.	Wt. of Un. Pkg. in Lbs.	Sugg. Dealer Each	List Price Each
JR1	4½ Volt Radar-Mate Lantern. Uses 3 No. 2 (Size D) batteries (Lamp PR3)	6	7½	$3.32	$4.98
164	Dolphin Lantern. Uses 1 No. F4M battery (Lamp PR13)	1	½	1.97	2.95
161	Magnet Flashlight—2 Cell Prefocused (Lamp PR2 or PR4)	6	3	1.33	1.99
163	Tuffy-Plastic Flashlight—2 Cell Prefocused (Lamp PR2 or PR4)	6	1⅝	.69	.99
257	Satellite Torch—2 Cell Junior Prefocused (Lamp PR2 or PR4)	3	1	1.17	1.75
357	Satellite Torch—2 Cell Prefocused (Lamp PR2 or PR4)	6	2¾	1.30	1.95
263	2 Cell Magnet-Tough Plastic Industrial Flashlight (Lamp PR2)	6	2½	1.33	1.99
453	2 Cell Industrial—Safety Light (Lamp PR2)	1	½	3.33	5.00
563	Penlight (AAA size) (Lamp 224)	12	1½	.82	1.25
663	Penlight (Heavy Duty AA size) (Lamp 222)	12	1½	.82	1.25
763	Snap-Lite Pocket Light (AAA size) (Lamp 224)	12	1½	.82	1.25


357

Transistorized Inverter Converts 12 VDC to 117 VAC 125-Watt Output

Ample power to operate portable TV sets, phonographs, P.A. systems, recorders, lights —backed by Certified Ratings.

Voltage Output: 117 volts, 60 cycle AC.
Power Output: 100/125 watts.
Voltage Regulation: 20 volts no-load to full-load.
Frequency Regulation: 5 cycles, no-load to full-load.
Size: 3½ x 6¼ x 6¼.
Weight: 6¾ lbs. net.
Higher overload capacity
Better frequency stability
Trouble-free operation in high, low temperatures
Battery charge warning light

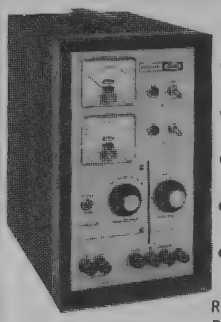


"TI-100" Inverter **$31.95**

Regulated 500 Volt, 250 MA Supply under $400!

Outperforms others . . . yet costs less!

Stable regulation down to 3-volt output setting . . . voltage remains constant regardless of load or AC supply voltage changes.

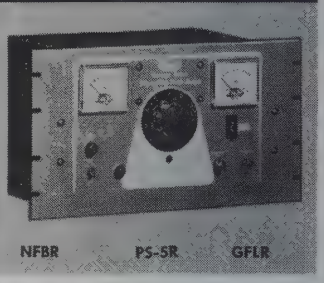


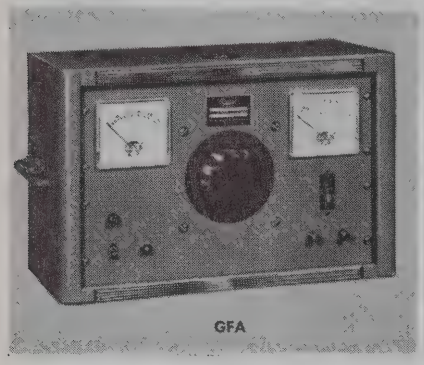
- Continous output voltage adjustment.
- Primary, secondary overload protection.
- Separate AC, DC switches.
- Bias output, 0-150VAC
- 2 separate filament outputs, 6.3V, 5A each
- Specifications listed in table below.

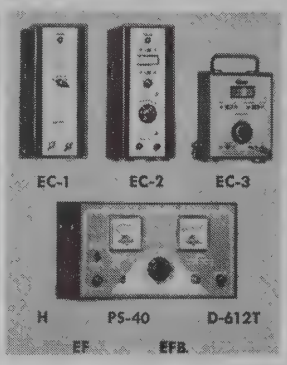
RB-500 Regulated DC Power Supply **$395**

ELECTRO

REGULATED & SEMI-REGULATED DC POWER SUPPLIES











Output, filtering for every need, from $27.50 . . . guaranteed performance, one year warranty

Model	Voltage Output	Amperage Output	Load Regulation (V/A)	Maximum Ripple (%)	Meters	DC Impedance (ohms)	Size (HxWxD) (inches)	Weight (lbs. net)	Price (net)
EC-1	12 (adjustable)	0-5	1.4 (0-5A)	0.5	————	1.4 (0-5A)	10¾ x 4⅜ x 6½	10	$ 34.95
H	12 (adjustable) 6 (adjustable)	0-10 0-20	0.23 (3-10A) 0.15 (3-20A)	5 5	0-20V, 0-30A	0.23 (3-10A) 0.15 (3-20A)	7 x 12 x 8½	29	99.50
PS-40	12 (adjustable)	0-40	2.7 (6-40A)	1	0-20V, 0-50A	0.27 (0.40A)	9¼ x 16¾ x 13	56	198.00
EC-2	0-16	0-5	1.8 (0-5A)	0.5	0-20V/10A	1.8 (0-5A)	10¾ x 4⅜ x 6½	9	44.95
D612T	0-16 0-8	0-10 0-10	0.44 (3-10A) 0.3 (3-10A)	0.5@ 5A, 2 @10A	0-20V, 0-10A	0.44 (3-10A) 0.3 (3-10A)	7 x 12 x 8½	20	69.95
EC-3	0-24 (0-7 bias)	0-100MA	————	0.2	0-24V/100MA	————	6¼ x 5 x 3½	3	27.50
PS-3A	0-25	0-200MA	.02%	0.5MV	0-25V/100MA/200 MA	.05	6¼ x 5 x 6	3½	99.50
EF	0-28 0-14	0-5 0-5	0.9 (1-5A) 0.6 (1-5A)	1 1	0-50V, 0-6A	0.9 (1-5A) 0.6 (1-5A)	7 x 12 x 8½	21	110.00
EFBR	0-32 0-16	0-4 0-8	1.25 (0-4A) 1.0 (0-8A)	0.1 0.1	0-40/20V, 0-10A	1.25 (0-4A) 1.0 (0-8A)	8¾ x 19 x 8½	34	175.00
EFB	0-32 0-16	0-4 0-8	1.25 (0-4A) 1.0 (0-8A)	0.1 0.1	0-40/20V, 0-10A	1.25 (0-4A) 1.0 (0-8A)	7 x 12 x 8½	31	150.00
NFBR	0-32	0-15	0.3 (0-15A)	0.75	0.50V, 0-25A	0.3 (0-15A)	10½ x 19 x 14¼	82	275.00
NFB	0-32	0-15	0.3 (0-15A)	0.75	0.50V, 0-25A	0.3 (0-15A)	9¾ x 14¼ x 14¼	71	250.00
PS-5R	0-55	0-10	0.8 (0-10A)	0.5	0-75V, 0-10A	0.8 (0-10A)	10½ x 19 x 14¼	71	275.00
PS-5	0-55	0-10	0.8 (0-10A)	0.5	0-75V, 0-10A	0.8 (0-10A)	9¾ x 14¼ x 14¼	60	250.00
GL	0-125	0-5	1.5 (0-5A)	5.0	0-5A 0-150V,	1.5 (0-5A)	9¾ x 14¼ x 14¼	65	255.00
GFLR	0-125	0-5	1.5 (0-5A)	0.5	0-150V, 0-5A	1.5 (0-5A)	10½ x 19 x 14¼	79	299.00
GFL	0-125	0-5	1.5 (0-5A)	0.5	0-150V, 0-5A	1.5 (0-5A)	9¾ x 14¼ x 14¼	75	275.00
GFA	0-125	0-10	1.6 (0-10A)	1.0	0-150V, 0-10A	1.6 (0-10A)	14¼ x 22 x 15¾	150	575.00
RB-500	0-500	0-250MA	0.03%	0.0005	0-500/0-150V/40-250MA	0.2	12 x 8 x 14	32	395.00

Stocked at Your Electronic Distributor. Write for Full-line Catalog. Prices subject to change without notice.

ELECTRO PRODUCTS LABORATORIES, INC. *Since 1936—Pioneers in Low Voltage Power Supplies*

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EVEREADY®

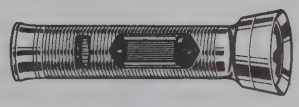
FLASHLIGHTS, LANTERNS and BATTERIES

the world's most trusted brand for over 50 years!

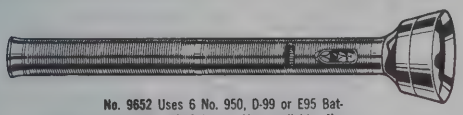
ALL PRICES WITHOUT BATTERIES.

"CAPTAIN" FLASHLIGHTS... Classic Design

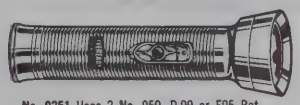
- Heavy-Duty Copper/Nickel/Chrome/Plated Steel
- Exclusive 3-Way Lock Switch and Flasher
- End-Loading... Ring Hanger



No. 9851 Magnet Lite. Uses 2 No. 950, D-99 or E95 Batteries, No. PR2 Lamp.



No. 9652 Uses 6 No. 950, D-99 or E95 Batteries, No. PR18 Lamp. Also available: **No. 9352**—Uses 3 No. 950, D-99 or E95 Batteries, No. PR3 Lamp.



No. 9251 Uses 2 No. 950, D-99 or E95 Batteries, No. PR2 Lamp. Also available: **No. 9351**—Uses 3 No. 950, D-99 or E-95 Batteries, No. PR3 Lamp and **No. 9231**—Uses 2 No. 935 or E93 Batteries, No. PR4 Lamp.



No. 3300 Rechargeable Flashlight—Twice the Light of standard 2-Cell Flashlights . . . never needs batteries! Uses rechargeable battery, No. PR3 Lamp.

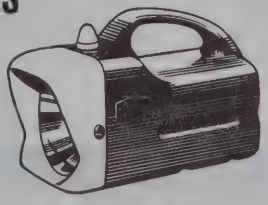
	No. 3300	No. 9231	No. 9251	No. 9351	No. 9352	No. 9652	No. 9951
List Each	$14.95	$2.19	$2.19	$2.49	$3.95	$5.95	$2.49
Sugg. Dealer	9.96	1.46	1.46	1.66	2.64	3.81	1.66

WEATHERPROOF LANTERNS



No. 100 "Big Jim" Lantern w/flasher. Uses 1 No. 731 Battery, No. 4546 Lamp, No. 407 Signal Lamp.

No. 101 Same without flasher.

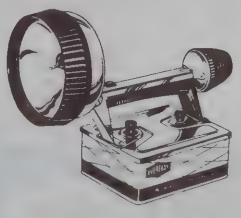


No. 108 All American Lantern. "Cordahide" polyethylene construction. Uses 1 No. 509 Battery, No. PR13 Lamp.

No. 68 Display—Contains 3 No. 108 All American Lanterns in Colors (white, red, black).



No. 109WB Heavy-Duty All American Lantern **complete** with 1 No. 731 Battery. "Cordahide" polyethylene construction. Uses No. PR13 Lamp.



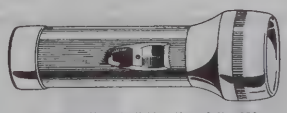
No. 150 "Captain" Stainless Steel Lantern. Uses 1 No. 520 Alkaline Battery and No. 4618 1-ampere Lamp for Double Brilliance, Longer Service, No. 407 Signal Lamp.

No. 151 Same without flasher.

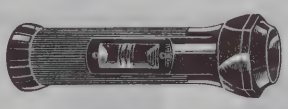
	No. 68	No. 100	No. 101	No. 108	No. 109WB	No. 150	No. 151
List Each	$11.37	$10.75	$8.00	$3.79	$7.89	$14.00	$12.00
Sugg. Dealer	7.59	6.45	4.80	2.53	5.24	8.39	7.19

"CORDAHIDE" polyethylene FLASHLIGHTS—

Insulated, Withstand Abuse, Resists Oils, Greases, Most Chemicals.



No. 6251 "Hercules" Lite. Uses 2 No. 950, D-99 or E95 Batteries, No. PR2 Lamp. Also available: **No. 62** Display—containing 6 No. 6251 Lites.



No. 330 Utility Lite. Uses 2 No. 950, D-99 or E95 Batteries, No. PR2 Lamp. Available individually boxed (**No. 330**) or in display of 6 (**No. 67**).



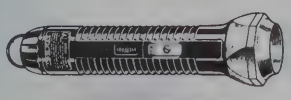
No. 349 Handy Lite. Uses 2 No. 935 or E-93 Batteries, No. PR4 Lamp. Available in assortment of 6 (**No. 49**) in colors.



No. 337 Magnet Utility Lite. Uses 2 No. 950, D-99 or E95 Batteries, No. PR2 Lamp. Available individually boxed (**No. 337**) or in display of 12 (**No. 51**) in Colors.

	No. 49	No. 51	No. 62	No. 67	No. 330	No. 337	No. 6251
List Each	$5.94	$16.68	$7.74	$5.94	$0.99	$1.39	$1.29
Sugg. Dealer	4.14	11.16	4.50	4.14	0.70	0.94	0.90

INDUSTRIAL and SPECIAL PURPOSE LITES



Industrial Flashlights

No. 1251—2 Cell, No. PR6 Lamp. **No. 1351**—3 Cell, No. PR7 Lamp. Uses Nos. 950, 1050, D99 or E95 Batteries. Will not shatter crack or dent.



Safety Flashlights

No. 1259—2 Cell, No. PR6 Lamp. **No. 1359**—3 Cell, No. PR7 Lamp. Uses Nos. 950, 1050, D99 or E95 Batteries. Approved by U.S. Bureau of Mines, Listed by Underwriters' Laboratories, Inc.



No. 3452 Head-Lite. Uses 1 No. 510S Battery and No. PR13 Lamp. Rainproof pouch also available (No. 1348).



Torch Lite

No. 2T3—3" wand. **No. 2T5**—5" wand. Uses 2 No. 950, D99 or E95 Batteries and No. PR2 Lamp.

	No. 2T3	No. 2T5	No. 1251	No. 1259	No. 1348	No. 1351	No. 1359	No. 3452
List Each	$1.49	$1.59	$2.89	$4.15	$0.69	$3.29	$4.35	$3.29
Sugg. Dealer	.99	1.05	1.93	2.74	0.46	2.19	2.89	2.14

Trade Discount Applies To List Prices Only

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HEAVY-GUAGE, CHROME-PLATED METAL FLASHLIGHTS



America's Standard

No. 2251 All-Purpose Flashlight—2 Cell, No. PR2 Lamp. **No. 2351**—3 Cell, No. PR3 Lamp. Use Nos. 950, D-99 or E95 Batteries. Available individually boxed.



Magnet Lites

No. 5MF Magnet Lite—2 Cell, No. PR2 Lamp. No. 7MF—3 Cell, No. PR3 Lamp. Use Nos. 950, D-99 or E95 Batteries. Available individually boxed. **No. 5MF** available in display of 6 with Selling Tags **(No. 6-5MF)** or display of 6 with Counter Card **(No. 14).**



Leader Lites

No. 326 Leader Lite—Uses 2 No. 950, D-99 or E95 Batteries, No. PR2 Lamp. Available in Displayer **No. 16** (containing 12 No. 326 Lites) or with Selling Tags—**No. 260** (containing 12 No. 326 Lites).



No. 350 "Highlander II" Lite—Uses 2 No. 950, D-99 or E95 Batteries, No. PR2 Lamp. Available in **No. 27-A** Display—containing 7 No. 350 Lites.



All American

No. 319 All American Lites-Uses 2 No. 950, D-99 or E95 Batteries, No. PR2 Lamp. Available in Counter Display of 14 Lites **(No. 130B).**
Also available **No. 339**—Uses 2 No. 935 or E93 Batteries, No. PR4 Lamp; Display **No. 39C** contains 6 No. 339 Lites with Selling Tags.

	No. 5MF	No. 6-5MF	No. 7MF	No. 14	No. 16	No. 39C	No. 130B	No. 260	No. 2251	No. 2351
List Each	$1.99	$11.94	$2.49	$11.94	$11.88	$7.14	$16.66	$11.88	$1.95	$2.35
Sugg. Dealer	1.33	7.98	1.66	7.98	7.56	4.68	9.84	7.56	1.30	1.57

MINIATURE FLASHLIGHTS



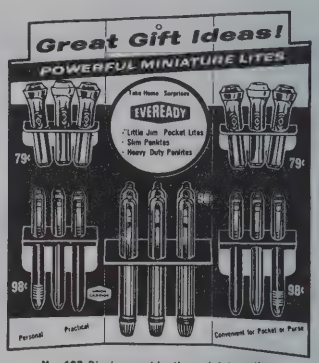
No. 115 "Little Jim" Pocket Lite—Uses 1 No. 915 or E91 Battery, No. 112 Lamp. Available in Counter Display of 12 **(No. 15).**



No. 230 Heavy-Duty Penlite. Uses 2 No. 915 or E91 Batteries and No. 222 Lamp. Available individually boxed or in Counter Display of 12 **(No. 23).**



No. 212 Slim Penlite. Uses 2 No. 912 or E92 Batteries and No. 224 Lamp. Available individually boxed or in Counter Display of 12 **(No. 21-C).**



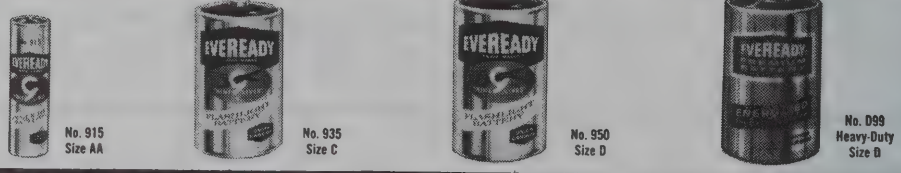
No. 167 Display-combination miniature lite assortment contains: 6 each of Slim and Heavy Duty Penlites and 6 "Little Jim" Pocket Lites.

	No. 15	No. 21-C	No. 23	No. 167	No. 212	No. 230
List Each	$9.48	$11.76	$11.76	$16.50	$0.98	$0.98
Sugg. Dealer	6.30	7.80	7.80	10.95	0.67	0.67

EVEREADY® BATTERIES with *POWER TO SPARE*

(See complete line listing for prices)

POPULAR FLASHLIGHT BATTERIES



No. 915 Size AA · No. 935 Size C · No. 950 Size D · No. D99 Heavy-Duty Size D

ENERGIZERS FOR TRANSISTOR RADIOS

and other electronic applications



No. 206 9 Volts · No. 216 9 Volts · No. 226 9 Volts · No. 333 4½ Volts · No. 1035 Size C 1½ Volts · No. 1015 Size AA 1½ Volts

SUPER POWER ALKALINE BATTERIES

for radios, cameras, toys, flashlights, and high drain applications, rechargeable TV



No. E90 Size N 1½ Volts · No. E91 Size AA 1½ Volts · No. 523 4½ Volts · No. 563 4½ Volts · No. E93 Size C 1½ Volts · No. E94 Size ½D 1½ Volts · No. E92 Size AAA 1½ Volts · No. 561 15 Volts · No. E95 Size D 1½ Volts

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EVEREADY

COMPLETE LINE SPECIFICATIONS

EVEREADY

MERCURY BATTERIES



No. E9
1.4 Volts



No. E146X
8.4 Volts



No. E133
4.2 Volts

SEALED NICKEL CADMIUM RECHARGEABLE BATTERIES



No. N24
1.25 Volts



No. N46
1.25 Volts



No. N57
1.25 Volts



No. N73
1.25 Volts

LANTERN BATTERIES



No. 509 — Spring
No. 510S — Screws
No. 510F — Fahnestock
6 Volts



No. 731
6 Volts



No. 520
6 Volts
Alkaline

OTHER BATTERIES



No. 6 "Ignitor"
1½ Volts



"HOT SHOT"
No. 1461 6 Volts
No. 1462 6 Volts
No. 1463 12 Volts
No. 1562 7½ Volts
No. 1662 9 Volts



EMERGENCY
LIGHTING
No. 715 7½ Volts
No. 706 6 Volts
No. 716 9 Volts

"Eveready" Battery Number	NEDA Number	Chemical System	Overall Dimensions in Inches L	W	H	Terminals & Voltages	Battery Weight lbs.	ozs.	Unit Pkg. Quan.	Sugg. Dealer Each	List, Each	Major Use
E1	1100	Mercury	0.625 Diam. x 0.650			Flat Contacts–, +1.40		0.43	4	$ 0.52	$ 0.75	Meters, Instr.
E1N		Mercury	0.625 Diam. x 0.650			Flat Contacts–, +.35		0.43	4	0.64	0.95	Sig. Light,
E3		Mercury	0.985 Diam. x 0.660			Flat Contacts–, +1.35		0.93	4	1.05	1.50	Min. Radios
E4		Mercury	1.195 Diam. x 0.660			Flat Contacts–, +1.35		1.6	4	1.31	1.95	
EPX-4		Mercury	0.662 Diam. x 1.965			Flat Contacts–, +5.40		1.16	1	1.57	2.25	Camera
No. 6 ** "Ignitor" Gen. Purpose No. 6 ***	905 914	Carb. Zinc	2-5/8 Diam. x 6-5/8			**Plastic Knurls–, +1.5	2	2	1	0.91	1.35	Ign., Lighting
"Gray Label" Telephone No. 6 **	906	Carb. Zinc	2-5/8 Diam. x 6-5/8			***Fahnestock–, +1.5	2	2		0.91	1.35	Tele.
Railroad & Industrial	911	Carb. Zinc	2-5/8 Diam. x 6-5/8			**Plastic Knurls–, +1.5	2	2	1	0.94	1.40	Ign., Tele.
EPX-6		Mercury	0.662 Diam. x 4.415			Flat Contacts–, +4.05, +8.1		1.6	1	2.75	3.95	Camera
E9	1103	Mercury	0.550 Diam. x 1.968			Flat Contacts–, +1.40		1.05	4	0.64	0.95	Trans. Appl.
E12	1101	Mercury	0.640 Diam. x 1.968			Flat Contacts–, +1.40		1.4	2	0.87	1.25	Instr., Misc.
E12N		Mercury	0.640 Diam. x 1.968			Flat Contacts–, +1.35		1.4	2	1.05	1.50	Meters, Instr.
EPX-13		Mercury	0.610 Diam. x 0.233			Flat Contacts–, +1.35		0.15	4	0.50	0.75	Camera
EPX-14		Mercury	0.655 Diam. x 0.614			Flat Contacts–, +2.7		0.3	1	1.05	1.50	Camera
*N22 (B20)		Nickel Cad.	0.457 Diam. x 0.217			Flat Contacts–, +1.25		0.04	1	1.05	1.50	
*N22T (●B20T)		Nickel Cad.	0.457 Diam. x 0.222			Solder Tabs–, +1.25		0.04	1	1.18	1.70	
*N24 (B50)		Nickel Cad.	0.610 Diam. x 0.235			Flat Contacts–, +1.25		0.12	1	0.70	1.00	
*N24T (●B50T)		Nickel Cad.	0.610 Diam. x 0.240			Solder Tabs–, +1.25		0.12	1	0.83	1.20	
*N26 (B100)		Nickel Cad.	0.992 Diam. x 0.252			Flat Contacts–, +1.25		0.32	1	0.77	1.10	
*N26T (●B100T)		Nickel Cad.	0.992 Diam. x 0.272			Solder Tabs–, +1.25		0.32	1	0.90	1.30	Instr., Hobby.
*N28 (B150)		Nickel Cad.	0.992 Diam. 0.272			Flat Contacts–, +1.25		0.4	1	0.80	1.15	Trans. Appl., Misc.
*N28T (●B150T)		Nickel Cad.	0.992 Diam. x 0.292			Solder Tabs–, +1.25		0.4	1	0.93	1.35	
*N32 (B225)		Nickel Cad.	0.992 Diam. x 0.350			Flat Contacts–, +1.25		0.45	1	0.83	1.20	
*N32T (●B225T)		Nickel Cad.	0.992 Diam. x 0.370			Solder Tabs–, +1.25		0.45	1	0.97	1.40	
*N33 (BH225)		Nickel Cad.	0.992 Diam. x 0.358			Flat Contacts–, +1.25		0.46	1	0.97	1.40	
*N33T (●BH225T)		Nickel Cad.	0.992 Diam. x 0.378			Solder Tabs–, +1.25		0.46	1	1.10	1.60	
T35		Carb. Zinc	1-1/32 Diam. x 1-15/16			Flat Contacts–, +1.5		1.4	6	0.39	0.60	Elect. Clocks
*N36 (B450)		Nickel Cad.	1.697 Diam. x 0.300			Flat Contacts–, +1.25		1.17	1	1.47	2.10	
*N36T (●B450T)		Nickel Cad.	1.697 Diam. x 0.320			Solder Tabs–, +1.25		1.17	1	1.60	2.30	
*N38 (BH500)		Nickel Cad.	1.355 Diam. x 0.394			Flat Contacts–, +1.25		1.0	1	1.75	2.50	
*N38T (●BH500T)		Nickel Cad.	1.355 Diam. x 0.414			Solder Tabs–, +1.25		1.0	1	1.88	2.70	
*N39 (B1)		Nickel Cad.	1.984 Diam. x 0.394			Flat Contacts–, +1.25		2.0	1	2.66	3.80	Instr., Hobby.
*N39T (●B1T)		Nickel Cad.	1.984 Diam. x 0.414			Solder Tabs–, +1.25		2.0	1	2.79	4.00	Trans. Appl., Misc.
*N40 (BH1)		Nickel Cad.	1.984 Diam. x 0.394			Flat Contacts–, +1.25		2.0	1	2.79	4.00	
*N40T (●BH1T)		Nickel Cad.	1.984 Diam. x 0.414			Solder Tabs–, +1.25		2.0	1	2.92	4.20	
*N41 (B2)		Nickel Cad.	1.984 Diam. x 0.719			Flat Contacts–, +1.25		3.3	1	4.69	6.70	
*N41T (B2T)		Nickel Cad.	1.984 Diam. x 0.739			Solder Tabs–, +1.25		3.3	1	4.82	6.90	
S41		Silver	0.455 Diam. x 0.165			Flat Contacts–, +1.5		0.06	6	0.27	0.40	Novelties

*NEDA number same as an "Eveready" battery number on a different battery. Omitted to prevent errors in shipping.
**Equipped with screw terminals unless Fahnestock spring terminals are specified.
***Equipped with Fahnestock spring terminals unless screw terminals are specified.
●Items differ from corresponding sizes in that they have tabs enabling the user to solder leads to battery without damage.
* Numbering system in process of revision. New catalog number shown in brackets ( ).
□Flashlight types.

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EVEREADY

COMPLETE LINE SPECIFICATIONS

EVEREADY

"Eveready" Battery Number	NEDA Number	Chemical System	Overall Dimensions in Inches L	W	H	Terminals & Voltages	Battery Weight lbs.	ozs.	Unit Pkg. Quan.	Sugg. Dealer Each	List, Each	Major Use
E42		Mercury	1-9/32 Diam. x 2.390			Flat Contacts–, +1.4		5.85	1	2.44	3.50	
E42N		Mercury	1-9/32 Diam. x 2.390			Flat Contacts–, +1.35		5.85	1	2.76	3.95	
*N43 (B3)		Nickel Cad.	1.984 Diam. x 0.989			Flat Contacts–, +1.25		5.0	1	5.70	8.15	Instr., Hobby,
*N43T (●B3T)		Nickel Cad.	1.984 Diam. x 1.009			Solder Tabs–, +1.25		5.0	1	5.83	8.35	Trans. Appl., Misc.
*N45 (●CH50T)		Nickel Cad.	0.563 Diam. x 1.969			Solder Tabs–, +1.25		0.8	1	2.10	3.00	
*N46 (C450)		Nickel Cad.	0.563 Diam. x 1.969			Flat Contacts–, +1.25		0.8	1	1.93	2.75	
T50		Carb. Zinc	1-11/32 Diam. x 2-13/32			Flat Contacts–, +1.5		3.3	6	0.48	0.75	Elect. Clocks
*N52 (C900)		Nickel Cad.	9/16 Diam. x 3-35/64			Solder Tabs–, +1.25		1.4	1	3.17	4.55	
*N53 (CH750)		Nickel Cad.	0.900 Diam. x 1.684			Flat Contact–, Solder Tab +1.25		1.7	1	2.58	3.60	
*N53T (●CH750T)		Nickel Cad.	0.900 Diam. x 1.689			Solder Tabs–, +1.25		1.7	1	2.71	3.80	Instr., Hobby,
*N54 (CH1.5)		Nickel Cad.	1.031 Diam. x 1.969			Flat Contact–, Solder Tab +1.25		2.3	1	4.06	5.80	Trans. Appl.,
*N54T (●CH1.5T)		Nickel Cad.	1.031 Diam. x 1.979			Solder Tabs–, +1.25		2.3	1	4.19	6.00	
*N56 (C2)		Nickel Cad.	1.344 Diam. x 2.406			Flat Contact–, Solder Tab +1.25		5.0	1	4.06	5.80	
*N56T (●C2T)		Nickel Cad.	1.344 Diam. x 2.416			Solder Tabs–, +1.25		5.0	1	4.19	6.00	
*N57 (CH4)		Nickel Cad.	1.344 Diam. x 2.406			Flat Contact–, Solder Tab +1.25		5.0	1	5.69	8.15	
*N57T (●CH4T)		Nickel Cad.	1.344 Diam. x 2.416			Solder Tabs–, +1.25		5.4	1	5.82	8.35	
N64		Nickel Cad.	2.810 x 2.810 x 1.320			Recessed Flat Contacts–, +15		12.5	1	65.38	93.50	
N65		Nickel Cad.	7.320 x 3.100 x 1.460			Socket–, +13.75	1	11.0	1	101.28	145.00	
N67		Nickel Cad.	1-33/64 x 1-33/64 x 4-13/64			Wire Leads–, +6.25		8.3	1	18.38	26.50	Instr., Trans.
*N69 (RH1.6)		Nickel Cad.	1-41/64 x 23/32 x 2-17/32			Nut & Stud–, +1.25		4.1	1	3.53	5.00	Appl., Misc.
N70		Nickel Cad.	3-7/8 x 1-9/16 x 4-1/32			Wire Leads–, +6.25	1	12.0	1	29.62	42.50	
*N71 (RH2.6)		Nickel Cad.	1-41/64 x 23/32 x 4-1/32			Nut & Stud–, +1.25		6.8	1	5.51	7.95	
*N72 (RH4)		Nickel Cad.	1-41/64 x 1-1/64 x 4-1/32			Nut & Stud–, +1.25		5.4	1	8.40	12.00	
*N73 (R2)		Nickel Cad.	1-25/64 x 1-25/64 x 2-17/32			Nut, Stud & Tab–, +1.25		6.0	1	5.97	8.50	
*N74 (R3.5)		Nickel Cad.	1-25/64 x 1-25/64 x 3-1/2			Nut, Stud & Tab–, +1.25		9.2	1	7.12	10.15	
*N75 (R4.5)		Nickel Cad.	2-1/64 x 1-23/32 x 3-7/32			Nut & Stud–, +1.25		13.4	1	9.35	13.35	Instr., Misc.
*N76 (R6)		Nickel Cad.	2-1/64 x 1-23/32 x 3-3/4			Nut & Stud–, +1.25		15.7	1	10.21	14.60	
S76		Silver	0.455 Diam. x 0.200			Flat Contacts–, +1.5		0.08	6	0.30	0.45	Novelties
*N77 (R7.5)		Nickel Cad.	2-1/64 x 1-23/32 x 4-9/32			Nut & Stud–, +1.25	1	2.0	1	11.17	15.95	
*N78 (RH7)		Nickel Cad.	1-41/64 x 1-9/16 x 4-1/32			Nut & Stud–, +1.25		14.7	1	11.96	17.10	Trans. Appl.
*N79 (R11)		Nickel Cad.	3-39/64 x 1-5/64 x 4-31/32			Nut & Stud–, +1.25	1	12.0	1	13.79	19.70	
*N81 (R15)		Nickel Cad.	3-39/64 x 1-13/32 x 4-31/32			Nut & Stud–, +1.25	2	3.0	1	16.78	23.95	
*N82 (RH15)		Nickel Cad.	3-3/64 x 1-15/64 x 4-63/64			Nut & Stud–, +1.25	1	11.0	1	21.57	30.75	Instr., Trans.
*N83 (R19)		Nickel Cad.	3-39/64 x 1-23/32 x 4-31/32			Nut & Stud–, +1.25	2	10.0	1	19.90	28.45	Appl., Misc.
*N85 (R23)		Nickel Cad.	3-39164 x 2-1/32 x 4-31/32			Nut & Stud–, +1.25	3	2.0	1	22.94	32.75	
E90	910	Alkaline	0.470 Diam. x 1.130			Flat Contacts–, +1.5		0.35	3	0.27	0.40	Radio,Electr. Dev.
E91	15	Alkaline	9/16 Diam. x 1-31/32			Flat Contacts–, +1.5		0.75	12	0.325	0.50	Radio,Electr. Dev.
E92		Alkaline	0.400 Diam. x 1.735			Flat Contacts–, +1.5		0.4	12	0.325	0.50	Electr.Photoflash
E93	14	Alkaline	1-1/32 Diam. 1-15/16			Flat Contacts–, +1.5		2.0	12	0.39	0.60	Radio,Electr.Dev.
E94	927	Alkaline	1-11/32 Diam. x 1-7/32			Flat Contacts–, +1.5		1.8	12	0.325	0.50	Electr.Photoflash
E95	13	Alkaline	1-11/32 Diam. x 2-13/32			Flat Contacts–, +1.5		4.1	12	0.49	0.75	Comm. Equip.
E97S		Alkaline	1-11/32 Diam. x 5-7/32			Plastic Knurls–, +1.5		9	12	0.73	1.10	Hobby
□D99	813	Carb. Zinc	1-11/32 Diam. x 2-13/32			Flat Contacts–, +1.5		3.3	48	0.19	0.30	Flashlight,Toys
◦A100	See 1050											
E113		Mercury	0.660 Diam. x 0.845			Flat Contacts–, +4.05		0.45	1	1.72	2.50	
E114		Mercury	0.660 Diam. x 1.080			Flat Contacts–, +5.40		0.59	1	1.85	2.65	Instr.
E115		Mercury	0.660 Diam. x 1.40			Flat Contacts–, +7		0.73	1	2.06	2.95	
E115N		Mercury	0.660 Diam. x 1.40			Flat Contacts–, +6.75		0.73	1	2.06	2.75	
E126	1611	Mercury	0.724 Diam. x 2			Flat Contacts–, +8.4		1.65	1	1.31	1.95	Trans. Radio
E132	1200	Mercury	0.662 Diam. x 1.315			Flat Contacts–, +2.80		0.9	2	1.05	1.50	
E132N		Mercury	0.662 Diam. x 1.315			Flat Contacts–, +2.70		0.9	2	1.17	1.65	Trans. Appl.
E133	1304	Mercury	0.662 Diam. x 1.965			Flat Contacts–, +4.2		1.4	12	1.17	1.65	
E133N	1304	Mercury	0.662 Diam. x 1.965			Flat Contacts–, +4.05		1.4	2	1.35	1.95	
E134		Mercury	0.662 Diam. x 2.620			Flat Contacts–, +5.60		1.9	2	1.57	2.25	Trans. Appl.
E134N		Mercury	0.662 Diam. x 2.620			Flat Contacts–, +5.40		1.9	2	1.72	2.50	
E135		Mercury	0.662 Diam. x 3.275			Flat Contacts–, +7		2.4	1	2.06	2.75	
E135N		Mercury	0.662 Diam. x 3.275			Flat Contacts–, +6.75		2.4	1	2.06	2.95	
E136		Mercury	0.662 Diam. x 3.930			Flat Contacts–, +8.40		2.9	1	2.27	3.25	Instr.
E136N		Mercury	0.662 Diam. x 3.930			Flat Contacts–, +8.10		2.9	1	2.40	3.50	
E137		Mercury	0.662 Diam. x 4.585			Flat Contacts–, +9.80		3.1	1	2.62	3.75	
E137N		Mercury	0.662 Diam. x 4.585			Flat Contacts–, +9.45		3.1	1	2.80	4.00	
E145		Mercury	21/32 Diam. x 1-3/16			Flat Contacts–, +7		0.7	1	1.72	2.50	Electr. Dev.
E146X	1604	Mercury	1-1/32 x 5/8 x 2			Min. Snap–, +8.40		1.6	6	1.31	1.95	Trans. Radio
E152		Mercury	0.485 Diam. x 1-140			Flat Contacts–, +2.80		0.42	1	0.87	1.25	
E152N		Mercury	0.485 Diam. x 1-140			Flat Contacts–, +2.70		0.42	1	1.05	1.50	
E153		Mercury	0.485 Diam. x 1.708			Flat Contacts–, +4.20		0.4	1	1.17	1.65	Instr.
E153N		Mercury	0.485 Diam. x 1.708			Flat Contacts–, +4.05		0.4	1	1.39	2.00	
E162		Mercury	0.662 Diam. x 0.887			Flat Contacts–, +2.70		0.58	1	1.05	1.50	
E163		Mercury	0.662 Diam. x 1.327			Flat Contacts–, +4.2		0.87	2	1.17	1.65	
E163N		Mercury	0.662 Diam. x 1.327			Flat Contacts–, +4.05		0.87	2	1.31	1.95	
E164		Mercury	0.662 Diam. x 1.767			Flat Contacts–, +5.6		1.16	12	1.31	1.95	Trans. Appl.
E164N		Mercury	0.662 Diam. x 1.767			Flat Contacts–, +5.4		1.16	2	1.57	2.25	
E165		Mercury	0.662 Diam. x 2-7/32			Flat Contacts–, +7		1.45	2	1.70	2.50	
E165N		Mercury	0.662 Diam. x 2-7/32			Flat Contacts–, +6.75		1.45	2	1.90	2.75	
E169		Mercury	0.662 Diam. x 3-63/64			Flat Contacts–, +12.6		4.2	1	3.50	4.95	Instr.
E175		Mercury	1/2 Diam. x 1-3/32			Flat Contacts–, +7		1.0	10	1.05	1.50	
E177	1606	Alkaline	35/64 Diam. x 1-29/32			Min. Snap–, +9.8		0.67	1	1.29	1.98	
206	1611	Carb. Zinc	3/4 Diam. x 2			Flat Contacts Neg. Recessed–, +9		1.2	6	0.62	0.89	
216	1604	Carb. Zinc.	1-1/32 x 21/32 x 1-29/32			Min. Snap–, +9		1.3	12	0.48	0.69	Trans. Radio
222	1604	Carb. Zinc.	1-1/32 x 21/32 x 1-29/32			Min. Snap–, +9		1.3	12	0.65	0.98	
226	1600	Carb. Zinc.	1.0 Diam. x 1-15/16			Snap Type–, +9		2.0	6	0.62	0.89	
228		Carb. Zinc	1.0 Diam. x 2-7/16			Snap Type–, +12		2.3	1	1.05	1.50	
E233	1300	Mercury	1-1/64 Diam. x 1-31/32			Flat Contacts–, +4.2		3.0	1	2.27	3.25	
E233N		Mercury	1-1/64 Diam. x 1-31/32			Flat Contacts–, +4.05		3.0	1	3.62	3.75	
E234		Mercury	1-1/64 Diam. x 2-5/8			Flat Contacts–, +5.6		3.88	1	2.76	3.95	Instr.
E243N		Mercury	1-1/64 Diam. x 2-5/8			Flat Contacts–, +5.4		3.88	1	3.15	4.50	
E235N		Mercury	1.015 Diam. x 3-1/4			Flat Contacts–, +6.75		4.85	1	3.64	5.50	
E236N		Mercury	1.015 Diam. x 3-7/8			Flat Contacts–, +8.1		5.82	1	4.12	5.95	
239	1900	Carb. Zinc	1-21/64 x 1-1/32 x 2-11/16			Socket–, +9, +13.5		3	1	1.30	1.85	
243	1610	Carb. Zinc	1-13/32 x 1-11/32 x 2-3/4			Min. Snap–, +4.5		4.5	1	1.30	1.85	
246	1602	Carb. Zinc	1-13/32 x 1-11/32 x 2-3/4			Min. Snap–, +9		4.5	1	1.30	1.85	
266	1605	Carb. Zinc	1-13/16 x 1-13/16 x 2-7/16			Snap Type–, +9		7	1	1.36	1.95	Trans. Radio
274	1400	Carb. Zinc	2-9/16 x 2-1/32 x 7-29/32			Snap Type–, +6	2	7	1	4.02	5.75	
276	1603	Carb. Zinc.	2-9/16 x 2-1/32 x 3-5/32			Snap Type–, +9		15	1	1.36	1.95	
E286		Mercury	1.0 Diam. x 1-15/16			Snap Type–, +8.4		2.6	6	1.35	1.95	
E289		Mercury	1.0 Diam. x 2-13/32			Snap Type–, +12.6		3.6	6	2.27	3.25	
E312		Mercury	0.310 Diam. x 0.140			Flat Contacts–, +1.40		0.02	6	0.24	0.35	Instr.
333	1306	Carb. Zinc	0.662 Diam. x 1.965			Flat Contacts–, +4.5		0.9	6	0.62	0.89	Trans. Radio
W-350	'	Carb. Zinc	3-1/32 x 1-7/8 x 4-31/32			Plastic Knurls–, +22.5, +45		14.5	1	2.69	3.85	Radio, Transc., Instr.
W-351		Carb. Zinc	3-5/8 x 2-1/4 x 3-11/16			Plastic Knurls–, +22.5, +45	1	5.5	1	6.65	9.50	Radio, Transc., Instr.

*NEDA number same as an "Eveready" battery number on a different battery. Omitted to prevent errors in shipping.

◦Designates number change only, see 1050 for A100.

□Flashlight types.

●Items differ from corresponding sizes in that they have tabs enabling the user to solder leads to battery without damage.

' Numbering system in process of revision. New catalog number shown in brackets ( ).

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EVEREADY

COMPLETE LINE SPECIFICATIONS

EVEREADY TRADE-MARK

"Eveready" Battery Number	NEDA Number	Chemical System	Overall Dimensions in Inches L W H	Terminals & Voltages	Battery Weight lbs. ozs.	Unit Pkg. Quan.	Sugg. Dealer Each	List, Each	Major Use
W-352	701	Carb. Zinc	2-21/32 x 1-11/32 x 4-9/16	Plastic Knurls–, +3	12.5	1	1.33	1.90	Electr. Dev., Instr.
W-353	11	Carb. Zinc	2-19/32 x 1-3/8 x 4-1/4	Socket–, +1.5	12.5	1	1.22	1.75	Port. Radio
W-356	*	Carb. Zinc	2-5/8 x 2-5/8 x 4-9/16	Plastic Knurls–, +3	1 6	1	1.64	2.35	Radio and Elect. Dev.
W-357	901	Carb. Zinc	3-7/8 x 2-11/16 x 5-13/16	Fahnestock–, +3	2 12	1	1.75	2.50	Model Ign., Tele.
W-358		Carb. Zinc	2-15/16 x 1-3/16 x 4-1/8	Plastic Knurls–, +45	8.75	1	2.93	4.50	Industrial
W-359	*	Carb. Zinc	3-9/16 x 2-1/4 x 4-1/2	Socket–, +45	1 11.8	1	3.15	4.50	Port. "B"
W-361	227	Carb. Zinc	1-11/32 x 1-11/32 x 11-23/32	Flat Contacts–, +103.5	1 4	1	4.86	6.95	Port. "B"
W-362		Carb. Zinc	2-15/16 x 11/16 x 1-3/4	Plastic Knurls+, –4.5, –7.5	1.5	1	2.05	2.95	Radio "C"
● W-363F	*	Carb. Zinc	8-1/32 x 4-1/16 x 7-5/8	Fahnestock–, +22.5, +45	10 5	1	6.96	9.95	Hvy.Duty Radio "B"
● W-364F	*	Carb. Zinc	8-1/8 x 4-7/16 x 7-11/16	Fahnestock–, +22.5, +45	11 14	1	6.96	9.95	Hvy. Duty Radio "B"
● W-365F	723	Carb. Zinc	8-1/16 x 2-15/16 x 7-5/8	Fahnestock–, +22.5, +45	7 7.5	1	6.96	9.95	Ind. "B"
W-366	407	Carb. Zinc	9-1/32 x 2-1/32 x 4-23/32	Socket–"A", +1.5 "A", –"B", +63"B"	4 4	1	6.65	9.50	Port. Radio "A-B"
W-367	408	Carb. Zinc	9-1/8 x 2-3/4 x 4-7/16	Socket–"A", +7.5 "A", –"B", +63"B"	4 5	1	6.65	9.50	
W-368	*	Carb. Zinc	9-1/32 x 2-23/32 x 3-9/16	Recessed Plug–"A", +6"A", –"B", +75"B"	4	1	8.05	11.50	
W-369	410	Carb. Zinc	9-15/16 x 2-1/4 x 4-23/32	Socket–"A", +1.5 "A", –"B", +90 "B"	4 5	1	6.65	9.50	
W-371		Carb. Zinc	1-5/32 x 1-5/32 x 2-9/16	Socket (including plug)–, +3	2.2	1	0.90	1.35	Model Ign.
E400	1106	Mercury	0.455 Diam. x 0.135	Flat Contacts–, +1.40	0.04	6	0.24	0.35	Trans. Appl.
E400N		Mercury	0.455 Diam. x 0.135	Flat Contacts–, +1.35	0.04	6	0.35	0.50	
E401	1102	Mercury	0.470 Diam. x 1.130	Flat Contacts–, +1.40	0.4	3	0.44	0.65	
E401N		Mercury	0.470 Diam. x 1.130	Flat Contacts–, +1.35	0.4	1	0.60	0.85	
409	916	Carb. Zinc	2-5/8 x 2-5/8 x 4-13/32	Coil Springs–, +6	1 6.5	1	–	–	Lanterns
411	208	Carb. Zinc	1-1/32 x 5/8 x 1-29/64	Flat Contacts–, +15	0.8	1	0.81	1.15	Port. Radio "B", Instr.
412	215	Carb. Zinc	1-1/32 x 5⅛ x 2	Flat Contacts–, +22.5	1.2	1	1.05	1.50	
413	210	Carb. Zinc	1-1/32 x 5/8 x 2-9/16	Flat Contacts–, +30	1.4	1	1.23	1.75	
415	213	Carb. Zinc	1-3/64 x 5/8 x 3-11/16	Min. Snap–, +45	2.5	1	1.75	2.50	
416	217	Carb. Zinc	1-21/64 x 63/64 x 3-1/2	Min. Snap–, +67.5	4	1	2.07	2.95	
417	224	Carb. Zinc	1-5/16 x 31/32 x 1-9/16	Flat Contacts–, +15	1.8	1	1.23	1.75	
420	225	Carb. Zinc	1-5/16 x 31/32 x 2-3/16	Flat Contacts–, +22.5	2.5	1	1.37	1.95	
425P		Carb. Zinc	1-23/64 x 1-1/32 x 3-15/16	Socket–, +22.5	4.1	1	1.37	1.95	Instr.
430	*	Carb. Zinc	1-5/10 x 1 x 2-13/16	Flat Contacts–, +30	3.2	1	1.65	2.35	Port. Radio "B", Instr.
430P		Carb. Zinc	1-23/64 x 1-1/32 x 3-11/32	Socket–, +30	3.2	1	1.65	2.35	Instr.
433P		Carb. Zinc	2-21/32 x 1-1/64 x 3-1/16	Socket–, +33	6	1	2.27	3.25	Instr.
437	212	Carb. Zinc	1-15/16 x 1-15/32 x 6-15/32	Snap Type–, +75	14.8	1	3.15	4.50	Port. Radio "B"
E450		Mercury	0.455 Diam. 0.570	Flat Contacts–, +1.35	0.18	4	0.53	0.75	Instr.
455	*	Carb. Zinc	2-21/32 x 1 x 3-11/16	Snap Type–, +45	7.8	1	2.27	3.25	Port. Radio "B"
455P		Carb. Zinc	2-21/32 x 1-1/64 x 3-29/32	Socket–, +45	8.6	1	2.27	3.25	Instr.
457	203	Carb. Zinc	2-13/16 x 1-3/8 x 2-1/2	Snap Type–, +67.5	7.4	1	2.70	3.85	Port. Radio "B"
460K		Carb. Zinc	1-29/64 x 1-3/8 x 2-3/8	Flat Contacts–, +45	5.3	6	1.67	2.50	Photoflash
467	200	Carb. Zinc	2-13/16 x 1-3/8 x 3-45/64	Snap Type–, +6.75	12	1	2.70	3.85	Port. Radio "B"
468	200	Carb. Zinc	2-13/16 x 1-3/8 x 3-45/64	Snap Type–, +67.5	12	1	2.77	3.95	Radio, Electr. Dev.
477	211	Carb. Zinc	1-29/32 x 63/64 x 5-7/16	Snap Type–, +67.5	8.6	1	2.70	3.85	
479	214	Carb. Zinc	1-31/32 x 1-1/32 x 7-15/32	Snap Type–, +90	12	1	2.97	4.25	Port. Radio "B"
482	202	Carb. Zinc	3-19/32 x 1-27/32 x 5-1/2	Socket–, +45	1 15	1	2.97	4.25	
484	207	Carb. Zinc	3-31/32 x 2-17/32 x 5-5/16	Socket–, +45	3 2	1	3.47	4.95	Fluor. Lantern
487		Carb. Zinc	5-1/8 x 2-1/16 x 7-1/4	Socket–, +22.5, +45	4 2	1	3.84	5.50	Farm Radio "B"
489		Carb. Zinc	4-1/132 x 2-11/16 x 4-3/16	Socket–, +225	2 12	1	6.96	9.95	Electr. Photoflash
490	204	Carb. Zinc	3-23/32 x 1-3/8 x 3-45/64	Snap Type–, +90	15	1	3.15	4.50	Port. Radio "B"
491		Carb. Zinc	2-19/32 x 1-5/16 x 4-1/2	Flat Recessed & Socket–, +240	13	1	5.56	7.95	Electr. Flash
492		Carb. Zinc	3-916 x 2-29/32 x 4-29/32	Socket–, +180, +225	2 8	1	7.65	10.95	Electr. Flash
493	722	Carb. Zinc	2-11/16 x 2-7/32 x 3-29/32	Pinjacks–, +300	14.5	1	8.37	11.95	Geiger Counter
495	*	Carb. Zinc	1-15/16 x 1-15/32 x 7-1/8	Snap Type–, +90	1 –	1	3.47	4.95	Port. Radio "B"
497		Carb. Zinc	3 x 1-19/32 x 5-5/8	Flat Recessed–, +180, +510	1 10	1	11.16	15.95	Electr. Flash
E502		Mercury	0.550 Diam. 1.968	Flat Contacts–, +1.35	1.05	1	0.87	1.25	Trans. Appl.
504	220	Carb. Zinc	5/8 x 19/32 x 1-3/8	Flat Contacts–, +15	0.6	1	0.81	1.15	Port. Radio "B", Instr.
505	221	Carb. Zinc	5/8 x 19/32 x 1-63/64	Flat Recessed–, +22.5	0.8	1	1.05	1.50	
506	223	Carb. Zinc	1-13/64 x 5/8 x 1-27/64	Flat Contacts–, +30	0.9	1	1.30	1.85	
507	*	Carb. Zinc	5/8 x 19/32 x 2.605	Flat Contacts–, +30	0.9	1	1.30	1.85	
509	908	Carb. Zinc	2-5/8 x 2-5/8 x 4-13/32	Coil Springs–, +6	1 5.5	1	0.85	1.29	Lanterns
510F	917	Carb. Zinc	2-5/8 x 2-5/8 x 4-13/32	Fahnestock–, +6	1 4	1	0.85	1.29	Misc.
510S	*	Carb. Zinc	2-5/8 x 2-5/8 x 4-3/8	Plastic Knurls–, +6	1 7	1	0.85	1.29	Misc.
515	*	Carb. Zinc	35/64 Diam. x 1-31/32	Flat Contacts–, +1.5	0.5	24	0.095	0.15	Flashlights, Toys
520	930	Alkaline	5-17/32 x 4-21/32 x 2-21/32	Ins. Screw–, +6	2 8	1	3.31	4.95	Lanterns, Electr. Dev.
E520		Mercury	0.495 Diam. x 0.286	Flat Contacts–, +1.40	0.07	6	0.17	0.25	Trans. Appl.
523	1306	Alkaline	0.662 Diam. x 1.965	Flat Contacts–, +4.5	1.1	1	0.82	1.25	Trans. Radio
531		Alkaline	0.622 Diam. x 2.290	Snap Type–, +4.5	1.25	1	0.82	1.25	Photo.
532	1308	Alkaline	0.662 Diam. x 1.670	Snap Type–, +3	0.8	1	0.70	1.00	Photo. Electr. Dev.
560		Alk. Sec.	2-21/32 x 1-17/32 x 7-5/32	Socket–, +7.5	1 10	1	4.33	6.50	Micro Television
561		Alk. Sec.	8-5/16 x 2-13/16 x 5-7/8	Socket–, +15	6 –	1	10.62	15.95	
563		Alk. Sec.	1-23/64 Diam. x 7-5/32	Flat Contacts–, +4.5	15	3	2.76	4.15	
564		Alk. Sec.	8-5/16 x 2-13/16 x 5-7/8	Socket–, +13.5	5 8	1	9.94	14.95	
E601		Mercury	0.627 Diam. x 1.40	Flat Contacts–, +1.35	1.22	1	0.83	1.30	Instr.
621		Carb. Zinc	2-9/16 Diam. x 13	Plastic Knurls–, +3	4 10	12	2.80	4.25	Fishing Buoy
E625		Mercury	0.615 Diam. x 0.238	Flat Contacts–, +1.40	0.14	4	0.42	0.60	Trans. Appl.
E625N		Mercury	0.615 Diam. x 0.238	Flat Contacts–, +1.35	0.14	4	0.53	0.75	
E630	1104	Mercury	0.615 Diam. x 0.238	Flat Contacts–, +1.40	0.17	4	0.42	0.60	
E630N		Mercury	0.615 Diam. x 0.238	Flat Contacts–, +1.35	0.17	4	0.53	0.75	
E640	1105	Mercury	0.625 Diam. x 0.440	Flat Contacts–, +1.40	0.38	4	0.42	0.60	
E640N		Mercury	0.625 Diam. x 0.440	Flat Contacts–, +1.35	0.38	4	0.53	0.75	
E675		Mercury	0.455 Diam. x 0.210	Flat Contacts–, +1.40	0.09	6	0.32	0.45	Instr.
702		Carb. Zinc	2-17/32 x 7/8 x 3-1/8	Socket–, +4.5	5	1	2.42	3.45	Shot Firing
703	*	Carb. Zinc	2-7/16 x 27/32 x 3-1/16	Spring–, +4.5	5	1	1.36	1.95	Instr.
704		Carb. Zinc	2-11/16 x 1-11/32 x 4-3/8	Socket–, +3	11.8	1	2.08	2.95	Shot Firing
706	902	Carb. Zinc	8-5/16 x 2-13/16 x 6-7/16	Ins. Screw–, +6	5 14	1	4.01	5.98	Ign. Emerg. Lighting
707	26	Carb. Zinc	2-9/16 x 2-1/32 x 2-13/16	Snap Type–, +7.5	12	1	1.15	1.65	Port. Radio "A"
708		Carb. Zinc	2-5/8 x 2-3/4 x 4-13/16	Socket–, +22.5	1 11	1	4.38	6.25	Shot Firing
711	700	Carb. Zinc	2-21/32 x 1-11/32 x 4-3/8	Plastic Knurls–, +1.5	12.2	1	0.79	1.15	Model Ign. "Glo-Plug"
713	8	Carb. Zinc	3-29132 x 53/64 x 2-27/32	Socket–, +7.5	6.3	1	2.27	3.25	Port. Radio "A"
714		Carb. Zinc	3-31/32 x 1-11/32 x 3-1/2	Plastic Knurls–, +4.5	14.5	1	1.57	2.25	Tele. Test Sets
715	903	Carb. Zinc	7-1/4 x 4-1/16 x 6-7/16	Ins. Screw–, +7.5	7 10	1	4.86	7.25	Ign., Emerg. Lighting
716	*	Carb. Zinc	8-37/64 x 4-1/16 x 6-7/16	Ins. Screw–, +9	8 8	1	5.53	8.25	Ign., Emerg. Lighting
717	9	Carb. Zinc	2-5/32 x 1-15/16 x 3-1/32	Socket–, +7.5	8	6	1.23	1.75	Port. Radio "A"
718	1	Carb. Zinc	3-29/32 x 2-3/4 x 5-7/16	Socket–, +6	2 4	1	2.87	4.10	
720	18	Carb. Zinc	2-25/32 x 1-13/32 x 3-1/32	Socket–, +1.5	6.5	1	1.15	1.65	
724	2	Carb. Zinc	1-7/32 x 1-7/32 x 2-11/32	Flat Contacts–, +6	2.5	1	0.87	1.25	
726	19	Carb. Zinc	4-3/32 x 1-7/16 x 2-15/16	Socket–, +4.5	10.5	1	1.23	1.75	
727	428	Carb. Zinc	8-7/8 x 2-1/8 x 3-25/32	Recessed Plug–"A", +9"A", –"B", +90"B"	2 14	1	5.22	7.45	Port. Radio "A-B"
729	*	Carb. Zinc	3-27/32 x 2-7/32 x 7-13/16	Socket–"A", +1.5"A", –"B", +90"B"	2 7	1	4.38	6.25	Port. Radio "A-B"

*NEDA number same as an "Eveready" battery number on a different battery. Omitted to prevent errors in shipping.

●Furnished with Fahnestock spring terminals. If socket terminals required specify W-363P, W-364P, W-365P.

□Flashlight types.

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EVEREADY COMPLETE LINE SPECIFICATIONS EVEREADY

"Eveready" Battery Number	NEDA Number	Chemical System	Overall Dimensions in Inches L	W	H	Terminals & Voltages	Battery Weight lbs.	ozs.	Unit Pkg. Quan.	Sugg. Dealer Each	List, Each	Major Use
731	918	Carb. Zinc	5-11/32 x 2-27/32 x 4-15/16			Ins. Screw–, +6	3	4	1	1.96	2.95	Lantern
732	926	Carb. Zinc	5-11/32 x 2-27/32 x 4-15/16			Ins. Screw–, +12	3	4	1	1.96	2.95	Lantern
735	900	Carb. Zinc	2-5/8 x 2-5/8 x 4-3/8			Plastic Knurls–, +1.5	1	7	1	0.84	1.25	Model Ign. "Glo-Plug"
736	3	Carb. Zinc	3-15/16 x 1-5/16 x 4-3/32			Socket–, +4.5	1	–	1	1.23	1.75	Port. Radio "A"
738	205	Carb. Zinc	3 x 2-5/16 x 4-1/8			Socket–, +22.5, +45	1	3	1	2.76	3.95	Port. Radio "B"
740	719	Carb. Zinc	4-19/32 x 3-7/8 x 7-3/4			Socket–, +1.5	6	–	1	7.65	10.95	Farm Radio "A"
741	17	Carb. Zinc	3-7/8 x 2-11/16 x 5-3/8			Socket–, +1.5	2	10	1	2.76	3.95	
742	4	Carb. Zinc	2-5/8 x 2-5/8 x 3-27/32			Socket–, +1.5	1	6	1	1.15	1.65	Port. Radio "A"
743	5	Carb. Zinc	3-13/16 x 2-5/8 x 4-1/32			Socket–, +1.5	1	15	1	2.69	3.85	
744	*	Carb. Zinc	2-5/8 x 2-5/8 x 3-27/32			Socket–, +6	1	6	1	1.15	1.65	
746	7	Carb. Zinc	3-15/16 x 1-5/16 x 4-21/32			Socket–, +4.5	1	3	1	1.36	1.95	Instr.
750	*	Carb. Zinc	1-11/32 x 11/16 x 2-21/32			Spring–, +3		2	1	0.79	1.15	Instr.
751	705	Carb. Zinc	2 x 11/16 x 2-21/32			Spring–, +4.5		3	1	0.87	1.25	
752	400	Carb. Zinc	14-1/16 x 2-11/16 x 4-1/16			Recessed Plug–"A", +9"A", –"B", +90"B"	6	2	1	5.78	8.25	
752W	*	Carb. Zinc	14-1/16 x 2-11/16 x 4-1/16			Recessed Plug–"A", +9"A", –"B", +90"B", –, +1.5	6	8	1	6.48	9.25	Port. Radio "A-B"
753	401	Carb. Zinc	9-71/32 x 2-23/32 x 4-5/16			Socket–"A", +7.5"A", +9"A", –"B", +90"B"	4	12	1	5.43	7.75	
754	402	Carb. Zinc	10-15/32 x 3-1/4 x 4			Socket–"A", +7.5"A", +9"A", –"B", +90"B"	6	1	1	6.62	9.45	
755	403	Carb. Zinc	8-9/16 x 3-3/4 x 2-7/16			Socket–"A", +6"A", +7.5"A", –"B", 75"B"	3	9	1	5.08	7.25	
756	*	Carb. Zinc	8-7/8 x 2-1/8 x 3-25/32			Socket–"A", +7.5"A", +9"A", –"B", +90"B"	2	14	1	4.87	6.95	
757	406	Carb. Zinc	9-7/32 x 2-23/32 x 4-7/32			Recessed Plug–"A", +9"A", –"B", +90"B"	4	12	1	5.57	7.95	
759	*	Carb. Zinc	15-11/16 x 4-1/32 x 6-15/16			Socket–"A", +1.5"A", –"B", +90"B"	16	4	1	7.95	10.65	Farm Radio"A-B"
761T	712	Carb. Zinc	4-1/16 x 1-15/32 x 3-1/2			Plastic Knurls–, +1.5, +3, +4.5		14	1	1.76	2.50	Tele. Test Sets
762S	709	Carb. Zinc	4-3/32 x 2-9/16 x 5-7/16			Plastic Knurls–, +22.5, +45	2	12	1	3.05	4.35	Instr.
763	710	Carb. Zinc	3-1/2 x 2-3/132 x 2-15/16			Plastic Knurls–, +22.5		14	1	1.61	2.35	Instr.
766T	*	Carb. Zinc	6-3/4 x 4-1/8 x 3-15/16			Fahnestock–, +16.5, +18, +19.5, +21, +22.5	4	10	1	5.56	7.95	Switchbd. Testing
771	*	Carb. Zinc	3-29/32 x 1-3/8 x 3-1/16			Socket+, –3, –4.5		13	1	2.07	2.95	Radio "C"
773	*	Carb. Zinc	3-29/32 x 7/8 x 3-1/8			5 Plastic Knurls,1 wire +, –1.5, –3, –4.5, –6, –7.5		9	1	1.75	2.50	Radio "C"
776	*	Carb. Zinc	7-27/32 x 4-1/8 x 9-7/8			Socket & Recessed Plug–"A", +7.5"A", +9"A", –B", +90"B"	14	12	1	10.47	14.95	Home Rec. "A-B"
778	*	Carb. Zinc	4-1/8 x 2-17/32 x 3-7/16			Fahnestock+, –3, –4.5, –6. –9, –10.5, –16.5, –22.5	1	8	1	4.16	5.95	Instr.
781	*	Carb. Zinc	2-15/32 x 55/64 x 3			Plastic Knurls+, –4.5		5	1	1.23	1.75	Instr.
785	431	Carb. Zinc	8-3/8 x 3-5/8 x 2-1/4			Socket–"A", +7.5"A", –"B", +75"B"	2	12	1	5.25	7.50	Port. Radio "A-B"
789		Carb. Zinc	5-9/32 x 1-7/16 x 3-1/4			Flat Contacts–, +3	1	1.5	1	2.97	4.25	Fingerprint Camera
799		Carb. Zinc	8-5/32 x 4-1/4 x 8-19/32			Fahnestock–, +22.5, +45, +49.5	13	5	1	9.45	13.50	Camera Cranking
812		Carb. Zinc	13/32 Diam. x 1-3/4			Flat Contacts–, +1.5		0.3	12	0.13	0.20	
815		Carb. Zinc	9/16 Diam. x 1-31/32			Flat Contacts–, +1.5		0.6	24	0.16	0.25	
835		Carb. Zinc	1-1/32 Diam. x 1-15/16			Flat Contacts–, +1.5		1.4	24	0.16	0.25	Photoflash
850		Carb. Zinc	1-11/32 Diam. x 2-13/32			Flat Contacts–, +1.5		3.3	12	0.19	0.30	
□904	910	Carb. Zinc	0.445 Diam. x 1.180			Flat Contacts–, +1.5		0.22	6	0.08	0.125	Novelties
□912	24	Carb. Zinc	13/32 Diam. x 1-3/4			Flat Contacts–, +1.5		0.3	12	0.095	0.15	
□915	*	Carb. Zinc	9/16 Diam. x 1-31/32			FlatContacts–, +1.5		0.6	24	0.13	0.20	Flashlight,
□935	814	Carb. Zinc	1-1/32 Diam. x 1-15/16			Flat Contacts–, +1.5		1.4	24	0.13	0.20	Toys
□950	813	Carb. Zinc	1-11/32 Diam. x 2-13/32			Flat Contacts–, +1.5		3	48	0.13	0.20	
960P	23	Carb. Zinc	1-11/32 Diam. x 4-1/16			Socket–, +1.5		5	1	0.87	1.25	Port. Radio "A"
964	20	Carb. Zinc	1-11/32 Diam. x 4-3/16			Flat Contacts–, +1.5		5.9	12	0.42	0.60	Port. Radio "A"
1007		Nickel Cad.	6-13/32 x 3-7/32 x 3-1/8			Socket–, +10	3	13.0	1	42.00	50.00	Port. Tools
1015	15	Carb. Zinc	9/16 Diam. x 1-13/32			Flat Contacts–, +1.5		0.6	24	0.155	0.25	Trans. Radio
1035	14	Carb. Zinc	1-1/32 Diam. x 1-15/16			Flat Contacts–, +1.5		1.4	12	0.155	0.25	Port. Radio "A",
◦1050 (Formerly A100)	13	Carb. Zinc	1-11/32 Diam. x 2-13/32			Flat Contacts–, +1.5		3.3	48	0.19	0.30	Trans.
1150		Carb. Zinc	1-11/32 Diam. x 2-13/32			Flat Contacts–, +1.5		3.3	48	–	–	Ind. Flashlight
1461	907	Carb. Zinc	10-7/16 x 2-25/32 x 7-9/32			Plastic Knurls–, +6	9	4	1	3.34	4.98	Ign., Fence Cont.
1462		Carb. Zinc	5-3/8 x 5-3/8 x 7-1/4			Plastic Knurls–, +6	9	7	1	4.01	5.98	Ign., Fence Cont.
1463	922	Carb. Zinc	10-13/32 x 2-25/32 x 7-9/32			Plastic Knurls–, +12	7	8	1	4.01	5.98	Toy Cars
1562	*	Carb. Zinc	7-15/16 x 5 x 7-1/4			Plstic Knurls–, +7.5	11	10	1	4.86	7.25	Ign., Lights
1662	913	Carb. Zinc	7-27/32 x 5-9/32 x 7-9/32			Plastic Knurls–, +9	14	1	1	5.53	8.25	Ign., Lights
2314	2400	Carb. Zinc	1-21/64 x 1-1/32 x 2-7/8			Socket+, –12, –21		3	1	1.92	2.75	
2356N	1612	Carb. Zinc	2-3/16 x 1-5/32 x 6-1/4			Snap Type–, +9	1	1	1	1.36	1.95	Trans. Radio
2506	1601	Carb. Zinc	8 x 2-13/16 x 1-9/16			Socket–, +3, +6, +9	1	8	1	1.92	2.75	
2709N	1613	Carb. Zinc	1-13/32 x 47/64 x 4-11/16			Snap Type–, +9		4.5	1	1.05	1.50	
2713N	1403	Carb. Zinc	1-13/32 x 47/64 x 4-11/16			Snap Type–, +6		4	1	1.05	1.50	
2731N	1303	Carb. Zinc	2-13/16 x 1-3/4 x 8-11/32			Socket–, +4.5	2	11	1	2.45	3.50	Flasher, Misc.
2744N	920	Carb. Zinc	2-21/32 x 2-21/32 x 3-7/8			Socket–, +6	1	14	1	0.79	1.19	Flasher, Misc.
2745N	924	Carb. Zinc	2-21/32 x 2-21/32 x 4-7/16			Coil Springs–, +6	1	14	1	0.79	1.19	Lighting, Misc.
2746N	925	Carb. Zinc	2-21/32 x 2-21/32 x 4-3/8			Plastic Knurls–, +6	1	14	1	0.79	1.19	
2761N	1608	Carb. Zinc	2-9/32 x 1-1/4 x 7-31/32			Socket–, +9	1	9	1	1.93	2.75	Trans. Radio
2762N	1609	Carb. Zinc	2-13/16 x 1-3/4 x 8-11/32			Socket–, +9	2	11	1	2.45	3.50	Trans. Radio
2780N	923	Carb. Zinc	5-11/32 x 2-27/32 x 4-5/32			Socket–, +12	3	8	1	2.37	3.40	Flasher, Misc.
E302157		Mercury	2-1/2 x 1-3/8 x 4-1/4			Socket–, +1.35		13.5	1	12.50	17.75	Rad. Equip.
E302250		Mercury	11/16 Diam. x 1-29/32			Tabs–, +9.45		1	1	2.90	4.10	Rad. Equip.
E302351		Mercury	1-1/16 Diam. x 2-5/8			Flat Contacts–, +5.4		4.5	1	5.60	8.00	Fire Alarm
E302358		Mercury	3/4 Diam. x 2-5/32			Wire Leads–, +10.8		0.87	1	4.10	5.95	
E302362		Mercury	23/32 Diam. x 5/32			Wire Leads–, +16.2		1.13	1	5.60	8.00	Rad. Equip.
E302435		Mercury	11/16 Diam. x 1-1/2			Flat Contacts–, +6.75		0.75	1	3.46	4.95	
E302462		Mercury	2-13/16 x 1-17/32 x 6-3/8			Wire Leads–, +97.2	2	–	1	40.00	56.00	Transmt. "B"
E302465		Mercury	2-3/16 Diam. x 3-3/4			Wire Leads–, +47.25	1	1	1	22.50	32.00	Geophys.
E302478		Mercury	1-9/32 Diam. x 3-5/8			Flat Contacts–, +9.8		9	1	6.90	9.80	Wire Rec.
E302497		Mercury	1-1/16 Diam. x 4-1/8			Screw–, +6.75		6	1	8.05	11.50	Test Equipt.
E302579		Mercury	1-113/32 x 3/4 x 3-3/16			Wire Leads–, +29.7		5	1	12.50	18.00	Test Equipt.
E302580		Mercury	2-23/32 x 2-23/32 x 3-29/32			Socket–, +27	2	6	1	33.60	48.00	
E302642		Mercury	1-9/32 Diam. x 2-5/8			Flat Contacts–, +7		5	1	5.20	7.40	Instr.
E302651		Mercury	1-5/16 Diam. x 2-7/16			Spec. Leads–, +1.35		6.14	1	4.80	6.90	
E302702		Mercury	1-1/8 Diam. x 1-5/8			Wire Leads–, +2.7		2	1	3.80	5.40	Geophys.
E302904		Mercury	1-11/32 Diam. x 2-31/32			Wire Leads–, +5.4		6	1	6.75	9.95	Meter
E302905		Mercury	1-11/32 Diam. x 3-19/32			Wire Leads–, +6.75		9	1	8.05	11.50	Test Equip.
E302907		Mercury	1-5/16 Diam. x 4-7/8			Wire Leads–, +9.45		11.6	1	10.50	15.00	Instr.
E302908		Mercury	1-11/32 Diam. x 5-9/16			Wire Leads–, + 10.8		12	1	11.50	16.50	Rad. Equip.
E303219		Mercury	1/2 Diam. x 1-9/16			Flat Contacts–, +9.8		0.6	1	2.06	2.95	Radio Conv. (FM)
E303314		Mercury	2.850 x 1.284 x 2.774			Recessed Flat Contacts–, +16.8		13	1	12.56	17.95	Comm. Equip.

*NEDA number same as an "Eveready" battery number on a different battery. Omitted to prevent errors in shipping.

□Flashlight types.

♦ This complete line catalog contains the basic data on all "Eveready" batteries in production at the time of preparation. Since the characteristics of individual batteries are sometimes modified, manufacturers who are designing their product to use a particular battery should contact the nearest Union Carbide Consumer Products Division Sales Office for verification of specifications. Manufacturers are urged to to use the Battery Engineering Department's consulting service, (see inside front cover).

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SOLA

A DIVISION OF
BASIC PRODUCTS CORPORATION

B P C



New "static" line-and-load regulator is insensitive to frequency

The Solatron® Line Voltage Regulator

fast . . . effective . . . economical voltage control

The new Solatron regulator operates on a different principle than the popular Sola CV transformer. And — it should not be confused with the Sola CV since the new Solatron offers fast, effective corrective action for voltage fluctuation in **line and load.** It is **not** sensitive to frequency, and is adaptable to both wye and delta 3-phase installations. It is also considerably smaller and lighter than other regulators of equal capacity.

Output is held within ± 1% for input variations of either ± 10% or ± 20%. It is maintenance-free and has no moving parts. Available in the following KVA ratings (1-phase): 1, 2, 3, 5, 7½, 10, 15, 25, 33⅓, 37½. Voltage ratings: 120-240-480; 208Y/120 and 410Y/240 (3-phase installations use 3 units, may be either delta or wye connected).

The new Solatron is available for 50- or 60-cycle operation. Special Solatrons for 400-cycle applications are also available — as are electronic component models.

For more information, write to the Sola Electric Company or ask your distributor for Sola Bulletin VR-200.

1. **No Moving Parts, Maintenance Free.**	
2. **Adjustable Output Voltage:**	Voltage may be adjusted to 10% of rated voltage and retain full regulation at any output setting.
3. **Fast Response:**	90% correction in less than 5 cycles; Complete correction in 10 cycles.
4. **Frequency Insensitive:**	Normal design range for 60-cycle units is 47-70 CPS.
5. **98% Efficiency:**	At rated load and rated output voltage.
6. **Low Harmonic Content:**	No harmful waveform distortion. Units furnishing less than 1% total harmonic content are optional.
7. **Power Factor, Load, or Frequency:**	Can be varied individually or simultaneously without affecting the output voltage level.
8. **Easy to Service:**	Control circuit is on removable end plate, can be serviced or replaced without disturbing power connections.
9. **Ultra Compact:**	Smaller and lighter than other standard regulators. Less than 17 pounds per KVA, less than 6 x 6 x 6 inches per KVA. All power windings on one magnetic core.

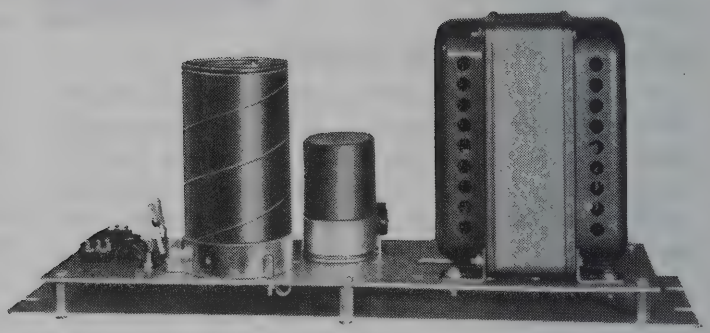
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SOLA
A DIVISION OF
BASIC PRODUCTS CORPORATION

Sola CVDC Power Supplies

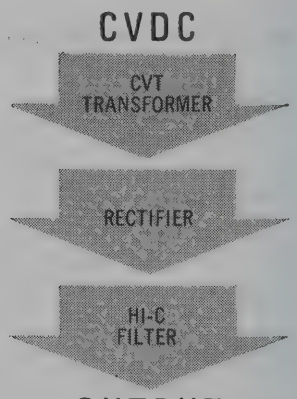
FAST, RELIABLE VOLTAGE REGULATION FROM A LOW-COST SOURCE

CVDC circuitry is so trim and simple that it can offer the utmost in performance and reliability. The constant-voltage transformer (originated by Sola) offers inherent current-limiting action that allows utilization of efficient, economical semiconductor rectifiers with low forward voltage drop. CVDC has these specific advantages:



Constant-voltage Sola transformer provides ±1% regulation for line-voltage variations as great as ±15%, serves as the heart of CVDC power supplies for voltage-sensitive equipment.

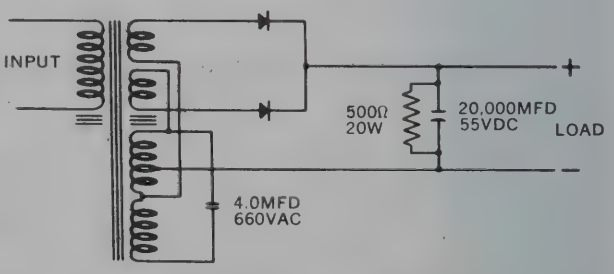
1. Fast, dependable line-voltage regulation: within ± 1% for fluctuations of ± 15%; voltage will return to regulation envelope in approximately 50 milliseconds.
2. Load regulation: from ½% to 8%, one half to full load.
3. Automatic current limiting: short circuit protection; withstands load faults; high overloads cannot damage power supply or equipment components.
4. High efficiency: upwards of 75%; low input-power requirements.
5. Simplified operation: no adjustments or maintenance; continuous duty.
6. Convection cooling.
7. Ripple: 1% rms maximum.
8. Ambient operating temperature: 40° C maximum.



Fixed output for fixed, intermittent, variable, or pulse loads.
All inputs 100-130 volts, 60 cps.

Catalog No.	Volts Out	Amps.	VA	Load Regulation 20%-F.L.	Load Regulation 50%-F.L.	Panel Ht.*	Price
281513-1	6	10	60	9	7	3½	$150.00
281514-1	12	5	60	7	5	3½	115.00
281845	12	15	180	7	5	5¼	195.00
281515-1	18	5	90	5	4	3½	120.00
281024-1	26	4	144	5	4	5¼	145.00
281203	24	15	360	5	4	8¾	250.00
28626	28	8	224	6	4	5¼	180.00
281048	48	4	192	3.5	2.5	5¼	135.00
281561	48	10	480	4	2	5¼	185.00
281125	125	2	250	2.5	1.5	5¼	145.00
281150	150	2	300	2	1.5	5¼	145.00
281200	200	1	200	3	2	5¼	140.00
281250	250	1	250	3	2	5¼	150.00

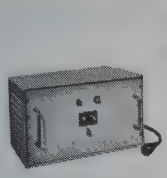
*All supplies furnished with panel for 19" rack mounting.

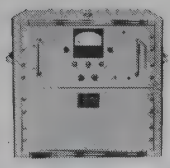


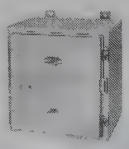
Typical schematic diagram for Sola CVDC power supply.

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STABILINE® Automatic VOLTAGE REGULATORS


TYPE IE5101


TYPE EMT4115B


TYPE EMT10228

Deliver a constant output voltage regardless of variations in input voltage or changes in load current. Types available from 0.25 to 275 kva. Submit specifications for ratings desired but not given in the chart. Input voltage ranges shown are at nominal output voltage; input voltage range shifts with output voltage setting. All are cabinet types; those with other construction are also indicated.

EMT SERIES – Electro Mechanical Transistorized types with virtually zero waveform distortion, 47-63 cycle frequency range, very low internal impedance, negligible phase shift and efficiency approximately 99%. Rated accuracy ±1% for all line voltage or load current variations within unit stated range. Insensitive to load magnitude and power factor; no effect on system power factor. Types EMT4106C and EMT4112B also available in wall (W) mounted types; type EMT4104B in open construction (U) and enclosed, but not in cabinet, (UT) types.

EMS SERIES – Electro Mechanical Transistorized types for heavier load requirements. Same operating characteristics as EMT Series. Units with letter I before first digit in type number have individual control for each line-to-neutral voltage.

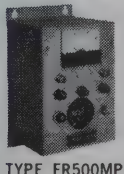
EMK SERIES – Electro Mechanical Transistorized types providing faster correction times than other EM models.

IE SERIES – Instantaneous Electronic types having extremely fast correction, no moving parts. Accuracy within ±0.1% for all input voltage changes and within ±0.15% for all load current changes and for load power factor changes from 0.5 lagging to unity. Complete correction 3-10 cycles on models to 1 kva; 10-20 cycles on 2.5 to 10 kva types; 20-30 cycles on 15 kva models.

IET SERIES – Instantaneous Electronic Transistorized types are similar to IE types but have completely transistorized control circuit. Recovery time 3-10 cycles. Hold output voltage within a 0.5 volt bandwidth for all variations in line voltage, load current and load power factor that might occur at a single frequency.

SPECIAL DUTY TYPES – Standard militarized types: 1 kva Instantaneous Electronic types for either 60 or 400 cycles; Electro Mechanical types with 8 kva rating for 45-66 cycles; with 0.69 kva rating for 380-420 cycles. Standard 400 cycle Instantaneous Electronic types in 1 and 5 kva ratings for 115 volt, 400 cycle single phase duty.

STABILINE® Full Range REGULATOR CONTROLLERS


TYPE FR500MP

Designed for use with any cataloged motor-driven 120, 240 or 480 volt POWERSTAT Variable Transformer to provide regulated a-c voltage, regulated a-c current and regulated d-c voltage adjustable to any value within the full range of the POWERSTAT used.

ELECTRO MECHANICAL TRANSISTORIZED

NOMINAL OUTPUT VOLTAGE	OUTPUT VOLTAGE (ADJUSTABLE)	INPUT VOLTAGE RANGE	MAXIMUM OUTPUT AMPERES	RATED OUTPUT KVA	CORRECTION RATE at 60 CYCLES SECONDS/VOLT	TYPE
50/60 CYCLE, SINGLE PHASE						
115	110 to 120	95 to 135	17.5	2.0	0.075	EMT4102B*#
			52	6.0	0.075	EMT4106C*
		90 to 115	52	6.0	0.12	EMT10228
		105 to 125	104	12.0	0.15	EMT4112B*§
		95 to 135	130	15.0	0.125	EMT4115B
120	110 to 120	108 to 137	35	4.2	0.10	EMT4104B‡
230	220 to 240	195 to 255	32.5	7.5	0.083	EMT4207B†
			87	20.0	0.083	EMT4220†
		205 to 250	120	27.5	0.111	EMT4228C†
240	220 to 240	228 to 256	35	8.4	0.10	EMT4104B‡
460	440 to 480	400 to 520	15	6.6	0.041	EMT4407B
			40	17.6	0.041	EMT4418B
50/60 CYCLE, THREE PHASE						
230	220 to 240	195 to 255	25	10.0	0.083	EMT6210YB†
			38	15.0	0.083	EMT6215YB†
			50	20.0	0.083	EMT6220YB†
			113	45.0	0.25	EMT6245YB†
			175	70.0	0.25	EMT6270DB†
460	440 to 480	400 to 520	16	12.5	0.041	EMT6412YB
			22	17.5	0.041	EMT6417YB
			33	25.0	0.041	EMT6425YB
			66	50.0	0.125	EMT6450YB
			100	75.0	0.125	EMT6475YB
		420 to 500	131	100	0.188	EMT64100YB
60 CYCLE, SINGLE PHASE, 2 WIRE (SINGLE CONTROL)						
115	110 to 120	103.5 to 126.5	833	100	0.65	EMS41100‡
230	220 to 240	218.5 to 241.5	435	100	0.22	EMS42100†‡
50/60 CYCLE, SINGLE PHASE, 3 WIRE (INDIVIDUAL LINE CONTROL)						
240/120	230 to 250	204 to 276	104	25.0	0.03	EMSI4225
	230 to 250	204 to 276	250	60.0	0.03	EMSI4260
240/120	220 to 240	228 to 252	417	100	0.10	EMSI42100‡
50/60 CYCLE, THREE PHASE (SINGLE CONTROL)						
230	220 to 240	203 to 257	339	135	0.28	EMS62135Y†
460	440 to 480	445 to 495	230	180	0.30	EMS64180Y
			347	275	0.30	EMS64275Y
50/60 CYCLE, THREE PHASE (INDIVIDUAL LINE CONTROL)						
208/120	191 to 217	177 to 239	250	90	0.08	EMSI6290Y
208/120	191 to 217	165 to 233	525	190	0.22	EMSI62190Y‡
50/60 CYCLE, SINGLE PHASE						
115	110 to 120	95 to 135	21.5	2.5	0.02	EMK4105
	110 to 120	105 to 125	43	5.0	0.04	

INSTANTANEOUS ELECTRONIC

NOMINAL OUTPUT VOLTAGE	OUTPUT VOLTAGE (ADJUSTABLE)	INPUT VOLTAGE RANGE	MAXIMUM OUTPUT AMPERES	RATED OUTPUT KVA	TYPE
60 ±10% CYCLE, SINGLE PHASE					
115	110 to 120	95 to 135	2.2	0.25	IE51002*
			4.5	0.5	IE51005*
			8.5	1.0	IE5101*
			22	2.5	IE5102*
			43.5	5.0	IE5105*
			87	10.0	IE5110
			130	15.0	IE5115
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*For rack model add suffix R to type number. †Can also be connected for nominal 208 volt operation.
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§Can also be operated with 95 to 135 volt input; 52 amp., 6 kva output.
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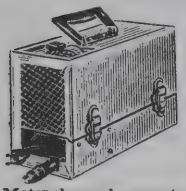
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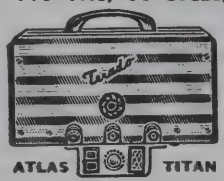
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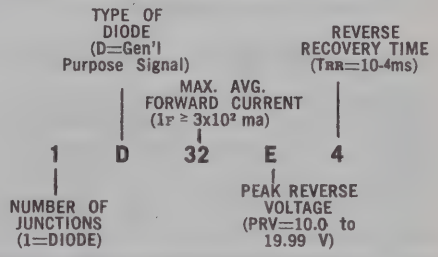
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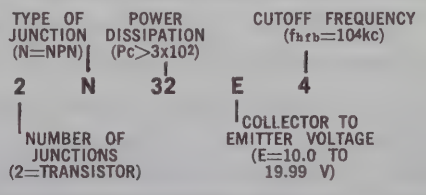
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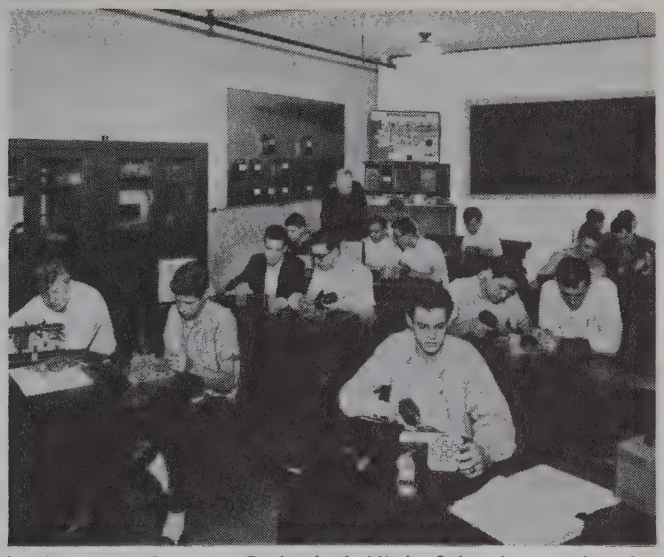
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Students at Detroit Cathedral High School are deeply absorbed in constructing a radio receiver kit.

Packaged Electronics Course Sparks Technical Education

By Brother Patrick Couture, F.I.C.
Detroit Cathedral High School, Detroit, Mich.

● THE LACK OF DIRECTION of many noncollege-bound high school students is becoming increasingly serious as the opportunities for unskilled labor diminish rapidly in today's employment market. There exists, on the other hand, an ever growing shortage of trained workers in the technical fields, which could well be filled by these very students. This situation provides the high school with the opportunity to motivate and channel the interests of those students who do not intend to continue with formal education in a direction profitable to them and to society.

Up to the 1964 school year, Detroit Cathedral High School offered only one course falling into the technical category: Drafting 1 and 2. Recognizing the nonacademic student's problems, the Brothers of Christian Instruction, who conduct the school, made a decision during the spring of 1963 to take immediate action to stem the tide of disinterest. Because of the personal interest of this instructor and others on the faculty in the field of electronics, an intensive effort was undertaken to try to offer a basic course in this subject in the very near future. Of all technical subjects, electronics seemed to be the most appropriate because of the increasing opportunities in industry for those trained in the subject. It was expected that the important role of electronic equipment — the importance of television, hi-fi, and radio — in everyday life and industry would wield a strong influence in student motivation.

Course Instituted Without Delay

The problem of how to go about setting up a course in basic electronics then became the paramount consideration. Unfortunately, there was no possibility of hiring a specialized teacher in the field, who could prepare his own course. The solution was found at a resident electronic school with headquarters in Detroit. The school, R.E.T.S. Electronic Schools, founded in 1935, is the world's largest system of resident electronic schools. R.E.T.S. and Simpson Electric Company, a major manufacturer of high-quality electrical measuring instruments and test equipment used in the radio service field, had just developed a packaged basic electronics course for high schools. The course material, based on the instruction technique found successful for years at the resident school, was so arranged as to be completed in a school year, without requiring the services of a specialized electronics teacher. One ideal aspect was the nature of the course content and goals, which met the needs and interests not only of the technical, but also of the academic, student.

Free instruction at the R.E.T.S. resident school with the same Simpson equipment for those who will teach the course provided adequate background in the subject to allow this instructor to institute electronics training in the high school during the fall of 1963. One Simpson/R.E.T.S. package consisting of student and instructor manuals, test equipment including meters and oscilloscopes, electronic "breadboards" for experimentation with circuits, components for a working radio, and slides and tape-recorded lectures allowed 30 students to participate in the course.

Benefits to Students

Detroit Cathedral has homogeneous class groupings, and the course was offered as an elective to average or better-than-average seniors. The results were rewarding. Of the boys who took the course in 1963–64, 10 are entering college, 10 are going on to various electronic schools, while the other 10 seemed to show no specific interest in further education. Of those contemplating technical training, it may be expected that some will eventually go on to college. The course seemed to exert a beneficial influence on several students with problems, and in three specific cases, chronic underachievers seemed to "find themselves" suddenly, and they decided on electronics as their field of interest. The college-bound students also benefited greatly from the training, which they expect to find valuable in their college work. The high school offers a full credit to those completing the course.

Inquiry by various members of the faculty throughout the school year engendered continuing interest in the

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course among the student body. As a result, another Simpson/R.E.T.S. package is now being obtained to extend the training to another 30 students. The use of the two courses will provide training for half the senior class. This expansion will make it possible to include those students who have even more to gain than the original group. Nevertheless, the number of applicants is expected to exceed the course capacity this fall.

The electronics course is being taught in the physics laboratory. Period time for both theory and laboratory work is set at one hour a day, five days per week. The course follows the same instruction scheme used at the R.E.T.S. resident schools, and the instructor's guide insures a close relationship between subjects by proper programing and detailing the teaching approach for theory lectures, mathematical applications, and laboratory experiments. As an aid to the instructor, examination answers are listed with the guide that details each lesson.

Students Function as Electronic Technicians

One of the most valuable features of the course is the opportunity for the students actually to "taste" the duties of an electronic technician or engineer. This closeness to the actual work serves as a valid basis for a decision on further training in the electronics field. The student works with actual professional test equipment to check out circuits he set up himself, and he is thus able to relate electronic theory to his own experience.

Both the instructor and the students have been pleased to learn that mathematics for electronics need not be a barrier or mental block for high school students. Relating mathematics in a step-by-step manner to theory reinforces the teaching of each. The basics of arithmetic and algebra, still fresh in the student's mind, are easily adapted to their electronic studies. Complex derivations, however, are avoided in the course.

Among the electronic subjects successfully learned by students are Ohm's Law for d.c. and a.c. circuits, power formulas, Kirchoff's Laws, reactance and impedance for reactive circuits, and formulas governing the electrical and physical size of components. Trigonometry is applied in the study of reactive-type circuits, but it is limited to right-angle functions of sine, cosine, and tangent.

Radio Construction Project Fosters Practical Knowledge

An interesting aspect of the course to the students is the construction of an a.c.-d.c. superheterodyne receiver, for which all the components are contained in the course package. The entire circuitry in the set is shown on a working dynamic demonstrator board, which is, in effect, the same radio spread out on a board. It was with a great deal of pride that the students brought these completed radios home to demonstrate their abilities in the field. Tangible factors such as this construction project, "seeing" circuits in operation and predicting their behavior, and using high-quality professional test equipment throughout the course, have been greatly responsible for its success.

(Reprinted from the "Catholic School Journal," November, 1964)

LIST OF SCHOOLS HAVING SIMPSON/RETS EDUCATIONAL PROGRAM

Notre Dame High School for Boys
Niles, Illinois

Troy High School
Troy, Michigan

Memorial School
Wyandotte, Michigan

Willingham High School
Macon, Georgia

Upper River Road Boys High
Macon, Georgia

Washington High School
Massilon, Ohio

Escondido Union High School
Escondido, California

State Vocation Technical School
Huntsville, Alabama

Beecher High School
Flint, Michigan

Sheffield Board of Education
Sheffield, Alabama

Madison Heights High School
Madison Heights, Michigan

Cumberland High School
Manville, Rhode Island

Negaunee Public Schools
Negaunee, Michigan

Reno High School
Reno, Nevada

New Haven Schools
New Haven, Indiana

Valdosta Public Schools
Valdosta, Georgia

Lake-Fenton Community School
Fenton, Michigan

Lake View High School
Battle Creek, Michigan

Jefferson High School
Denver, Colorado

Jackson Wilson High School
Jackson, Wyoming

Nashwauk Senior High School
Nashwauk, Minnesota

Warren Woods High School
Warren, Michigan

Augusta College
Augusta, Georgia

Wilbur Cross High School
New Haven, Connecticut

The New South Central High School
Union Mills, Indiana

Somerville High School
Somerville, Massachusetts

Downers Grove High School
Downers Grove, Illinois

Mapleton High School
Denver, Colorado

North Arlington High School
Arlington, New Jersey

Board of Education
Watertown High School
Watertown, New York

Independent School District
White Bear Lake, Minnesota

McClatchy High School
Sacramento, California

Sky View High School
Smithfield, Utah

James Weldon Johnson High School
Yorktown, Virginia

Barron Senior High School
Barron, Wisconsin

Waycross Vocational School
Waycross, Georgia

Independent School, District #696
Ely, Minnesota

South Eugene High School
Eugene, Oregon

South Moreland Senior High School
Alverton, Pennsylvania

Roy High School
Roy, Utah
Pennfield Schools
Battle Creek, Michigan

Simpson ELECTRIC COMPANY | r·e·t·s ELECTRONIC SCHOOLS



A LOW BUDGET ELECTRONIC COURSE FOR HIGH SCHOOL INSTRUCTION

MADE AVAILABLE THROUGH THE COMBINED EFFORTS OF TWO LEADERS IN THE ELECTRONICS FIELD



Photo courtesy of Chicago suburban school

QUALIFIES FOR TITLE 3 AND TITLE 8 NEDA PROGRAM IN MOST STATES

Worked Out in Every Detail—There are no loose ends . . . nothing else to buy. All lesson and lab materials are complete, basic, electronics texts. All instruments, components, tools, and teaching aids are supplied as part of the SIMPSON-R.E.T.S. "package course."

Simplified and Spelled Out for the Instructor—The course includes lesson-by-lesson orientation in the form of teaching manual, color slides, audio tape, and personal help from the nearest of 23 R.E.T.S. schools located across the country. Instructors find that it is easy to teach electronics with the SIMPSON-R.E.T.S. program.

Based on 30 Years of Teaching Electronics—The nationally known "Radio-Electronics-Television Schools" developed the course in collaboration with Simpson Electric Company, world's largest manufacturer of electronic test equipment. Lessons carry students from the ABC's of electricity to transistor theory and include all of the necessary "building blocks" in between! Lessons are first studied by the students, demonstrated and explained by the instructor. Then students apply the theory in laboratory projects.

Replace Only Lessons and Manuals Each Year—Everything else is reusable. Test equipment lasts for years. *Write today for all the details on this complete course in electronics education.*

SIM 3

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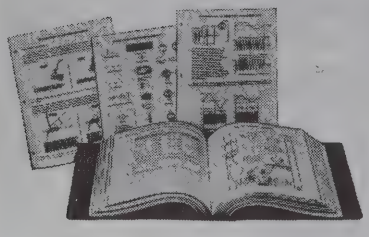
Simpson ELECTRIC COMPANY | r·e·t·s ELECTRONIC SCHOOLS

STUDENT ELECTRONIC COURSE INSTRUCTION BOOKLETS ARE SUPPLIED ON THE FOLLOWING SUBJECTS:

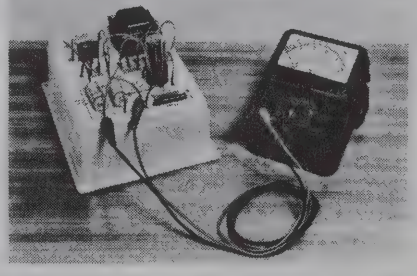
- Introduction to Modern Electronics
- Simple Characteristics of Electricity—I
- Measuring Equipment—I
- Simple Characteristics of Electricity—II
- Characteristics of Resistance
- Electronic Tubes
- Capacitance
- Inductance
- Rectifiers
- Power Supplies
- Power Supplies for Electronic Equipment
- Waves
- Electromagnetic Waves and the Broadcast System
- Triodes, Tetrodes and Pentodes
- Resistance, Capacitance and Inductance in Alternating Current Circuits
- Voltage and Power Amplifiers
- Simple Characteristics of Reactive Circuits
- Detectors
- Coupling of Circuits
- Test and Measuring Equipment—II
- Resistance and Current Measurements
- Oscillators and Oscillator Circuits
- Mixer Operation and Input Circuits
- Signal Tracing and Electronic Servicing
- Transistor Theory
- Servicing Transformers and General Trouble Shooting Methods
- Introduction to Frequency Modulation (FM)
- Frequency Modulation—II
- Amplifier Circuits

In conjunction with the theoretical portion of the training program the student has practical laboratory work covering the related subjects.

The student also receives instruction and practice in instrumentation, using a volt-ohm-meter, signal generator, and oscilloscope.



Lab sessions are fully described in the lesson booklets and provide a step-by-step procedure that theorizes circuit operation, constructs, and aligns the finished receiver.



Resistors, Transformers, Tubes, Condensers and Transistors are the basic components of electronic circuits and are studied along with AC power supply projects.



Transistor projects are dynamic measures for studying and understanding semiconductor (Transistor) theory and operation.



The instructor's demonstration unit shown holds all the elements that are explained in the brochure, and provides a convenient and orderly display of all equipment plus multiple electrical outlets.

Listed below is the Test Equipment and Course Material to teach the RETS Basic Electronics Course to a class of 25* Students.

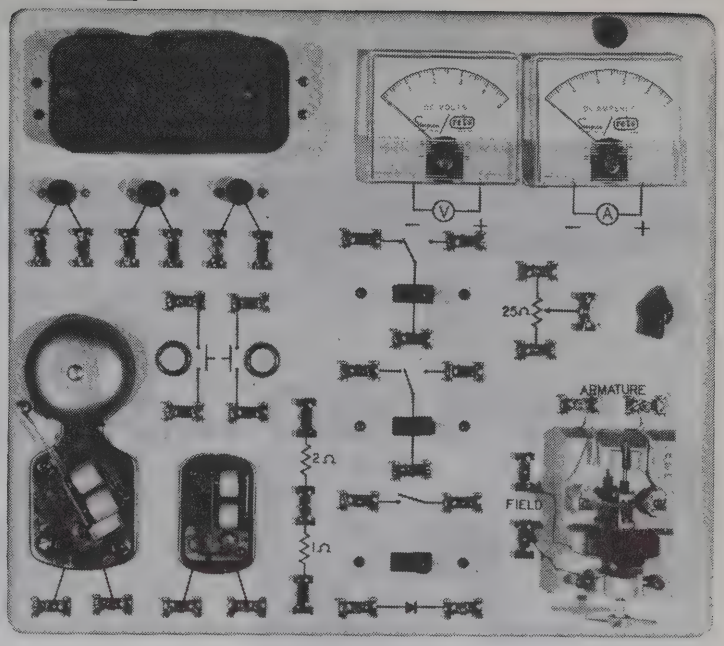
TEST EQUIPMENT & COURSE MATERIAL	PACKAGES	
	INSTRUCTOR	STUDENT
Demonstration Console	1	None
Simpson 260 Volt-Ohm-Milliammeter	1	13
Simpson 466 Oscilloscope	1	5
Simpson 317 Signal Generator	1	5
Dynamic Demonstrator	1	None
Power Supply Quick Connect Board	1	13
Transistor Quick Connect Board	1	13
Soldering Gun & Set of Hand Tools	1	15
Radio Kit	1	13
Instructor's Guides, Tapes (3.75 speed) & Slides	1	None
Lessons & Lab Manuals	1	25
Cost	$1238.00	$4757.00
Total		$5995.00

*Alternate size packages for classes under 25 can be had in units of 5 and up.

Additional classes of up to twenty-five students each can be taught by purchasing one radio kit for every two students and one lesson and lab manual for each student.

SIM 4

elementary ELECTRICITY



PURPOSE and SCOPE

The basic training for electricity and electronics is nearly identical. The student must learn the meaning of voltage, current, resistance and power and the relationship of each to the other. He must learn about series circuits, parallel circuits and various combinations of series and parallel circuits.

The student studies the various parts such as resistors, capacitors, coils, transformers, relays, switches, etc; the symbols that represent these parts, and how to understand electrical and schematic diagrams.

Lesson material is furnished to the student to study these subjects.

The instructor lectures on and demonstrates the subjects.

The student applies this knowledge in the shop projects, which gives him the experience necessary to use and retain what he has learned.

The purpose of this training program is to give the student sufficient exposure to this subject to evaluate his adaptability and to motivate his interest to the extent that he may wish to continue his education in this field.

ESPECIALLY PLANNED FOR SEVENTH-EIGHTH GRADES OR JUNIOR HIGH SCHOOLS

ELEMENTARY ELECTRICITY COURSE		
LESSON NO.	**ESTIMATED HOURS**	**LESSON TITLE**
1	2 3	Introduction to Electricity Quiz Lab sheet
2	2 3	Units and Symbols Quiz Lab sheet
3	2 3	Electrical Laws Quiz Lab sheet
4	2 3	Electrical Circuits Quiz Lab sheet
5	2 3	Magnetism and Electromagnetism Quiz Lab sheet
6	2 3	Generators Quiz Lab sheet
7	1 4	Motors Quiz Lab sheet
8	3 2	Signaling Circuits Quiz Lab sheet
9	3 2	Applied Electricity Quiz Lab sheet
10	5	No lesson issued—this time to be used for review and examinations.
TOTAL TIME — 50 hours. NOTE: Time spent giving answers to the quizzes is included in lecture time allotted to each lesson title.		

Simpson
ELECTRIC COMPANY

The Simpson Electric Company, with headquarters located in Chicago, Illinois, is a manufacturer of electrical indicating instruments and electrical and electronic test equipment. They have been identified with electrical indicating instruments for 60 years and with test equipment for 30 of these years. They are a division of American Gage and Machine Company.

r·e·t·s
ELECTRONIC SCHOOLS

R.E.T.S. ELECTRONIC SCHOOLS—the world's largest Resident Electronic Training Organization, has been educating specialists for industry since 1935. Many schools have requested that we develop a training program in elementary electricity.

SIM 5

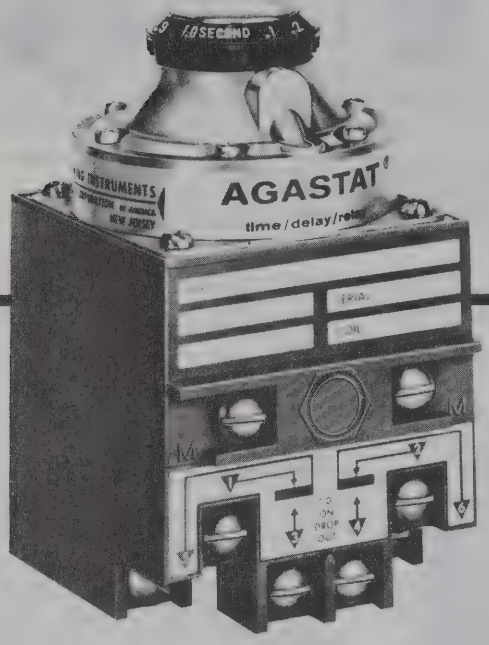
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AGASTAT TIMING INSTRUMENTS

ELASTIC STOP NUT CORPORATION OF AMERICA
ELIZABETH DIVISION • ELIZABETH, NEW JERSEY

PNEUMATIC ■ ELECTRONIC ■ PROGRAMMERS

NEW 2400 series electropneumatic time/delay/relay





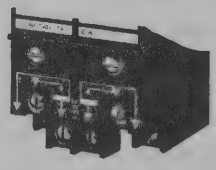
time-calibrated adjustment dials

nine linear adjustment ranges provide delays from milliseconds to 60 minutes



new panelmount style

modern dial plate and knob, with mechanism protected behind the panel



front terminals

out-front accessibility with permanent identification, for easy wiring

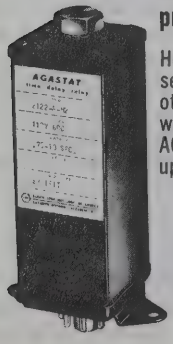


auxiliary switch options

easily-added auxiliary switches handle extra circuits or provide two-step timing

The all-new 2400 SERIES AGASTAT time/delay/relay opens new areas of application potential for pneumatic timers. Advanced design combining time-tested principles with modern materials obsoletes any reservation circuit designers may have had about earlier pneumatics units.

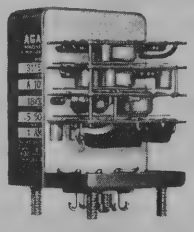
Today, AGASTAT relays provide the reliability and versatility matched only by the most sophisticated electronic components, with a bonus of economy and ruggedness which put them in a class by themselves. Request Bulletin SR-2 for complete specifications.



miniature pneumatic t/d/r

Hermetically sealed or unsealed units for MIL-spec or other demanding applications where space is limited. AC or DC operation, timing up to 3 minutes.

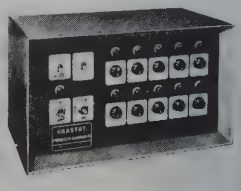
electronic t/d/r



New Magnetic Core-Counter Models as well as the conventional R-C Units in a wide range of operating types, time ranges, and output options.

solid state programmer

A new combination of solid state timing accuracy and electromechanical switching, offering unmatched versatility in low cost programming.

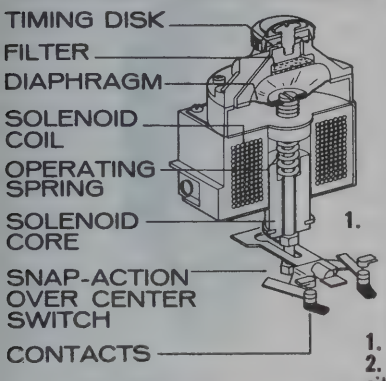


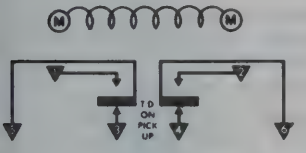
industrial AGASTAT® time/delay/relay

HOW A MODERN PNEUMATIC TIMER WORKS

AGASTAT time/delay/relays are electrically actuated, but **pneumatically** timed . . . they recirculate their own filtered air supply . . . this means long timing ranges, easy adjustment, instant recycling . . . no need for stable voltage supply for accurate timing . . . less temperature sensitivity. Here are the operating principles of the two basic types:

TYPE 1—DELAY ON PULL-IN — 2412 SERIES provides delayed switch transfer on energization, with instant reset on deenergization.

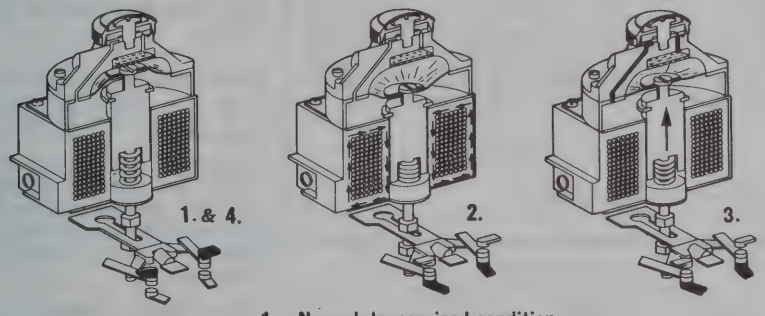


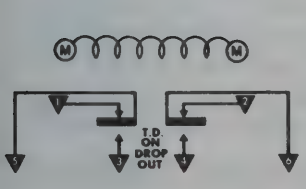


Contact and terminal arrangement of 2412 Series. All 2400 Series switches are DPDT.

1. Normal deenergized condition.
2. Coil is energized, drawing solenoid core to upper position and compressing operating spring. Spring pressure on diaphragm forces air through filter and into circular groove of timing disk. Setting of calibrated dial controls effective length of groove, which determines time required to exhaust air from timing chamber, and therefore, the length of the delay period.
3. At the end of delay period snap-action switch is forced over center, "breaking" NC contacts and "making" NO contacts. Switch remains in this transferred position as long as coil is energized. When coil is deenergized (at any time during or after the timing cycle), the one-way valve allows the unit to recycle instantly to its original condition, Fig. 1.

TYPE 2—DELAY ON DROP-OUT — 2422 SERIES provides instant switch transfer on energization, with delayed reset on deenergization.





Contact and terminal arrangement of 2422 Series.

1. Normal deenergized condition.
2. Coil is energized, drawing solenoid core instantly to lower position, as one-way diaphragm valve allows timing chamber to fill with air. Operating spring is simultaneously compressed, and forces snap-action switch over center, "breaking" NC contacts and "making" NO contacts. Switch remains in this transferred position as long as coil is energized.
3. When coil is deenergized, spring pressure on diaphragm forces air through filter and into circular groove of timing disk. Setting of calibrated dial controls effective length of groove, which determines time required to exhaust air from timing chamber, and therefore, the length of the delay period. No power is required during the timing period.
4. At the end of delay period switch resets to its original position. When coil is reenergized (at any time during or after timing cycle), the unit recycles instantly to the beginning of a new timing cycle, Fig. 2.

These diagrams have been simplified to illustrate relationship of basic components. Parts shown are not representative of actual production models.

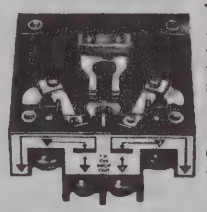
design features

Other manufacturers assemble time delay relays using switches; solenoid coils or other parts originally designed for non-timing applications. Extensive research through the years has proven, however, that the proper balance of electrical, mechanical, and pneumatic forces required to produce a reliable timing instrument cannot be achieved in this manner. This is why every component of the AGASTAT time/delay/relay has been expressly designed for its specific part in the overall timing function. These are the main components of the 2400 Series relays:



Calibrated timing head — uses no needle valve, recirculates air under controlled pressure through a variable orifice to provide linearly adjustable timing. Patented design provides instant recycling, smooth adjustment and long service life under severe operating conditions.

Precision-wound potted coil module supplies the initial motive force with minimum current drain. Total sealing without external leads eliminates moisture problems, gives maximum insulation value.



New snap-action switch assembly — custom-designed over-center mechanism provides greater contact pressure up to transfer time for positive, no-flutter action. All switches are DPDT arrangement, with flexible beryllium copper blades and gold bonded silver-cadmium oxide contacts. Special "timing-duty" design assures positive wiping action, sustained contact pressure, and greater heat dissipation over long delay periods.

Each of these main assemblies forms a self-contained module which may be selectively assembled with the other two to afford a wide choice of operating types, coil voltages, and timing ranges. The coil and switch housing are molded in highly stable glass-and-nylon-filled alkyd enclosures. This material is a special non-gassing formulation with high arc resistance. It provides an attractive, weather-tight housing in a new shape designed to complement the most modern panel or equipment.

The squared design with front terminals and rear mounting permits the grouping of 2400 Series units side-by-side in the minimum panel space. Auxiliary switches may be added in the base of the unit, without affecting the overall width or depth.

timing adjustment

The 2400 Series AGASTAT is the first pneumatic timer to offer the ease of adjustment and resetting of a time-calibrated dial head. Nine ranges are available, covering a total span from .1 second to 60 minutes. (See table) Each has its own time-calibrated, clearly identified dial.

Timing is set by simply turning the dial (in either direction) to the desired time value. The standard head has no stops —it can safely be turned past the 360° point, although a "dead zone" of approximately 60° separates the high and low ends of the range. Setting the unit in this area will result in infinite time delay.

mounting/terminals

Normal mounting of the basic unit is in a vertical position, from the back of the panel. Four tapped holes are provided in the back plate of the unit, making it interchangeable with earlier AGASTAT industrial models. A front mounting bracket is also supplied with each unit, for installation from the front of the panel.

A new horizontal panelmount model is also available, offering the convenience of "out-front" adjustment, with large calibrated faceplates and modern dial skirt knobs. The plate and knob blend with advanced equipment and console designs, while the body of the unit and its wiring are protected inside the cabinet. Faceplates are time calibrated in all standard ranges.

Other mounting options include plug-in and special configurations to meet unusual installation requirements. Your inquiries are invited.

Standard screw terminals are located on the front of the unit, with permanent schematic markings. Barrier isolation is designed to accommodate spade or ring tongue terminals, with spacing to meet all industrial control specifications.

AGA 2

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coil data

Rated Voltage	Operating Voltage Range	Rated Voltage	Operating Voltage Range
AC (60 cps)		DC	
120	102 - 132	28	22.5 - 33.5
240	204 - 264	48	38.5 - 57.5
480	408 - 528	24	19.2 - 28.8
550	468 - 605	120	96 - 144
24	20.5 - 26.5	12	9.6 - 14.4
		60	48 - 74
		250	200 - 300
		550	440 - 660
12	10.2 - 13.2	32	25.6 - 38.4
6	5.1 - 6.6	96	76.8 - 115
208	178 - 229	6	4.8 - 7.2

Consult factory for information on other voltages and frequencies.

repeat accuracy

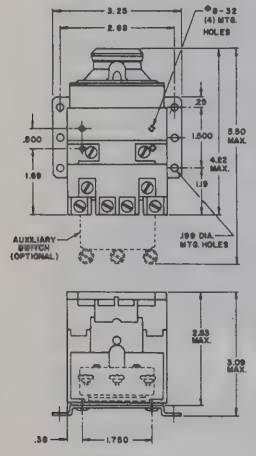
For units set at 200 sec. or under—better than ± 5% of preset adjustment. For longer time settings—better than ±10% of preset adjustment. In 20, 30, and 60 minute Type 1 units the first delay will be approximately 20% longer than subsequent delay periods after coil warm up.

ambient temperature range

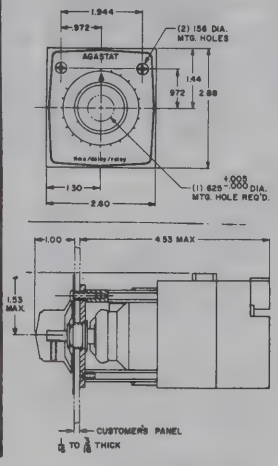
Rated performance over an ambient range of —67°F to 165°F. Temperature effect on preset delays will be less than ± 10% between 0°F and 165°F.

dimensions

basic unit



panelmount style



linear timing ranges

A	.1 to 1 sec.	E	10 to 200 sec.
B	.2 to 5 sec.	F	.5 to 10 min.
C	.8 to 15 sec.	G	1 to 20 min.
D	2.5 to 50 sec.	H	1 to 30 min.
		I	2 to 60 min.

All dial head units are furnished with dials calibrated in linear increments covering the range selected. In addition, ranges C through I provide non-linear adjustment from .2 seconds to the beginning of the linear zone. For easiest adjustment and lowest cost, the shortest time range suitable for the application should be selected.
One needle valve adjustment model is also available, for applications where cost is a prime consideration and frequent redjustment is not required.

N	.2 to 300 sec.

contact ratings

Contact Voltage	Contact Capacity in Amperes (Resistive Loads) Min. 100,000 Operations*	Min. 1,000,000 Operations*
30 vdc	15.0	7.0
110 vdc	1.0	0.5
120 v 60 cps	20.0	10.0
240 v 60 cps	15.0	7.0
480 v 60 cps	2.5	1.0

* Continuing life test programs indicate that maximum operations under these loads will average over three times these minimums.

life expectancy

Accelerated life testing under 8 watts inductive load at short delay settings indicates life expectancies in excess of 1 million operations for AC units, 20 million operations for DC units.

auxiliary switch options

To increase the versatility of the basic AGASTAT models, auxiliary switches may be added to either delay-on-energizing or deenergizing types. They switch additional circuits, provide two-step timing action, or furnish electrical interlock for sustained coil energization from a momentary impulse, depending on the type selected and its adjustment. Because of their simple attachment and adjustment features, they can be installed at the factory or in the field.

All values are at nominal operating voltage and 25°C unless otherwise noted.

model number code

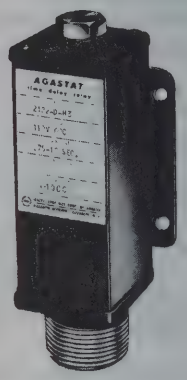
First Two Numbers	Third Number	Fourth Number	First Letter	Second Letter	Third Letter	Fourth Letter
(24)	(1)	(2)	(A.)	(D)	(T)	(G)
2400 Series AGASTAT	Operation 1—Delay on Pull-in 2—Delay on Drop-Out	Contact Arrangement 2—Double Pole, Double Throw	Coil Voltage *A 120 V 60cps *B 240 V 60cps C 480 V 60cps D 550 V 60cps E 24 V 60cps H 12 V 60cps I 6 V 60cps J 208 V 60cps M 28 VDC N 48 VDC O 24 VDC P 120 VDC Q 12 VDC R 60 VDC S 250 VDC T 550 VDC V 32 VDC W 96 VDC Y 6 VDC	Time Range A .1 to 1 Sec. *B .2 to 5 Sec. C .8 to 15 Sec. *D 2.5 to 50 Sec. E 10 to 200 Sec. *F .5 to 10 Min. G 1 to 20 Min. H 1 to 30 Min. I 2 to 60 min. Needle Valve Models *N .2 to 300 Sec.	Aux. Switch Options L or T	Special Enclosures or Mounting GZ —Total Enc., w/Bottom Connection. B —Plug-In Connectors C —Plug-In Receptacle (Screw Term.) D —Plug-In Receptacle (Faston Term.) W —Watertight Enc., (NEMA-4) Y —Horizontal Panelmount

* Normally available from stock.
| = Revised since last printing

miniature, pneumatic

AGASTAT®

time/delay/relay



- lightweight, rugged
- adjustable timing to three minutes
- instantaneous recycling
- unaffected by normal temperature or voltage variations
- hermetically sealed or unsealed models

The miniature AGASTAT time/delay/relay offers all the features of the standard size unit in a rugged package designed to meet the stringent requirements of missile, aircraft, and ground support applications. Provides time delay on energization or deenergization, with actuating coils in a wide range of voltages for AC or DC circuits.

linear timing ranges (seconds)

.03 to .1	.375 to 3.0	2.0 to 60.0
.1 to .3	.750 to 10.0	5.0 to 120.0
.15 to 1.0	1.0 to 30.0	5.0 to 180.0

Adjustment is linear over these ranges. All units also provide lower non-linear settings. Individual units may have maximum delays up to double those listed, maintaining linear adjustment.

contact capacity, amperes

	30 v DC	110 v DC	120 v 400 cps	120 v 60 cps	240 v 60 cps
Ind.	2	.75	2	3	1.5
Res.	10	1	10	10	5

Inductive and capacitive loads should not have inrush currents that exceed 5 times normal operating load.

terminals . . . solder lug, octal plug, "AN" connector, or to your specific requirements.

vibration and shock . . . exceeds MIL-E-5272

acceleration . . . withstands 10g's under operating conditions (position sensitive)

weight . . . approximately 15 ozs.

Request Bulletin SM-2

AGA 3

THERMOSTATIC **AMPERITE** DELAY RELAYS

GLASS ENCLOSED • HERMETICALLY SEALED • A.C., D.C., OR PULSATING CURRENT



STANDARD

AMPERITE THERMOSTATIC DELAY RELAYS

Amperite Themostatic Delay Relays are manufactured on automatic high production equipment—resulting in a low price—and top quality. Quality is not sacrificed at any point. For example, although contacts are rated at 3 amps, 10 amp contacts are actually used. Similarly with all other parts—only the best available are used.

Amperite Thermostatic Delay Relays are actuated by a heater...can therefore be used on A.C., D.C., or pulsating current. Being hermetically sealed, Amperite Relays are not affected by altitude, moisture, or other atmospheric conditions. REPLACED AS EASILY AS A RADIO TUBE.

CIRCUITS SPST: Available only—normally open or normally closed. **HEATER VOLTAGES AVAILABLE:** 2.5, 5.0, 6.3, 12.6, 26, 50, 115V. For 220V use a 6500 ohm-5 watt resistor in series with 115V heater. **HEATER WATTAGE:** Standard and Miniature Relays—all voltages—2w prox. All heaters may be operated continuously. Heaters will not be damaged by a 50% voltage overload for duration of 1 hour or less.



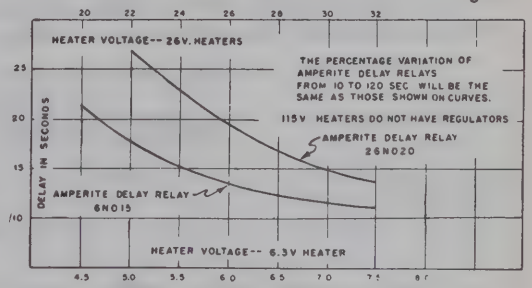
MINIATURE

VARIATION OF DELAY WITH HEATER VOLTAGE

FIG. 1—Effect of change in heater voltage on delay in seconds. Only low voltage heaters (2.5 to 26 V.) incorporate heater voltage regulations as shown in diagram.

For 22 to 30 V. supply: We recommend Amperite Delay Relays with 26 V. heaters for airplanes and similar power supplies. These heaters are regulated for battery variation of 22 to 30 V. as shown in this diagram.

Figure 1



CONTACT RATING

	Delay	Contact Rating Non-Inductive	DC Voltage Breakdown Contact-to-Contact	Heater-to-Contact
STANDARD	2 to 10 Sec.	115V — 3a AC	250V	500V
RELAYS	15 to 180 Sec.	115V — 3a AC	800V	800V
		220V — 1a AC	800V	800V
MINIATURE	2 to 10 Sec.	115V — 2a AC	250V	500V
RELAYS	15 to 180 Sec.	115V — 2a AC	800V	800V
		220V — 1a AC	800V	800V
FLASHERS		—½a AC	250V	500V

AMBIENT TEMPERATURES: Relays are compensated for temperatures of — 55° to + 80°C. (Relays can be operated from — 80°C to + 125°C without damage). Ambient temperature tolerances depend on type. Low voltage heaters 26V or less have better ambient compensation than relays with 115V heaters. If the relays are actually to be used over ambients of — 55°C to + 80°C it is advisable to have each relay tested at the factory over the ambient. A nominal charge is made for this service.

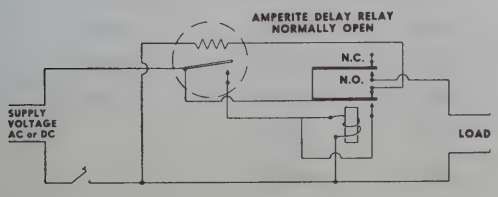
DELAYS AVAILABLE: From 2 to 180 seconds. Relays can be used in series to obtain longer delays. The delay of any individual relay can be increased up to 50% by using a resistor in series with the heater. Relays with short delays such as 2 to 5 seconds can be increased 100%.

CONTACT DROP: —0.1V — Prox. at 1A.

LIFE of any individual relay will depend on the service the contacts are subjected to. With a 115V. — 2A A.C. non inductive load the contacts will withstand at least 250,000 operations. SHELF LIFE of Amperite Delay Relays is over 10 years.

INDUCTIVE A.C. LOADS: When breaking an inductive A.C. load, use a condenser of .01 to .1 mfd across contacts. In some cases, putting a 20,000 ohm, 5w. resistor across the contacts reduces the arcing considerably.

Relay Contacts should not be used on voltages above 220V.



INSTANTANEOUS RECYCLE: This can be obtained by using a normally open Amperite Delay Relay in conjunction with a DPDT Magnetic Relay as shown at left. If normally closed is required — use a **normally open** Amperite Delay Relay — and use the NC contacts on the magnetic relay. Choose the Amperite Delay Relay for the voltage required and the delay required (e.g. — 115N030 — would be used on 115 volt supply — for a 30 second delay).

LONG RECYCLE RELAYS: are also available. For example, Amperite Delay Relay 115N07T has a delay in closing of 3 to 8 seconds. After heater is disconnected, contacts will remain closed for 30 seconds minimum. Write us about your requirements.

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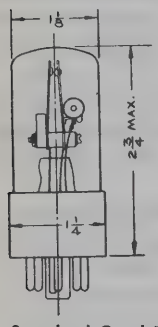
THERMOSTATIC AMPERITE DELAY RELAYS

GLASS ENCLOSED • HERMETICALLY SEALED • A.C., D.C., OR PULSATING CURRENT

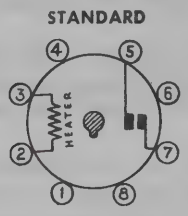
BREAKING D.C. CURRENT: When Relay contacts open D.C. Current above 50 volts, a condenser with a resistor in series with the condenser must be connected across the conatcts. The following condenser values are approximate.

	50 V. D.C.	115 V. D.C.	230 V. D.C.
0 to .5 Amp.	None	.1 MF	.25 MF
.5 to 1.5 Amps.	"	.25 "	.25 "
1.5 to 3 Amps.	.25 MF	1 "	.5 "

SPECIFICATIONS:

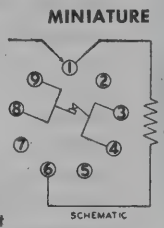


Standard Octal Base



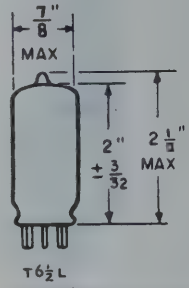
Bottom View
Schematic Diagram

Base Wiring:
Standard Radio Octal:
Prongs 2-3-heater;
Prongs 5-7-contacts.



Bottom View
Schematic Diagram

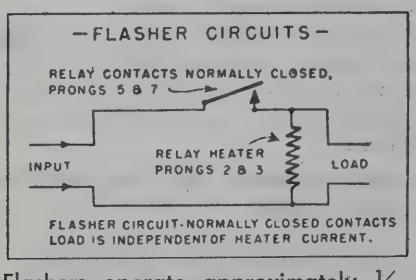
Base Wiring:
9-Pin Miniature:
Prongs 1-6 heater;
Prongs 3-4, 1 contact;
Prongs 8-9, 2nd contact



9-Pin Miniature Base

STANDARD AND MINIATURE TYPES OF AMPERITE DELAY RELAYS AND FLASHERS... Net $2.40 each
STANDARD RELAYS: Available in 2 to 180 Seconds Delay. MINIATURE RELAYS: Available in 2 to 120 Seconds Delay.
Types shown in Bold type in the chart below are more popular relays and are more readily available.
MINIATURE TYPES: Designated by letter T (e.g. 6N05T)

Delay-Seconds	Tolerance Seconds at 20°C	NORMALLY OPEN CONTACTS — HEATER VOLTAGES							NORMALLY CLOSED CONTACTS — HEATER VOLTAGES						
		2.5 V.	5.0 V.	6.3 V.	12.6 V.	26 V. (22-30)	50 V.	115 V.	2.5 V.	5.0 V.	6.3 V.	12.6 V.	26 V. (22-30)	50 V.	115 V.
2	± 1½	2N02	5N02	6N02	12N02	26N02	50N02	115N02	2C2	5C2	6C2	12C2	26C2	50C2	115C2
3	± 1½	2N03	5N03	**6N03**	12N03	**26N03**	50N03	**115N03**	2C3	5C3	**6C3**	12C3	**26C3**	50C3	**115C3**
5	± 2½	2N05	5N05	**6N05**	12N05	**26N05**	50N05	**115N05**	2C5	5C5	**6C5**	12C5	**26C5**	50C5	**115C5**
8	± 3	2N08	5N08	**6N08**	12N08	**26N08**	50N08	**115N08**	2C8	5C8	**6C8**	12C8	**26C8**	50C8	**115C8**
10	± 4	2N010	5N010	**6N010**	12N010	**26N010**	50N010	**115N010**	2C10	5C10	**6C10**	12C10	**26C10**	50C10	**115C10**
15	± 4	2N015	5N015	**6N015**	12N015	**26N015**	50N015	**115N015**	2C15	5C15	**6C15**	12C15	**26C15**	50C15	**115C15**
20	± 5	2N020	5N020	**6N020**	12N020	**26N020**	50N020	**115N020**	2C20	5C20	**6C20**	12C20	**26C20**	50C20	**115C20**
30	±10	**2N030**	**5N030**	6N030	**12N030**	**26N030**	50N030	**115N030**	2C30	5C30	**6C30**	12C30	**26C30**	50C30	**115C30**
45	±10	2N045	5N045	**6N045**	12N045	**26N045**	50N045	**115N045**	2C45	5C45	**6C45**	12C45	**26C45**	50C45	**115C45**
60	±15	**2N060**	5N060	**6N060**	12N060	**26N060**	50N060	**115N060**	2C60	5C60	**6C60**	12C60	**26C60**	50C60	**115C60**
75	±15	2N075	5N075	**6N075**	12N075	**26N075**	50N075	**115N075**	2C75	5C75	**6C75**	12C75	**26C75**	50C75	**115C75**
90	±20	2N090	5N090	**6N090**	12N090	**26N090**	50N090	**115N090**	2C90	5C90	**6C90**	12C90	**26C90**	50C90	**115C90**
120	±35	2N0120	5N0120	**6N0120**	12N0120	**26N0120**	50N0120	**115N0120**	2C120	5C120	**6C120**	12C120	**26C120**	50C120	**115C120**
150	±35	2N0150	5N0150	**6N0150**	12N0150	**26N0150**	50N0150	**115N0150**	2C150	5C150	**6C150**	12C150	**26C150**	50C150	**115C150**
180	±45	2N0180	5N0180	**6N0180**	12N0180	**26N0180**	50N0180	**115N0180**	2C180	5C180	**6C180**	12C180	**26C180**	50C180	**115C180**



Flashers operate approximately ⅓ on, ⅔ off. The percentage time on can be increased by reducing voltage of heater.

Flashers available only in quantities of 12 or less. Cannot be supplied in production quantities.

Normally closed flashers are standard, and are indicated by the letter "F." The number following letter "F" denotes flashes per minute. *For example a 6F30 flasher,* has 6.3V heater, normally closed 30 FPM with a ± 15 flashes per minute tolerance. A 6F30T, would be the same type but in 9-pin miniature. Flashers are available from *30 to 90 Flashes per minute* with tolerances as shown in the chart below:

FLASHERS have contact rating of ½a 115V AC, non-inductive.

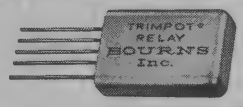
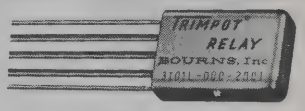
Tol. FPM — 20°C	Standard Flashers Available		
30 ± 15	6F30	26F30	115F30
45 ± 15	6F45	26F45	115F45
60 ± 20	6F60	26F60	115F60
75 ± 20	6F75	26F75	
90 ± 25	6F90	26F90	

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BOURNS TRIMPOT® SUB-MINIATURE RELAYS AND MINIATURE, ADJUSTABLE TIME-DELAYS

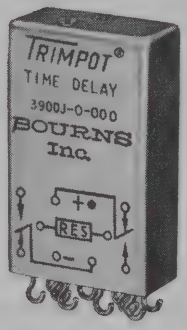
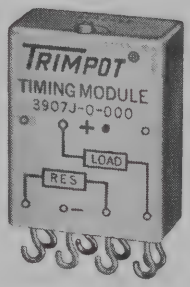
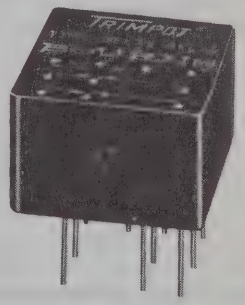
SUB-MINIATURE RELAYS

TRIMPOT® relays feature single-coil design, rotary balanced armature, self-cleaning contacts and hermetically sealed case. Every unit goes through a 5000-operation run-in and 100% final inspection, including mass-spectrometer leak testing, for all important characteristics.

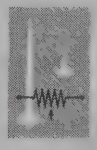
	 Model 3100	 Model 3101
Size	0.2" x 0.4" x 0.6"	0.2" x 0.4" x 0.6"
Contacts	SPDT	DPDT
Contact rating	1.0 amp resistive at 26.5 VDC	1.0 amp resistive at 26.5 VDC
Pick-up sensitivity	100 mw	160 mw
Coil resistance	50 to 2000Ω	65 to 2000Ω
Nominal voltage	4.2 to 26.5 VDC	6.0 to 23.4 VDC
Environmental specification	MIL-R-5757D	MIL-R-5757D
Terminal styles	Plug-in pins, solder hooks, 1½" straight leads	Plug-in pins, solder hooks, 1½" straight leads
Ambient temperature range	−65 to +125°C	−65 to +125°C

MINIATURE TIME-DELAY RELAYS adjustable up to 200 seconds

Bourns TRIMPOT® time-delay relays have integral adjustment from 0.1 to 1.5 seconds. Addition of an external resistor or resistor-capacitor combination can increase adjustability to 200 seconds. Units are protected against accidental polarity reversal and against transients up to 200% of line voltage. All models have welded circuitry and are vacuum-potted. MIL-Spec models have repeatable accuracy of ±5% max.

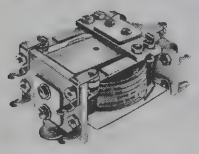
	 Model 3900	 Model 3907	 Model 3908
Size	0.4" x 0.8" x 1.31"	0.4" x 0.8" x 1.0"	1.0" x 1.0" x 0.7"
Output	DPDT relay	SPST NO—solid state	DPDT relay
Contact rating	1.0A resistive at 26.5 VDC	0.05A resistive at 26.5 VDC	1.0A resistive at 26.5 VDC
Time delay range	0.1 to 200 sec.	0.1 to 200 sec.	0.1 to 200 sec.
Nominal voltage	20 to 30 VDC	20 to 30 VDC	20 to 30 VDC
Repeatability	±5% max.	±5% max.	±10%
Environmental specification	MIL-R-5757D	MIL-R-5757D	Industrial
Terminal styles	Plug-in pins, solder hooks, 1½" straight leads	Plug-in pins, solder hooks, 1½" straight leads	Plug-in pins
Ambient temp. range	−55 to +120°C	−55 to +120°C	−40 to +85°C

ALL BOURNS RELAYS AND TIME-DELAYS ARE AVAILABLE OFF THE SHELF.



BOURNS

PHILLIPS-ADVANCE CONTROL CO.



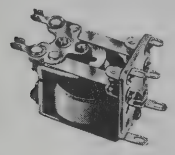
ANTENNA TYPES

AH SERIES A changeover relay designed specifically for RF operation. The small size of this relay makes it ideal for use in compact sets where the load does not exceed ½ KW. Low-cost handling of RF energy is assured by the Steatite insulation used throughout, and by adequate spacing between contacts. Units are fast and positive in action, and will operate in any position.

Dimensions: H. 1⅞", W. 1⅝", L. 2¾".

Mounting Data: 2 tapped holes; 6-32 NC-2; 2" centers.

TYPE	COIL RES. (OHMS)	CONTACTS FORM	CONTACTS RATING (AMPS)	NET
AH/2C/6VD	16	DPDT	10	11.75
AH/2C/12VD	63	DPDT	10	11.75
AH/2C/24VD	250	DPDT	10	11.75
AH/2C/115VA	450	DPDT	10	13.00
AH/2C1C/115VA	450	DPDT & SPDT (aux)	10	14.25



ANTENNA TYPES

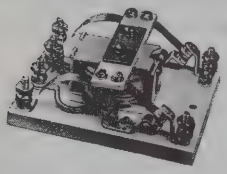
AM SERIES Space-saving "transmit-receive" antenna relays for many different low-power RF applications. They fill the need for 300-ohm circuit switching in mobile, marine, aircraft, television, communication and fixed-station service. Conically-shaped silver contacts assure low resistance paths for either "receive" or "transmit" positions.

Dimensions: H. 1-9/16", W. 15/16", L. 1-15/16".

Mounting Data: Relay supplied with single 6-32 NC-2 mounting stud with hex nut.

Weight: 2 oz.

TYPE	COIL RES. (OHMS)	CONTACTS FORM	CONTACTS RATING (AMPS)	NET
AM/2C/6VA	4	DPDT	2	4.70
AM/2C/115VA	1600	DPDT	2	5.05
AM/2C/6VD	25	DPDT	2	4.20
AM/2C/12VD	100	DPDT	2	4.20
AM/2C/24VD	250	DPDT	2	4.20



ANTENNA TYPE

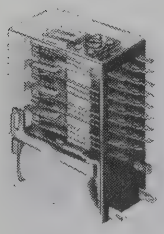
AT SERIES For heavy-duty RF transmitter antenna changeover applications. Primarily designed for fixed-station usage, with a conservative 1-kilowatt RF rating. Insulated with ceramic Steatite. Excellent wiping action of contacts assures flow of most minute currents for receiving positions. High efficiency. Available with auxiliary single-pole, normally open contacts.

Dimensions: H. 1-11/16", W. 2-13/16", L. 3-9/16".

Mounting Data: 4 holes .157 dia.; clearance for 6-32 screws.

Weight: 12.6 oz.

TYPE	COIL RES. (OHMS)	CONTACTS FORM	CONTACTS RATING (AMPS)	NET
AT/2C/115VA	450	DPDT	10	13.20



MINATURE INDUSTRIAL TYPES

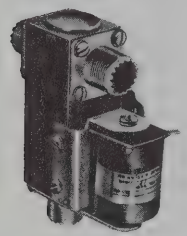
VERSAPAC 67 SERIES Accepted in almost all branches of electrical and electronic engineering, the 67 Series incorporates the advantages of microminiaturization with long life characteristics. Their low cost make them suitable for such applications as medium power switching, as well as tape head, microphone, and other low level switching applications.

Special contact materials and other voltage ranges available on special order. All 67 relays come with a clear plastic dust cover. Available with up to 8 Form C Contacts.

ACCESSORIES

TYPE		NET
218-16-2	Two pole socket	0.39
58-18-2	Retaining spring (2C)	0.05
58-19-1	Grounding clip (2C and 4C)	0.03
218-16-4	Four pole socket	0.62
58-18-4	Retaining spring (4C)	0.08

TYPE (DPDT)	COIL RES. (OHMS)	OPERATING VOLT RANGE	PULL IN POWER (NOMINAL)	NET
	52	3-10 VDC	75MW	3.40
	185	5.5-18 VDC	70MW	3.40
	600	9.5-32 VDC	75MW	3.40
	700	11.5-36 VDC	85MW	3.40
	1000	12.5-46 VDC	75MW	3.40
	2500	19.5-65 VDC	80MW	3.60
	15000	52.5-165VDC	85MW	5.40
TYPE (4PDT)				
	52	4.5-10 VDC	170MW	3.80
	185	8-19 VDC	165MW	3.80
	600	15-32 VDC	195MW	3.80
	700	17-36 VDC	205MW	3.80
	1000	19-46 VDC	195MW	3.80
	2500	30-65 VDC	170MW	4.00
	15000	75-165VDC	200MW	5.60



COAXIAL TYPES

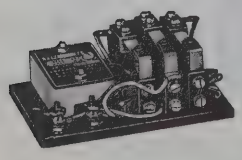
CB SERIES Unsurpassed for meeting problems of coaxial cable switching. Designed for performance on 52-ohm coaxial lines. Low standing-wave ratios permit usage on frequencies up to 300 megacycles. Units operate equally well in any position. The CB/1000 is a kit for converting CB/1C to CB/1C2C contact arrangement. All types CB, with exception of CB/1C2C/115VA(N), supplied with SO-239 connectors. CB/1C2C/115VA(N) supplied with "N" connectors.

Dimensions: H. 1⅞", W. 3⅛", L. 3⅞".

Mounting Data: 2 tapped holes 6-32 NC-2; 1⅞" centers.

Weight: 11.1 oz.

TYPE	COIL RESISTANCE (OHMS)	CONTACTS FORM	CONTACTS RATING (AMPS)	NET
CB/1C/6VD	18	SPDT	5	20.00
CB/1C/12VD	70	SPDT	5	20.00
CB/1C/24VD	280	SPDT	5	20.00
CB/1C/115VA	280	SPDT	5	21.00
CB/1C2C/6VD	18	SPDT (int) DPDT (aux)	5	23.60
CB/1C2C/12VD	70	SPDT (int) DPDT (aux)	5	23.60
CB/1C2C/24VD	280	SPDT (int) DPDT (aux)	5	23.60
CB/1C2C/115VA	280	SPDT (int) DPDT (aux)	5	24.55
CB1000		DPDT	5	5.00
CB/1C2C/115VA (N)	280	SPDT (int) DPDT (aux)	5	24.55



TIME DELAY TYPES

DB & DM SERIES With their adjustable time-delay range, these relays excellent for use in preheating tube-filaments; for specialized lighting circuits, photographic controls, protection applications, etc. DB provides time-delay before break. DM provides delay before make. Both series utilize bi-metal thermal units which can be adjusted for delays from 5 to 60 seconds. Cooling of the thermal units for proper re-cycling requires 8 to 10 times the delay period.

Dimensions: H. 1⅝", W. 2⅝", L. 3¾".

Mounting Data: 2 holes .152 dia.; 3⅛" centers.

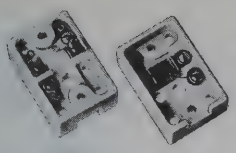
Weight: 7.8 oz.

TYPE	COIL RES. (OHMS)	CONTACTS FORM	CONTACTS RATING (AMPS)	NET
DB/2C/115VA	450	DPDT	15	13.60
DM/2C/115VA	450	DPDT	15	14.35

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TIME DELAY TYPES



DT SERIES Efficient, low-cost units used in conjunction with various relays for delayed making or breaking of controlled circuits. Applicable wherever a time delay of 5 to 60 seconds is needed. Units are adjustable with a range of 8 to 20 cycles per minute. Operating on the bi-metal thermal principle, these types are housed in unglazed porcelain, and are obtainable with either normally-open or normally-closed contacts.

Dimensions: H. 13/16", W. 1 17/64", L. 1 57/64".

Mounting Data: 2 holes .154 dia. for 6-32 NC-2 screws; 1 3/8" centers.

Weight: 1.4 oz.

TYPE	COIL VOLT	CONTACTS FORM	CONTACTS RATING (AMPS)	NET
DT/1A/115VA	115VAC	SPST-NO	2	2.75
DT/1B/115VA	115VAC	SPST-NC	2	2.75

GENERAL PURPOSE RELAYS



GHA



GHP

GH SERIES—GHA—GHP Low-cost continuous-duty general purpose relay. Contacts rated at 5 amps resistive load. Available as an open relay (GHA) or with a dustite plastic enclosure (GHP). Enclosed types with SPDT and DPDT contacts have 8 pin octal plug-in bases while the 3PDT types use 11 pin plug-in bases. Open relays supplied with axial type solder lugs. UL (Underwriters Laboratories) approval granted on types GHA1C and GHA2C.

Dimensions: Open Style—1 47/64" x 1 7/64" x 1 3/16"".
Enclosed Style—1 13/32" x 1 13/32" x 2 1/8".

TYPE	COIL RESISTANCE (OHMS)	CONTACTS FORM	CONTACTS RATING (AMPS)	NET
GHA/1C/6VA	4	SPDT	5	3.05
GHA/1C/12VA	16	SPDT	5	3.05
GHA/1C/24VA	63	SPDT	5	3.05
GHA/1C/115VA	1600	SPDT	5	3.05
GHA/1C/220VA	5000	SPDT	5	3.55
GHA/1C/6VD	25	SPDT	5	3.05
GHA/1C/12VD	100	SPDT	5	3.05
GHA/1C/24VD	400	SPDT	5	3.05
GHA/1C/110VD	8000	SPDT	5	3.55
GHA/2C/6VA	4	DPDT	5	3.55
GHA/2C/12VA	16	DPDT	5	3.55
GHA/2C/24VA	63	DPDT	5	3.55
GHA/2C/115VA	1600	DPDT	5	3.55
GHA/2C/220VA	5000	DPDT	5	4.05
GHA/2C/6VD	25	DPDT	5	3.35
GHA/2C/12VD	100	DPDT	5	3.35
GHA/2C/24VD	400	DPDT	5	3.35
GHA/2C/110VD	8000	DPDT	5	3.85
GHA/3C/6VA	4	3PDT	5	4.05
GHA/3C/12VA	16	3PDT	5	4.05
GHA/3C/24VA	63	3PDT	5	4.05
GHA/3C/115VA	1600	3PDT	5	4.05

TYPE	COIL RESISTANCE (OHMS)	CONTACTS FORM	CONTACTS RATING (AMPS)	NET
GHA/3C/220VA	5000	3PDT	5	4.55
GHA/3C/6VD	25	3PDT	5	3.75
GHA/3C/12VD	100	3PDT	5	3.75
GHA/3C/24VD	400	3PDT	5	3.75
GHA/3C/110VD	8000	3PDT	5	4.25
GHP/1C/6VA	4	SPDT	5	5.10
GHP/1C/12VA	16	SPDT	5	5.10
GHP/1C/24VA	63	SPDT	5	5.10
GHP/1C/115VA	1600	SPDT	5	5.10
GHP/1C/6VD	25	SPDT	5	5.15
GHP/1C/12VD	100	SPDT	5	5.15
GHP/1C/24VD	400	SPDT	5	5.15
GHP/1C/110VD	8000	SPDT	5	5.65
GHP/2C/6VA	4	DPDT	5	5.75
GHP/2C/12VA	16	DPDT	5	5.75
GHP/2C/24VA	63	DPDT	5	5.75
GHP/2C/115VA	1600	DPDT	5	5.75
GHP/2C/220VA	5000	DPDT	5	6.25
GHP/2C/6VD	25	DPDT	5	5.65
GHP/2C/12VD	100	DPDT	5	5.65
GHP/2C/24VD	400	DPDT	5	5.65
GHP/2C/110VD	8000	DPDT	5	6.15
GHP/3C/6VA	4	3DPT	5	7.05
GHP/3C/24VA	63	3PDT	5	7.05
GHP/3C/115VA	1600	3PDT	5	7.05
GHP/3C/220VA	5000	3PDT	5	7.55
GHP/3C/6VD	25	3PDT	5	6.95
GHP/3C/12VD	100	3PDT	5	6.95
GHP/3C/24VD	400	3PDT	5	6.95
GHP/3C/110VD	8000	3PDT	5	7.45

GENERAL PURPOSE RELAYS



GHB



GHH

GHB—GHH Similar in size and mounting to the GHA and GHP types shown above with contacts rated at 10 amps resistive. GHB is open style with axial leads and GHH utilizes plastic enclosure and plug-in base. UL approval granted on types GHB/1C and GHB/2C.

Dimensions: Open Style—1 47/64" x 1 7/64" x 1 3/4".
Enclosed Style—1 13/32" x 1 13/32" x 2 1/8".

TYPE	COIL RESISTANCE (OHMS)	CONTACTS FORM	CONTACTS RATING (AMPS)	NET
GHB/1C/6VA	4	SPDT	10	3.50
GHB/1C/24VA	63	SPDT	10	3.50
GHB/1C/115VA	1600	SPDT	10	3.50
GHB/1C/6VD	25	SPDT	10	3.50
GHB/1C/12VD	100	SPDT	10	3.50
GHB/1C/24VD	400	SPDT	10	3.50
GHB/2C/6VA	4	DPDT	10	4.05
GHB/2C/24VA	63	DPDT	10	4.05
GHB/2C/115VA	1600	DPDT	10	4.05

TYPE	COIL RESISTANCE (OHMS)	CONTACTS FORM	CONTACTS RATING (AMPS)	NET
GHB/2C/6VD	25	DPDT	10	3.80
GHB/2C/12VD	100	DPDT	10	3.80
GHB/2C/24VD	400	DPDT	10	3.80
GHB/3C/6VA	4	3PDT	10	4.60
GHB/3C/24VA	63	3PDT	10	4.60
GHB/3C/115VA	1600	3PDT	10	4.60
GBH/3C/6VD	25	3PDT	10	4.40
GHB/3C/12VD	100	3PDT	10	4.40
GHB/3C/24VD	400	3PDT	10	4.40
GHH/2C/24VA	63	DPDT	10	6.05
GHH/2C/115VA	1600	DPDT	10	6.05
GHH/2C/24VD	400	DPDT	10	5.75
GHH/3C/115VA	1600	3PDT	10	7.25
GHH/3C/24VD	400	3PDT	10	7.25

GENERAL PURPOSE RELAYS

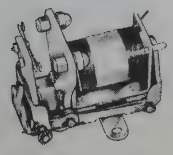


GHE A plate circuit current operated unit having extremely good sensitivity. Standard GHE enclosed in dustite plastic enclosure and mounts with either an 8 pin or 11 pin plug-in base. Nominal power of 130 milliwatts per 1C (single pole) is required.

Dimensions: 1 13/32" x 1 13/32" x 2 1/8".

TYPE	COIL RESISTANCE (OHMS)	COIL CURRENT	CONTACTS FORM	CONTACTS RATING (AMPS)	NET
GHE/1C/2500D	2500	7.2 MA	SPDT	5	5.40
GHE/1C/5000D	5000	5.0 MA	SPDT	5	5.85
GHE/1C/10000D	10000	3.6 MA	SPDT	5	6.25
GHE/2C/2500D	2500	10.0 MA	DPDT	5	6.15
GHE/2C/5000D	5000	7.2 MA	DPDT	5	6.25
GHE/2C/10000D	10000	5.0 MA	DPDT	5	6.65
GHE/3C/2500D	2500	11.8 MA	3PDT	5	7.60
GHE/3C/5000D	5000	8.3 MA	3PDT	5	7.70
GHE/3C/10000D	10000	5.8 MA	3PDT	5	8.10

HIGH VOLTAGE TYPES



HV SERIES Applicable where "standard" design high voltage units occupy too much space. Contact assembly mounted on Steatite to insure high insulation and low energy loss. Will break up to 5000 volts RMS at 200 milliamperes current. Available in SPDT (double break-double make DM-DB) contact arrangement.

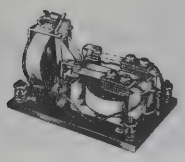
Dimensions: 1 29/32" x 2 7/32" x 3 1/16".

Mounting data: 2 holes 3/16" diameter on 1 3/4" centers.

TYPE	COIL RESISTANCE	CONTACTS	NET
HV/1Z/24VD	120 Ohms	SPDT DB-DM	17.65
HV/1Z/110VD	3000 Ohms	SPDT DB-DM	18.25

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LATCHING TYPES

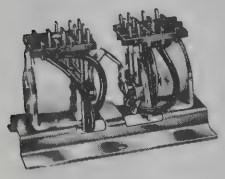
LE SERIES The LE Series relays are employed in industrial and power control applications where it is desirable to eliminate continuous use of current consumption by the duty coil.

The latching mechanism in these relays is positive, and assures consistent performance. The units are assembled on a heavy bakelite base.

Dimensions: H. 2⅜", W. 2½", L. 3⅜".

Mounting Data: 2 holes .152 dia.; clearance for 6-32 NC-2 screws; 2" centers.

TYPE	COIL RESISTANCE	CONTACTS	NET
LE/2C/115VA	160 ohms	DPDT 15 amps	12.00
LE/2C/24VD	100 ohms	DPDT 15 amps	11.65

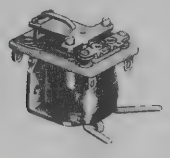


LATCHING TYPES

LGA SERIES Used in industrial and power control applications where it is desirable to eliminate continuous use of current consumption by the duty coil. Latching mechanism is positive and assures consistent performance. Both operate and reset coils are electrically operated.

Dimensions: 1¾" x 1⅝" x 3½".
Two 6-32 mounting holes on 1⅜" centers.

TYPE	COIL RESISTANCE (BOTH COILS) (OHMS)	FORM	CONTACTS RATING (AMPS)	NET
LGA/4C/24VA	40	4PDT	5	10.45
LGA/4C/115VA	1000	4PDT	5	10.45
LGA/4C/6VD	16	4PDT	5	9.35
LGA/4C/12VD	63	4PDT	5	9.35
LGA/4C/24VD	250	4PDT	5	9.35
LGA/4C/110VD	5000	4PDT	5	10.55
LGA/6C/24VA	40	6PDT	5	12.50
LGA/6C/115VA	1000	6PDT	5	12.50
LGA/6C/6VD	16	6PDT	5	11.40
LGA/6C/12VD	63	6PDT	5	11.40
LGA/6C/24VD	250	6PDT	5	11.40
LGA/6C/110VD	5000	6PDT	5	12.60



SPECIAL PURPOSE TYPES

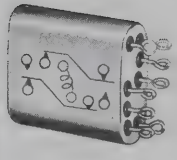
MK SERIES Ultra-small and feather-light, these direct current devices require less than ½ cubic inch mounting space. All switching is entirely above ground . . . insulated material is silicone glass. Beryllium copper armature hinges assure stable performance under vibration and shock.

Dimensions: H. 5¼", W. 4¼", L. 5¾".

Mounting Data: Relay supplied with single 2-56 NC-2 machine screw.

Weight: 11 grams.

TYPE	COIL RESISTANCE	FORM	CONTACTS RATING (AMPS)	NET
MK/1C/6VD	50	SPDT	1	4.95
MK/1C/12VD	200	SPDT	1	4.95
MK/1C/24VD	800	SPDT	1	4.95
MK/2C/6VD	30	DPDT	1	5.95
MK/2C/12VD	120	DPDT	1	5.95
MK/2C/24VD	500	DPDT	1	5.95
MK/2C/5000D	5000	DPDT	1	6.95



MICRO-MINIATURE CRYSTAL CAN TYPES

MV SERIES Hermetically sealed rotary action DPDT (2 Form C) DC relay for severe military and industrial applications. All units are designed to meet requirements of MIL-R-5757 D. Occupies ¼ cubic inch. Contains new spring leaf contact blades which insure longer life with rapid heat dissipation. This Series, except MV7033, is available from stock with wide variety of terminal and mounting arrangements (see ordering information). MV7033 meets requirements of USAF Specification MS24250-6 (USAF) and is available from stock with solder hooks and special side angle mounting brackets only.

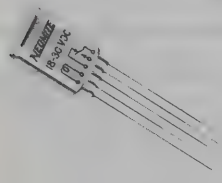
ORDERING INFORMATION
All relays listed here except MV7033 are available with any of the following terminal and mounting arrangement combinations.

TERMINAL ARRANGEMENT		MOUNTING ARRANGEMENT	
Solder-Hook	Code 1	Side Studs	Code 1
Plug-in Pin	Code 2		
3" Leads	Code 3 (add .35)	Top Studs	Code 2
		2 Hole Bracket	Code 3
		Plain Can Plug-in	Code 4
		4 Hole Bracket	Code 5
		Side Angle Brackets	Code 6
		Flange Bracket	Code 7

EXAMPLES:

1. Solder-hook terminals with side angle mounting brackets with 12 volt DC coil MV/2C/120D-16 Price: 13.50
2. 3" leads, top studs with 110 volt DC coil MV/2C/5000D-32 Price: 13.90 + .35 for 3" leads = 14.25

TYPE	RESISTANCE (OHMS)	PULL-IN CURRENT MAX. (MA)	COIL NOMINAL VOLTAGE (VDC)	NET
MV/2C/30D	30	85	6	13.50
MV/2C/120D	120	44	12	13.50
MV/2C/600D	600	21	26	13.50
MV/2C/1000D	1000	16	35	13.50
MV/2C/2500D	2500	10	55	13.60
MV/2C/5000D	5000	7	78	13.90
MVT/2C/10000D	10000	5	110	14.50
MV7033	600	21	26.5	13.50



NEOMITE MICRO-MINIATURE TYPES

NM SERIES Hermetically sealed SPDT (form C) DC relay for missiles, aircraft, control equipment and printed circuits. Occupying only 0.04 of a cubic inch, it is ideal where space is at a minimum and long life is important. Contact resistance is extraordinarily low, making it invaluable in dry circuit switching. Available from stock with a screw down mounting bracket or a bend-over-tab mounting bracket for printed circuit board use.

TYPE	RESISTANCE (OHMS)	PULL-IN CURRENT MAX. (MA)	COIL NOMINAL VOLTAGE (VDC)	NET
NM/1C/50	50	44	4	21.00
NM/1C/200	200	22	8	21.00
NM/1C/500	500	14	12	21.00
NM/1C/1K	1000	10	16	21.00
NM/1C/2K	2000	7	24	21.00
6B 346000 Two hole Bracket				.50
6B 347000 Tab Bracket				.50



POWER TRANSFER TYPES

PG SERIES A continuous duty general purpose relay, available in AC or DC with DPDT (2C) and SPDT-DB (1Z) contact arrangements. Excellent for general industrial power control circuits and withstand vibration and shock because of special armature and frame design. 30 amp contact rating is achieved on the PG/1Z by including a jumper between blades, effecting a single pole design.

Dimensions: H. 1⅞", W. 1⅝", L. 1½".

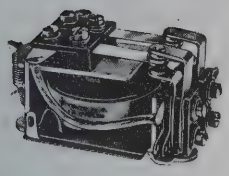
Mounting Data: 4 tapped holes 6-32 NC-2; ½" x 1-5/16" centers.

Weight: 4.4 oz.

TYPE	COIL RESISTANCE (OHMS)	FORM	CONTACTS RATING (AMPS)	NET
PG/2C/6VA	1.4	DPDT	15	7.50
PG/2C/24VA	25	DPDT	15	7.50
PG/2C/115VA	400	DPDT	15	7.50
PG/2C/220VA	1600	DPDT	15	7.95
PG/2C/6VD	16	DPDT	15	6.90
PG/2C/12VD	63	DPDT	15	6.90
PG/2C/24VD	250	DPDT	15	6.90
PG/1Z/6VD	16	SPDT	30	8.95
PG/1Z/115VA	400	SPDT	30	10.40

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POWER TYPES

PC SERIES Compact and positive-acting relays for either AC or DC. Used in air conditioning and lighting systems, small motor starting, transformers, garage door openers—wherever dependable circuit switching is necessary. Contacts rated at 15 Amps resistive, 5 Amps inductive at 115VAC or 26.5 VDC.

Dimensions: H. 1⅞", W. 1⅝", L. 2⅝"—1 & 2 hole.
H. 1⅞", W. 2¾", L. 3⅛"—3 & 4 hole.

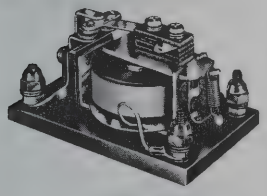
Mounting Data: 2 tapped holes 6-32 NC-2; 2" centers.

Weight: 8 oz.

TYPE	COIL RESISTANCE (OHMS)	CONTACTS FORM	CONTACTS RATING (AMPS)	NET
PC/3C/12VD	63	3PDT	15	8.45
PC/3C/24VD	250	3PDT	15	8.45
PC/3C/110VD	4000	3PDT	15	8.95
PC/4C/6VA	1.6	4PDT	15	10.95
PC/4C/24VA	16	4PDT	15	10.95
PC/4C/115VA	450	4PDT	15	10.95
PC/4C/220VA	1600	4PDT	15	12.45
PC/4C/6VD	16	4PDT	15	10.95
PC/4C/12VD	63	4PDT	15	10.95
PC/4C/24VD	250	4PDT	15	10.95
PC/4C/110VD	4000	4PDT	15	11.45

Note: PC/3C and PC/4C not available in 12 volts AC.

TYPE	COIL RESISTANCE (OHMS)	CONTACTS FORM	CONTACTS RATING (AMPS)	NET
PC/1C/6VA	1.6	SPDT	15	3.95
PC/1C/12VA	4	SPDT	15	3.95
PC/1C/24VA	16	SPDT	15	3.95
PC/1C/115VA	450	SPDT	15	3.95
PC/1C/220VA	1600	SPDT	15	4.95
PC/1C/6VD	16	SPDT	15	3.95
PC/1C/12VD	63	SPDT	15	3.95
PC/1C/24VD	250	SPDT	15	3.95
PC/1C/110VD	4000	SPDT	15	4.45
PC/2C/6VA	1.6	DPDT	15	5.95
PC/2C/12VA	4	DPDT	15	5.95
PC/2C/24VA	16	DPDT	15	5.95
PC/2C/115VA	450	DPDT	15	5.95
PC/2C/220VA	1600	DPDT	15	6.95
PC/2C/6VD	16	DPDT	15	5.95
PC/2C/12VD	63	DPDT	15	5.95
PC/2C/24VD	250	DPDT	15	5.95
PC/2C/110VD	4000	DPDT	15	6.55
PC/3C/6VA	1.6	3PDT	15	8.45
PC/3C/24VA	16	3PDT	15	8.45
PC/3C/115VA	450	3PDT	15	8.45
PC/3C/220VA	1600	3PDT	15	9.65
PC/3C/6VD	16	3PDT	15	8.45



POWER TYPES

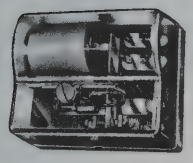
PV SERIES Very heavy-duty power-transfer relays—excellent for motor starting, lighting circuits and numerous applications where heavy double make contacts are needed. "T" blade is equipped with two ⅝" silver-cadmium oxide contacts, with ample contact gap. These contacts minimize pitting and burning under heavy non-inductive or inductive loads.

Dimensions: H. 1⅝", W. 2¼", L. 3¼".

Mounting Data: 2 holes .169 dia. clearance for 8-32 NC-2 screws, 1⅞" centers.

Weight: 6.8 oz.

TYPE	COIL RESISTANCE (OHMS)	CONTACTS FORM	CONTACTS RATING (AMPS)	NET
PV/1X/6VD	16	SPST-NO	30	7.35
PV/1X/115VA	450	SPST-NO	30	7.70
PV/1Z/6VD	16	SPDT	30	8.55
PV/1Z/115VA	450	SPDT	30	8.70



SENSITIVE TYPES

SV SERIES For use in any DC circuit restricted to a few thousandths of a watt power consumption.

Transparent, molded plastic cover guards against dust or dirt reaching the contacts or other working parts.

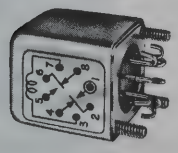
Adjustments are quickly made with the vernier screws which vary relay sensitivity from the 5-milliwatt factory setting. Both the two stationary contacts and the spring tension can be accurately and permanently set—yet easily changed.

Dimensions: H. 1½", W. 2", L. 2⅝".

Mounting Data: 2 holes .52 dia.

Weight: 6.5 oz.

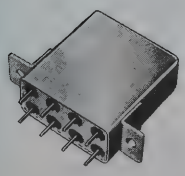
TYPE	COIL RESISTANCE (OHMS)	COIL CURRENT (MA)	CONTACTS FORM	CONTACTS RATING (AMPS)	NET
SV/1C/.005D	.005	1000	SPDT	1	7.95
SV/1C/1000D	1000	2.25	SPDT	1	8.25
SV/1C/1600D	1600	1.80	SPDT	1	8.40
SV/1C/2200D	2200	1.50	SPDT	1	8.40
SV/1C/3500D	3500	1.20	SPDT	1	8.40
SV/1C/5500D	5500	0.95	SPDT	1	8.75
SV/1C/8700D	8700	0.75	SPDT	1	9.40
SV/1C/10000D	10000	0.70	SPDT	1	9.40
SV/1C/14000D	14000	0.60	SPDT	1	10.10
SV/1C/20000D	20000	0.50	SPDT	1	11.10
SV/1C/30000D	30000	0.40	SPDT	1	11.85
SV/1C/40000D	40000	0.35	SPDT	1	13.30



MINIATURE ROTARY TYPE

VGS SERIES Miniature sealed rotary action DPDT (2 form C) relay for missile and aircraft use. A more sensitive version of its forerunner, the VG. VGS occupies less than a cubic inch of space and withstands 15 G's to 2000 cycles vibration, utilizing only 125 milliwatts of power at 25 degrees C. Contacts rated at 5 amps resistive at 115 VAC or 26.5 VDC. Contact material is silver magnesium nickel alloy, gold flashed.

TYPE	COIL RESISTANCE (OHMS)	NET
VGS/2C/2000D	2000	22.50



HIGH SHOCK AND VIBRATION CRYSTAL CAN RELAY

VR SERIES A 0.2 inch grid-spaced hermetically sealed relay, designed to meet the requirements of Military Specification MIL-R-5757D. Will withstand 35 G's vibration and 100 G's shock. The standard catalog item has a pull-in power of 250 milli-watts at 25 degrees C, and a nominal operating power of 1.25 watts. The double-pole double-throw contacts are of silver magnesium nickel, gold plated and have a rating of 3 amperes resistive at 28 volts DC or 115 volts AC.

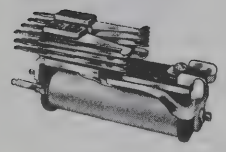
TYPE	COIL RESISTANCE (OHMS)	NET
VR/2C/35D-10	35	13.00
VR/2C/35D-24	35	13.00
VR/2C/125D-10	125	13.00
VR/2C/125D-12	125	13.00
VR/2C/125D-13	125	13.00
VR/2C/125D-14	125	13.00
VR/2C/125D-24	125	13.00

TYPE	COIL RESISTANCE (OHMS)	NET
VR/2C/125D-31	125	13.00
VR/2C/125D-34	125	13.00
VR/2C/675D-10	675	13.00
VR/2C/675D-11	675	13.00
VR/2C/675D-12	675	13.00
VR/2C/675D-13	675	13.00
VR/2C/675D-14	675	13.00
VR/2C/675D-20	675	13.00
VR/2C/675D-24	675	13.00
VR/2C/675D-33	675	13.00
VR/2C/675D-34	675	13.00
VR/2C/1500D-24	1500	13.00
VR/2C/2450D-14	2450	13.10
VR/2C/2450D-24	2450	13.10
VR/2C/9100D-24	9100	14.00
VR/2C/9100D-31	9100	14.00

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PHILLIPS-ADVANCE CONTROL CO.

LONG FRAME TELEPHONE TYPES



TYPE 2 Dependable and versatile, the Type 2 is the "workhorse" of relays. It operates millions of times with reliability and requires little attention during its long life. An unusually large number of variations in contact assemblies, contact materials, coils, adjustments, and mounting arrangements are available.

On special order:

Operating Voltage: Up to 750 volts DC. Up to 440 volts AC, 60 cycles.

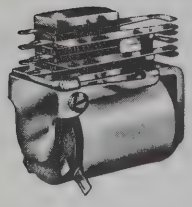
Resistance: Up to 50,000 ohms, single or double wound.

Standard Contacts: 18 ga. palladium, rated 3 amps, 150W. resistive.

Type	Coil Voltage	Contact Arrange.	Coil Res. (Ohms)	Operate Curr. (Amps)	Operate Time (Sec.)	Net
2DC-6-2C	6	DPDT	50	.048	.030	7.20
2DC-6-6C	6	6PDT	50	.090	.065	11.20
2DC-24-2C	24	DPDT	600	.015	.025	7.50
2DC-24-6C	24	6PDT	600	.024	.050	11.50
2DC-48-4C	48	4PDT	2,000	.011	.040	7.70
2DC-48-6C	48	6PDT	2,000	.013	.050	11.70
2DC-115-1C	115	SPDT	3,600	.0045	.010	7.00
2DC-115-3C	115	3PDT	3,600	.008	.015	9.25
2DC-230-2C	230	DPDT	10,000	.004	.010	8.80
2DC-230-4C	230	4PDT	10,000	.006	.050	10.80

Type	Coil Voltage	Contact Arrange.	Coil Res. (Ohms—DC)	Curr. Drain (Amps—AC)	Pick-up Volt. 60 Cy.	Net
2AC-6-C	6	SPDT	0.2	1	4.5	7.10
2AC-6-4C	6	4PDT	0.2	1	4.5	8.60
2AC-24-2C	24	DPDT	4	.24	21	7.55
2AC-24-4C	24	4PDT	4	.24	21	8.60
2AC-115-1C	115	SPDT	100	.08	100	7.50
2AC-115-3C	115	3PDT	100	.08	100	9.70

SHORT FRAME TELEPHONE TYPES

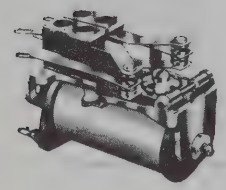


TYPE 4 Relays constructed on the same general design of compact assembly and possess similar specifications. The heelpiece, armature and coil core are made of annealed magnetic iron, with the heelpiece acting as a return path for the magnetic circuit. The armature is pivoted on long-life bearings to insure constant pickup and drop-out adjustment. Standard relays are supplied with solder terminals for contact springs and coils.

Standard Contacts: 18 ga. palladium, rated 3 amps, 150W. resistive.

TYPE	CONTACT ARRANGE.	COIL RES. OHMS	NET
4CDC-6-2C	DPDT	30	5.30
4CDC-12-2C	DPDT	75	5.30
4CDC-24-2C	DPDT	425	5.30
4CDC-115-2C	DPDT	6500	5.80
4CDC-6-4C	4PDT	30	7.05
4CDC-12-4C	4PDT	75	7.05
4CDC-24-4C	4PDT	425	7.05
4CDC-115-4C	4PDT	6500	7.65
4CDC-12-6C	6PDT	75	8.60
4CDC-24-6C	6PDT	425	8.65
4CDC-115-6C	6PDT	6500	9.20

MEDIUM FRAME TELEPHONE TYPES



TYPE 8 Small versatile multi-contact telephone type relays. Available with many variations in coils, contact assemblies, contact ratings, adjustments, terminal arrangements and mountings for a variety of applications. Standard contact blades are made of spring temper nickel silver, designed to give true independent twin contact operation. For special applications, other materials and configurations are used for contact blades.

Coil Characteristics:

Operating Voltage: Up to 300 volts D. C., 115 volts A. C., 60 or 400 cycles.

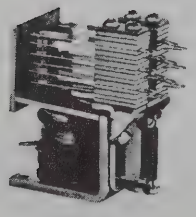
Resistance: Up to 21,000 ohms. Single or double wound.

Standard Contacts: Twin palladium, rated 4 amps, 175W. resistive.

TYPE (DC)	COIL RES. (OHMS)	OPERATE CURR. (AMPS)	WATTS	OPERATE TIME (SEC.)	NET
8DC-12-4C	100	.072	.518	.022	8.25
8DC-12-6C	100	.100	1.0	.030	11.30
8DC-24-4C	300	.046	.635	.020	8.25
8DC-24-6C	300	.064	1.23	.025	11.30
8DC-115-4C	8000	.010	.80	.023	9.80
8DC-115-6C	8000	.012	1.15	.023	12.15

TYPE (AC)	COIL RES. (OHMS)	CURR. DRAIN (AMPS)	PICK-UP VOLT. 60 CY.	NET
8AC-115-2C	400	.075	95	6.30
8AC-115-4C	400	.075	95	8.90

GENERAL PURPOSE TYPES



TYPE 12 Low cost general purpose relay with multiple contacts. Used widely in commercial applications such as industrial controls, communications equipment, and automatic vending machines. On special order available in resistances up to 12,000 ohms. AC or DC, 230 volts, maximum. Coil dissipation, 3 watts maximum.

Dimensions: H. 2 3/16"; L. 1 23/32"; W. 1".

Mounting: Single stud, four mounting holes.

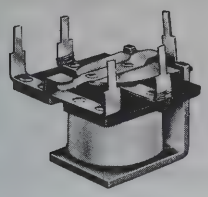
Standard Contacts: 3/16" silver.

TYPE	COIL VOLTAGE (DC)	CONTACT ARRANGE.	RATING (AMPS)	NET
12DC-6-2C-10	6	DPDT	10	2.30
12DC-12-2C-10	12	DPDT	10	2.40
12DC-24-2C-10	24	DPDT	10	2.50
12DC-115-2C-10	115	DPDT	10	2.80
12DC-6-3C-10	6	3PDT	10	3.00
12DC-12-3C-10	12	3PDT	10	3.10
12DC-24-3C-10	24	3PDT	10	3.15
12DC-115-3C-10	115	3PDT	10	3.50
12DC-6-4C-10	6	4PDT	10	3.00
12DC-12-4C-10	12	4PDT	10	3.10
12DC-24-4C-10	24	4PDT	10	3.15
12DC-115-4C-10	115	4PDT	10	3.50
12DC-6-6C-10	6	6PDT	10	3.50
12DC-12-6C-10	12	6PDT	10	3.60
12DC-24-6C-10	24	6PDT	10	3.65
12DC-115-6C-10	115	6PDT	10	4.00

TYPE	COIL VOLTAGE (AC)	CONTACT ARRANGE.	RATING (AMPS)	NET
12AC-6-2C-10	6	DPDT	10	2.40
12AC-12-2C-10	12	DPDT	10	2.50
12AC-24-2C-10	24	DPDT	10	2.55
12AC-115-2C-10	115	DPDT	10	2.70
12AC-6-3C-10	6	3PDT	10	2.70
12AC-12-3C-10	12	3PDT	10	2.80
12AC-24-3C-10	24	3PDT	10	2.90
12AC-115-3C-10	115	3PDT	10	3.10
12AC-6-4C-10	6	4PDT	10	3.10
12AC-12-4C-10	12	4PDT	10	3.15
12AC-24-4C-10	24	4PDT	10	3.20
12AC-115-4C-10	115	4PDT	10	3.40
12AC-6-6C-10	6	6PDT	10	3.60
12AC-12-6C-10	12	6PDT	10	3.65
12AC-24-6C-10	24	6PDT	10	3.70
12AC-115-6C-10	115	6PDT	10	3.90

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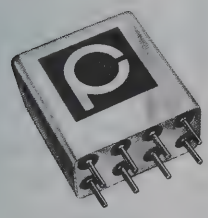
GENERAL PURPOSE TYPES

TYPE 15 A small economical unit designed for printed circuit or screw mounting. 200 milliwatts nominal operating power. Available form 1C only.

Dimensions: H. 0.781"; L. 1⅛"; W. 1".

Mounting: Single ⅝" tapped hole.

TYPE	COIL VOLTAGE	COIL RES.	CONTACT RATING (AMPS)	NET
15-6-1C	6	85	1	1.50
15-12-1C	12	300	1	1.50
15-24-1C	24	1100	1	1.50

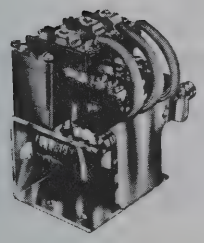


MICRO-MINIATURE TYPES

TYPE 30 Phillips micro-miniature Type 30 provides rugged, dependable performance from a compact, hermetically sealed relay. It is ideal for applications involving computer systems, missile or aircraft control circuits, communications equipment and general electronic circuitry.

Quality controlled production and precision components assembled and tested under dust-free, super clean manufacturing conditions assures you that the Phillips micro-miniature Type 30 will uphold the high quality standards of your products. Conforms to MIL-5757 D. Meets the following low level requirements: 30 microvolts open circuit voltage; 10 microamperes contact current.

Type	Mounting	Res.	Volt. Nom.	Net
30-01G	Solder Header with 2 Mounting Brackets	675	26.5	7.25
30-02G	Solder Header with Side Bracket	675	26.5	7.25
30-04G	Solder Header with 2 Side Studs	675	26.5	7.25
30-05G	Solder Header with 2 Top Studs	675	26.5	7.25
30-07G	Plug In—Plain Can	675	26.5	7.25



POWER TYPES

TYPE 33B Designed and constructed with a variety of features which contribute to the sensitivity and longevity of this relay. Contacts and terminals are mounted on molded phenolic blocks with integral barriers. Moveable contact blades are made of spring temper phosphor bronze for high conductivity and long life. Adjusting screws on each blade permit close adjustment in the factory for contact gap, over-travel, and pressure. Armature pivots on machined phosphor bronze bearing pins and pivot holes are precision reamed. Adjustment of the armature and yoke assembly allows proper alignment between the armature and pole face. Four 6-32 N. C. tapped mounting holes in the base allow easy mounting on chassis or bracket.

Coil Characteristics:

Operating Voltage: Up to 300 volts D. C. Up to 450 volts A. C., 60 cycles.

Resistance: Up to 12,000 ohms.

Operating Current: 0.007 amps D. C., minimum.

Operating Time: 0.010 seconds, minimum.

Contact Assembly: All forms A, B, or C plus double makes, breaks and transfers. Code No. 13 or 14 silver contacts, standard. Other contacts available.

*Stock numbers are coded—
Relay Type 33B—AC or DC—nominal voltage 24—
Contact assembly 5C—contacts Code 14

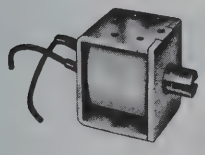
A type 33B Relay for 24 volt DC operation with a 4C contact assembly using Code number 14 contacts.

Type (DC)	Coil Res. (Ohms)	Operate Curr. (Amps)	Watts	Operate Time (Sec.)	Contact Arrange.	Net
33BDC-6-3C-14	18	.185	.62	.019	3PDT	6.60
33BDC-6-5C-14	18	.225	.91	.025	5PDT	8.10
33BDC-24-3C-14	250	.064	1.02	.025	3PDT	6.60
33BDC-24-5C-14	250	.070	1.22	.029	5PDT	8.10
33BDC-230-3C-14	10,000	.010	1.0	.014	3PDT	8.60
33BDC-230-5C-14	10,000	.011	1.21	.016	5PDT	10.10

Type (AC)	Coil No.	Coil Res. (Ohm —DC)	Curr. Drain (Amps)	Pick-up Volt. 60 Cy.	Contact Arrange.	Net
33BAC-6-3C-14	33CA3F	1	.720	4.5	3PDT	6.60
33BAC-6-5C-14	33CA3F	1	.720	4.5	5PDT	8.10
33BAC-24-3C-14	33CA3K	9	.390	21	3PDT	6.60
33BAC-24-5C-14	33CA3K	9	.390	21	5PDT	8.10
33BAC-115-3C-14	33CA3Q	215	.070	100	3PDT	9.10
33BAC-115-5C-14	33CA3Q	215	.070	100	5PDT	10.60

SOLENOIDS

TYPES 38, 39, 40, 41, 42, 51 Solid frame solenoids using high-grade steel in all parts of the magnetic circuit. Carefully controlled annealing, after all machining operations are completed, assures maximum efficiency. The frame is dovetailed and staked to the end plate, adding mechanical strength and increasing the performance of the magnetic circuit. Plungers and plunger stops, which are made of annealed and specially processed steel, are available in three standard types for specific operating requirements. Type 51 is a laminated frame solenoid and has been designed and engineered to meet all of the requirements of the highest quality A. C. solenoid. Special production techniques and rigid quality control combine to provide a highly efficient unit. The frame is composed of silicon steel laminations securely riveted to a steel frame. Pole faces are precision ground and equipped with copper shading rings. Silicon steel laminations are also used for the plunger.



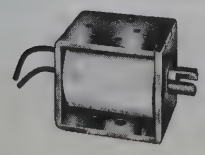
TYPE 38

DC SOLENOIDS

CONTINUOUS DUTY Type	Volt.	Coil Res.	Net	25% INTERMITTENT DUTY Type	Volt.	Coil Res.	Net
38C06DC-AY	6	6	4.50	—	—	—	—
38C12DC-AY	12	21	4.50	382512DC-AY	12	6	4.50
38C24DC-AY	24	66	4.50	382524DC-AY	24	21	4.50
38C48DC-AY	48	300	4.50	382548DC-AY	48	66	4.50
38C115DC-AY	115	1500	4.50	3825115DC-AY	115	400	4.50

AC SOLENOIDS

CONTINUOUS DUTY Type	Volt.	Coil Res.	Net	25% INTERMITTENT DUTY Type	Volt.	Coil Res.	Net
38C0660-AX	6	0.75	4.50	—	—	—	—
38C1260-AX	12	2.5	4.50	38251260-AX	12	0.75	4.50
38C2460-AX	24	10	4.50	38252460-AX	24	2.5	4.50
38C11560-AX	115	135	4.50	382511560-AX	115	50	4.50
38C23060-AX	230	470	4.50	382523060-AX	230	135	4.50



TYPE 39

DC SOLENOIDS

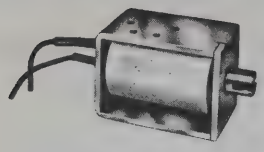
CONTINUOUS DUTY Type	Volt.	Coil Res.	Net	25% INTERMITTENT DUTY Type	Volt.	Coil Res.	Net
39C06DC-AY	6	4	5.10	—	—	—	—
39C12DC-AY	12	10	5.10	392512DC-AY	12	4	5.10
39C24DC-AY	24	60	5.10	392524DC-AY	24	10	5.10
39C48DC-AY	48	250	5.10	392548DC-AY	48	60	5.10
39C115DC-AY	115	1600	5.10	3925115DC-AY	115	300	5.10

AC SOLENOIDS

CONTINUOUS DUTY Type	Volt.	Coil Res.	Net	25% INTERMITTENT DUTY Type	Volt.	Coil Res.	Net
39C0660-AX	6	.4	5.10	—	—	—	—
39C1260-AX	12	1.5	5.10	39251260-AX	12	.4	5.10
39C2460-AX	24	7	5.10	39252460-AX	24	1.5	5.10
39C11560-AX	115	105	5.10	392511560-AX	115	30	5.10
39C23060-AX	230	400	5.10	392523060-AX	230	105	5.10

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PHILLIPS-ADVANCE CONTROL CO.



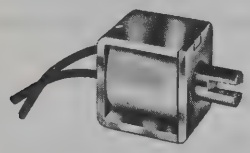
TYPE 40

DC SOLENOIDS

CONTINUOUS DUTY				25% INTERMITTENT DUTY			
Type	Volt.	Coil Res.	Net	Type	Volt.	Coil Res.	Net
40C06DC-AY	6	3.6	6.00	—	—	—	—
40C12DC-AY	12	12	6.00	402512DC-AY	12	3.6	6.00
40C24DC-AY	24	47.5	6.00	402524DC-AY	24	12	6.00
40C48DC-AY	48	225	6.00	402548DC-AY	48	47.5	6.00
40C115DC-AY	115	1570	6.00	4025115DC-AY	115	417	6.00

AC SOLENOIDS

CONTINUOUS DUTY				25% INTERMITTENT DUTY			
Type	Volt.	Coil Res.	Net	Type	Volt.	Coil Res.	Net
40C0660-AX	6	0.8	6.00	—	—	—	—
40C1260-AX	12	1.5	6.00	40251260-AX	12	0.8	6.00
40C2460-AX	24	8.8	6.00	40252460-AX	24	1.5	6.00
40C11560-AX	115	84	6.00	402511560-AX	115	25	6.00
40C23060-AX	230	417	6.00	402523060-AX	230	84	6.00



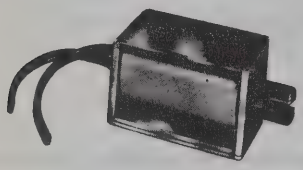
TYPE 41

DC SOLENOIDS

CONTINUOUS DUTY				25% INTERMITTENT DUTY			
Type	Volt.	Coil Res.	Net	Type	Volt.	Coil Res.	Net
41C06DC-AU	6	12	4.10	—	—	—	—
41C12DC-AU	12	60	4.10	412512DC-AU	12	12	4.10
41C24DC-AU	24	200	4.10	412524DC-AU	24	60	4.10
41C48DC-AU	48	830	4.10	412548DC-AU	48	200	4.10
41C115DC-AU	115	4500	4.10	4125115DC-AU	115	1400	4.10

AC SOLENOIDS

CONTINUOUS DUTY				25% INTERMITTENT DUTY			
Type	Volt.	Coil Res.	Net	Type	Volt.	Coil Res.	Net
41C0660-AX	6	1	4.10	—	—	—	—
41C1260-AX	12	10	4.10	41251260-AX	12	1	4.10
41C2460-AX	24	45	4.10	41252460-AX	24	10	4.10
41C11560-AX	115	740	4.10	412511560-AX	115	230	4.10
41C23060-AX	230	2700	4.10	412523060-AX	230	740	4.10



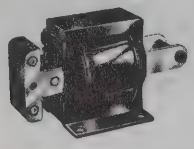
TYPE 42

DC SOLENOIDS

CONTINUOUS DUTY				25% INTERMITTENT DUTY			
Type	Volt.	Coil Res.	Net	Type	Volt.	Coil Res.	Net
42C06DC-AU	6	8	4.50	—	—	—	—
42C12DC-AU	12	30	4.50	422512DC-AU	12	8	4.50
42C24DC-AU	24	115	4.50	422524DC-AU	24	30	4.50
42C48DC-AU	48	420	4.50	422548DC-AU	48	115	4.50
42C115DC-AU	115	2300	4.50	4225115DC-AU	115	675	4.50

AC SOLENOIDS

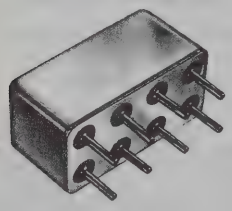
CONTINUOUS DUTY				25% INTERMITTENT DUTY			
Type	Volt.	Coil Res.	Net	Type	Volt.	Coil Res.	Net
42C0660-AX	6	1	4.50	—	—	—	—
42C1260-AX	12	3.5	4.50	42251260-AX	12	1	4.50
42C2460-AX	24	30	4.50	42252460-AX	24	3.5	4.50
42C11560-AX	115	370	4.50	422511560-AX	115	125	4.50
42C23060-AX	230	1100	4.50	422523060-AX	230	370	4.50



TYPE 51 AC SOLENOIDS

CONTINUOUS DUTY				25% INTERMITTENT DUTY			
Type	Volt.	Coil Res.	Net	Type	Volt.	Coil Res.	Net
51C11560	115	30	7.20	512511560	115	15	7.20
51C23060	230	150	7.20	512523060	230	65	7.20
51C46060	460	650	7.20	512546060	460	285	7.20

MICRO-MINIATURE HALF SIZE TYPES

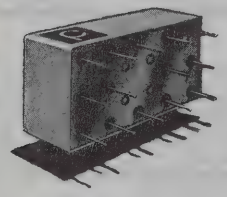


TYPE 62 A unique half-size microminiature relay having these eleven specific advantages: (1) diagonally mounted coil allows larger coil for greater sensitivity; (2) uniquely designed armature assures maximum sensitivity and magnetic uniformity; (3) massive pole pieces provide higher heat dissipation; (4) contacts of gold-flashed silver magnesium nickel for high temperature stability and low level performance; (5) single coil design provides greater reliability; (6) single stamping forms integral return spring and back stop. Fewer parts, greater dependability; (7) Welded, spade-type coil terminations; (8) greater rigidity thru unitized, welded construction; (9) designed for optimum magnetic characteristics; (10) balanced armature provides higher resistance to vibration and shock; (11) sensitivity level below 200 milliwatts.

Dimensions: H. 0.400"; L. 0.390"; W. 0.800".

Type	Res.	Contacts	Volt.	Style	Net
62-01-G	700	DPDT	26.5	Solder Header with 2 Mounting Brackets	14.25
62-07-G	700	DPDT	26.5	Plug In—Plain Can	14.25

MICRO-MINIATURE 4 POLE—HALF SIZE TYPES



TYPE 64 The Type 64 embodies engineering advances truly unique among today's four-pole, double throw relays—twice the versatility of conventional 2PDT's, half the size of conventional 4PDT's, with no sacrifice in performance. Designed specifically to meet aero-space needs, the Type 64 features all-welded construction and "Thermo-Dri" nitrogen backfilling to assure contamination-free operation. Symmetrical circuitry simplifies wiring. Available in various coil resistances and all popular header styles. Meets MIL-R-5757/12A.

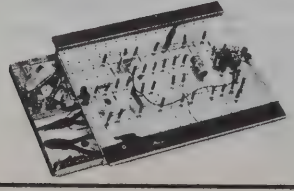
Type	Res.	Contacts	Voltage	Style	Net
64-01-H	500	4PDT	26.5	Solder Header with Mounting Brackets	24.50
64-07-H	500	4PDT	26.5	Plug In—Plain Can	24.50

SENSITIVE MICRO-MINIATURE TYPES



TYPE 80 A 40 milliwatt micro-miniature relay using latest manufacturing techniques, including back-filling with "Thermo-Dri" nitrogen and precise adjustments to obtain an operate time of less than 10 milliseconds. This unit meets all requirements of military specifications, MIL-R-5757/13A. Vibration, 20 G's through 2000 CPS. Shock, 65 G's for 11 milliseconds. Operating temperature range, —65 C to +125 C.

Type	Res. (Ohms)	Contact Rating (Amps)	Voltage	Style	Net
80-01-S	5000	3	26.5	Solder Header with Mounting Brackets	13.00
80-07-S	5000	3	26.5	Plug In—Plain Can	13.00



CIRCUIT DESIGNERS' BREADBOARD The latest advance in circuit breadboard design . . . the ideal electronic workbench for schools and industry. Circuit diagrams may be drawn on schematic transferral board and viewed from above thru transparent work surface. 14K gold plated spring connectors assure perfect electrical contacts, instantly and without solder. Features: sturdy aluminum frame on rubber cushions; binding posts, 100 spring connectors included; solid ¼" Plexiglas circuit panel; built-in ground rail for alligator clips; partitioned drawer for tools and parts; slide-out schematic board doubles as cover; includes Ohms Law, color code, symbol charts. Size, 14" by 17". Weight, 4¾ pounds. Net, **$34.95**

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POTTER & BRUMFIELD *Quality* RELAYS

STOCK CATALOG 100

eem File System Sec. 4500
electronic engineers master

ALPHABETICAL INDEX

Relay	Page	Relay	Page	Relay	Page	Relay	Page
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AP	10	GP	9	KR3	10	MG	2
BS	1	GP Kit	9	KRP	10	MH	2
BS Cover	1	HC	8	KRP-N	10	ML	2
BU	10	JM	6, 7	KT	11	MR	4
CD	5	KA, KAP	9	LB	3	MS	11
FC, FL	8	KB	9, 11	LM	3	MS/MR Cover	4, 11
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						Hold Down Spring	10

KEY TO SUFFIXES

SUFFIX		STANDS FOR	EXAMPLE
A	—	Alternating Current	BS17A
D	—	Direct Current	BS17D
DD	—	DC in a sealed "D" can	MH23DD
G	—	Silver Cad.-Oxide Contacts	KRP5AG
L	—	Plate Circuit	SM5L
M	—	Sealed in "M" can	MH17DM
N	—	Neon Light	KRP11AN
P	—	Enclosed in Plastic Dust Cover	MG11DP
R	—	With Built-in Rectifier	MH17AMR
S	—	Sealed in can	PW5DS, SM5DS
T	—	Sealed in "T" can	MG11DT
Y	—	U/L Listed	AB11AY

ORDERING INSTRUCTIONS —— File-O-Matic Sec. 23

All relay contacts are rated at 115 volt-60 cycle, non inductive load.

When ordering specify relay type and coil voltage or resistance.

Example: PR5AY, 115 Volts AC, 60 cycles or LB5, 2500 ohms resistance.

To operate 110V DC relays on 220V DC use a 5 watt wire-wound resistor of a value approximately the relay coil resistance in series with the relay coil.

CONTACT LEGEND: S-Single; D-Double; P-Pole; T-Throw; N-Normally; O-Open; C-Closed; B-Break; M-Make.

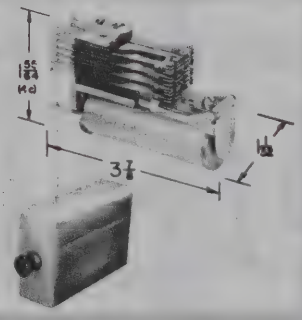
Prices and Specifications subject to change without notice. For latest prices refer to United Pricing Service.

IN STOCK AT LEADING ELECTRONIC PARTS DISTRIBUTORS

BS SERIES Long coil telephone type. Suited for computer and automatic test equipment applications requiring large numbers of poles. Tinned, pierced solder type terminals for rear panel wiring. Mounting: Two No. 8-32 NC 2B tapped holes on ¾" centers. Contacts arms: Bifurcated with 1/16" dia. twin palladium contacts. Weight: Approximately 9 ozs.

BS DUST COVER Two sizes of sheet metal enclosures: Small size for BS relays up to 6 Form C (6PDT, BS23), measures: H: 2 1/16", W: 1¼", L: 3 27/32" exclusive ⅝" knob; weight: 6.5 ozs. Medium size for up to 10 Form C, measures: H: 2⅝", other dimensions same as small size; weight: 7 ozs.

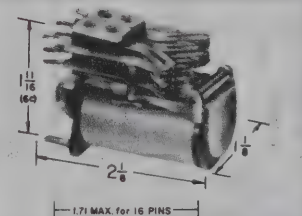
35D188, Small size NET $1.80
35D189, Medium size NET $1.80



TELEPHONE TYPE RELAYS

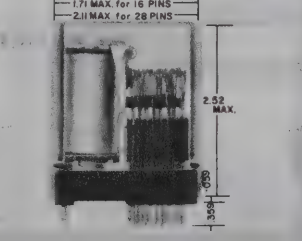
TYPE	COILS: Voltage or Current	COILS: Resistance in Ohms	COILS: Nominal Power	CONTACTS: Arrangement	CONTACTS: Rate in Amps	SUGG. RESALE PRICE
BS17A	115V	71	17.9VA	4PDT	4	$ 9.00
BS17D	24V	1,000	576MW	4PDT	4	7.40
BS17D	110V	6,500	1.8W	4PDT	4	8.00
BS17L	5.5MA	10,000	300MW	4PDT	4	8.00
BS23A	115V	71	17.9VA	6PDT	4	10.50
BS23D	24V	1,000	576MW	6PDT	4	8.95
BS23D	110V	6,500	1.8W	6PDT	4	9.50
BS23L	7.6MA	10,000	600MW	6PDT	4	9.50

LS SERIES Short springs and light weight armature provide fast action without sacrificing reliability and long life. Stainless steel hinge bearing designed to give 100 million operations. Tinned, pierced solder type terminals. Mounting: Two No. 6-32 tapped holes on ¾" centers. Bifurcated contact arms with 1/16" dia. twin palladium contacts. Weight: Approximately 4 ozs.



LS17D	24V	300	1.8W	4PDT	4	5.60
LS17D	48V	1,300	1.8W	4PDT	4	5.75
LS17D	110V	8,000	1.8W	4PDT	4	6.00
LS23D	24V	300	1.8W	6PDT	4	6.80
LS23D	48V	1,300	1.8W	6PDT	4	6.95
LS23D	110V	8,000	1.8W	6PDT	4	7.20

The LSP version has identical specifications as the LS, except that it is enclosed in a high impact, clear plastic cover and is provided with a rectangular socket with combination taper tab or solder terminations. Enables plug-in like any other plug-in component. Two sizes of sockets and covers are available: 16-pin for 4 Form C (4PDT) or 28-pin for 6 Form C (6PDT). Dimensions: LSP17D: 1.71" x 1.39" x 2.52" seated; weight: 4 ozs. LSP23D: 2.11" x 1.39" x 2.52" seated; weight: 4½ ozs.



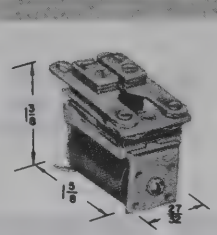
LSP17D	24V	300	1.8W	4PDT	4	$ 7.35
LSP17D	48V	1,300	1.8W	4PDT	4	7.45
LSP17D	110V	8,000	1.8W	4PDT	4	7.75
LSP23D	24V	200	2.9W	6PDT	4	9.10
LSP23D	48V	800	2.9W	6PDT	4	9.20
LSP23D	110V	4,200	2.9W	6PDT	4	9.50

POTTER & BRUMFIELD DIVISION AMF AMERICAN MACHINE & FOUNDRY COMPANY

Potter & Brumfield Relays

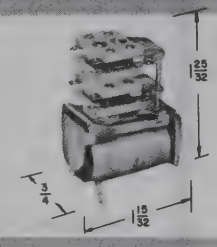
TELEPHONE TYPE RELAYS

MB SERIES Miniature DC contactor. Designed for very high current applications. Extra rugged construction insures long life. Handles 150 ampere surges for 0.3 sec. Contact arms: Stationary, heavy brass, ¼" dia. silver contacts pierced solder terminals. Movable, ¼" x 1 1/16" silver bar contact. Mounting: Four No. 3-48 tapped holes on ⅜" x ⅜" centers. Weight: 2 ozs.



TYPE	COILS: Voltage or Current	COILS: Resistance in Ohms	COILS: Nominal Power	CONTACTS: Arrangement	CONTACTS: Rate in Amps	SUGG. RESALE PRICE
MB3D	**6V**	**13.3**	**2.7W**	**SPST-NO-DB**	**60**	**$ 5.40**
MB3D	12V	62.3	2.7W	SPST-NO-DB	60	5.50
MB3D	24V	245	2.7W	SPST-NO-DB	60	5.50
MB3D	110V	5,000	2.7W	SPST-NO-DB	60	5.90

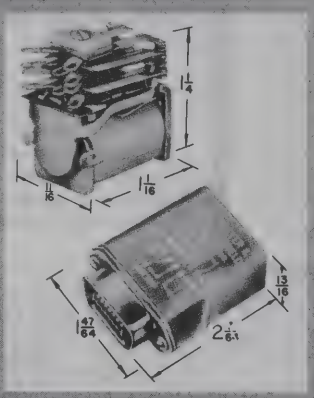
MC SERIES Built with ceramic contact spaces for RF switching to minimize losses at high frequencies. Intercontact capacitance 1.5 mmfd. max. Tinned, pierced solder type terminals. Mounting: Four No. 3-48 tapped holes on ⅜" x ⅜" centers. Contacts: 3/32" dia. palladium. Weight: 2 ozs.



MC5A	**6V**	**2.5**	**4.6VA**	**SPDT**	**1**	**$ 5.00**
MC5A	115V	800	4.6VA	SPDT	1	5.00
MC5D	12V	96	1.6W	SPDT	1	4.40
MC5D	24V	365	1.6W	SPDT	1	4.40
MC11A	115V	800	4.6VA	DPDT	1	6.90
MC11D	12V	96	1.6W	DPDT	1	6.35
MC11D	24V	365	1.6W	DPDT	1	6.35
MC11D	110V	6,200	1.6W	DPDT	1	6.85

SPECIFY COIL VOLTAGE OR RESISTANCE WHEN ORDERING

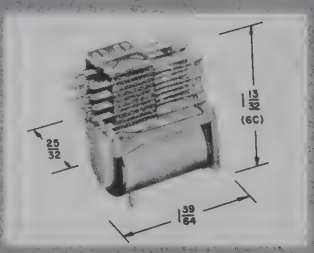
MG SERIES Sub-miniature telephone type relay for aircraft, computer and other applications requiring good shock and vibration characteristics. Furnished open, sealed or in nylon dust cover. Mounting: Open model has four No. 3-48 tapped holes on ⅜" x ⅜" centers. Sealed model has three No. 4-40 threaded studs on 1" x ½" centers. Dust cover model has plug-in header that fits Amphenol receptacle No. 57-20140 or similar. Contacts: 3/32" dia. silver. Weight: Open 1.2 ozs.; Dust cover 2.0 ozs.; Sealed 2.75 ozs.



MG11D	**6V**	**23**	**1.6W**	**DPDT**	**2**	**5.20**
MG11D	12V	90	1.6W	DPDT	2	5.20
MG11D	24V	365	1.6W	DPDT	2	5.20
MG11D	110V	7,560	1.6W	DPDT	2	5.65
MG11DT†	24V	365	1.6W	DPDT	2	10.50
MG17D	6V	23	1.6W	4PDT	2	6.95
MG17D	12V	90	1.6W	4PDT	2	6.95
MG17D	24V	365	1.6W	4PDT	2	6.95
MG17D	110V	7,560	1.6W	4PDT	2	7.40
MG17DP§	6V	23	1.6W	4PDT	2	11.55
MG17DP§	12V	90	1.6W	4PDT	2	11.55
MG17DP§	24V	365	1.6W	4PDT	2	11.55
MG17DP§	110V	7,560	1.6W	4PDT	2	12.15
MG17DT†	24V	365	1.6W	4PDT	2	12.60
MG17DT†	110V	7,560	1.6W	4PDT	2	13.20

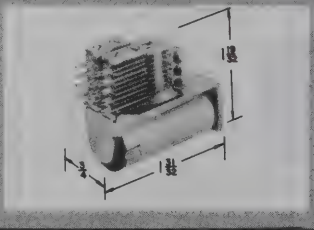
MH SERIES MINIATURE TYPE

Ideal for miniature program applications where space and weight are factors. Mounting: Open model, MH11L, one No. 6-32 threaded stud 11/32" long plus locating boss. All other open models have four No. 3-48 holes on ⅜" x ⅜" centers. Sealed models, M enclosures, three 6-32 NC 2 threaded studs on 1¼" x ½" centers. D enclosures, three 6-32 threaded studs on 1 3/16" x 1 5/16" centers. All sealed models have hook end solder terminals. All models have ⅛" dia. gold-flashed silver contacts. Weight: Open models 2½ oz. max. Sealed models 5 ozs. max.



MH11L	**4.5MA**	**10,000**	**200MW**	**DPDT**	**3**	**5.45**
MH11LM†	4.5MA	10,000	200MW	DPDT	3	9.20
MH17D	6V	23	1.6W	4PDT	5	5.45
MH17D	12V	96	1.6W	4PDT	5	5.45
MH17D	24V	365	1.6W	4PDT	5	5.45
MH17DM†	6V	23	1.6W	4PDT	5	11.00
MH17DM†	12V	96	1.6W	4PDT	5	11.00
MH17DM†	24V	365	1.6W	4PDT	5	11.00
MH17AMR†	115V	6,200	2VA	4PDT	5	17.95
MH23D	6V	13.3	2.5W	6PDT	5	6.85
MH23D	12V	62.3	2.5W	6PDT	5	6.85
MH23D	24V	245	2.5W	6PDT	5	6.85
MH23D	110V	5,000	2.5W	6PDT	5	7.30
MH23DD†	12V	62.3	2.5W	6PDT	5	14.60
MH23DD†	24V	245	2.5W	6PDT	5	14.60
MH23DD†	110V	5,000	2.5W	6PDT	5	15.15

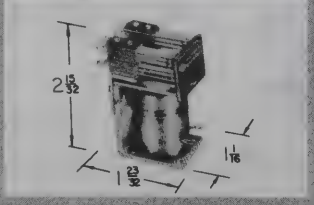
ML SERIES A small telephone type relay having excellent sensitivity with outstanding switching capabilities. Ideal for transistorized computor networks, telephone systems and battery powered communications equipment. Single contact arms have ⅛" dia. gold-flashed silver contacts rated at 3 amps for 100,000 operations. Pierced solder terminals. Mounting: Four 3-48 holes on ⅜" centers. Weight: 2.5 ozs.



ML11D	**4.0MA**	**2,500**	**40MW**	**DPDT**	**3**	**6.05**
ML11D	2.83MA	5,000	40MW	DPDT	3	6.20
ML11D	2.0MA	10,000	40MW	DPDT	3	6.50
ML17D	5.65MA	2,500	80MW	4PDT	3	7.20
ML17D	4.0MA	5,000	80MW	4PDT	3	7.35
ML17D	2.83MA	10,000	80MW	4PDT	3	7.65
ML23D	6.93MA	2,500	120MW	6PDT	3	8.15
ML23D	4.9MA	5,000	120MW	6PDT	3	8.30
ML23D	3.46MA	10,000	120MW	6PDT	3	8.60

PLATE CIRCUIT and SENSITIVE RELAYS

GB SERIES (See GA series for similar voltage actuated relays.) Sensitivity 115 milliwatts for single pole and 275 milliwatts for 4 pole. Medium cost, high quality relay. Pull-in is not adjustable. Mounting: No. 8-32 tapped core and locating boss. Contacts: 3/16" dia. silver. Weight: Approximately 5 ozs.



GB5D	**6.8MA**	**2,500**	**115MW**	**SPDT**	**5**	**3.45**
GB5D	4.8MA	5,000	115MW	SPDT	5	3.60
GB5D	3.4MA	10,000	115MW	SPDT	5	4.10
GB11D	7MA	2,500	125MW	DPDT	5	4.85
GB11D	5MA	5,000	125MW	DPDT	5	4.95
GB11D	3.53MA	10,000	125MW	DPDT	5	5.50
GB17D	10.5MA	2,500	275MW	4PDT	5	5.80
GB17D	7.4MA	5,000	275MW	4PDT	5	5.95
GB17D	5.25MA	10,000	275MW	4PDT	5	6.40

†Sealed Relay
§Enclosed Relay

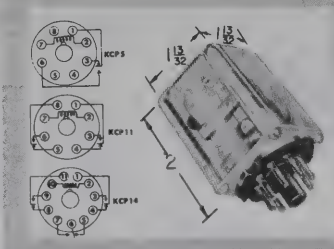
See ordering information on page 1.

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Potter & Brumfield Relays

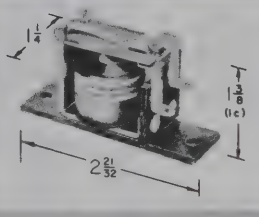
PLATE CIRCUIT and SENSITIVE RELAYS

KCP SERIES Low cost plate circuit relay enclosed in clear high impact plastic cover. Sensitivity 125 mw single pole; 250 mw double pole; 375 mw three pole. Mounting: Standard octal plug-in type. Eight pin for KCP5 and KCP11. Eleven pin for KCP14. Contacts: ⅛" dia. gold-flashed silver. Weight: Approximately 3 ozs. Use KCP-KRP hold down spring when vibration, inverted or horizontal mounting are factors (see page 10).



TYPE	COILS			CONTACTS		SUGG. RESALE PRICE
	Voltage or Current	Resistance in Ohms	Nominal Power	Arrangement	Rate in Amps	
KCP5§	7.2MA	2,500	125MW	SPDT	2	$ 5.90
KCP5§	5MA	5,000	125MW	SPDT	2	6.00
KCP5§	3.6MA	10,000	125MW	SPDT	2	6.40
KCP11§	10MA	2,500	250MW	DPDT	2	6.30
KCP11§	7.2MA	5,000	250MW	DPDT	2	6.40
KCP11§	5MA	10,000	250MW	DPDT	2	6.80
KCP14§	12.3MA	2,500	375MW	3PDT	2	7.75
KCP14§	8.7MA	5,000	375MW	3PDT	2	7.85
KCP14§	6.1MA	10,000	375MW	3PDT	2	8.25

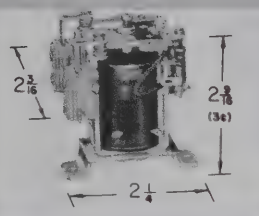
LB SERIES Designed for top performance, long life at an unusually low cost. Each coil is wound with a given coil resistance and factory adjusted to operate on minimum current requirements. Mounting: Two 3/16" dia. holes on 2 7/32" centers. Contacts: ⅛" dia. silver. Weight: Approximately 2 ozs.



LB5	9MA	2,500	200MW	SPDT	5	2.45
LB5	6.3MA	5,000	200MW	SPDT	5	2.65
LB5	4.5MA	10,000	200MW	SPDT	5	2.85

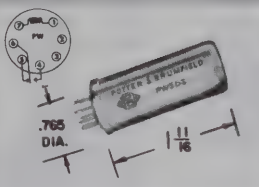
SPECIFY COIL VOLTAGE OR RESISTANCE WHEN ORDERING

LM SERIES (See KL for similar voltage actuated relays.) Sensitivity 100 milliwatts for single pole and 200 milliwatts for double pole. Medium cost, high quality relay with 7/32" dia. silver contacts. Pull-in adjustable by tail spring adjusting screw. Mounting: Two No. 6-32 tapped holes on 1 13/16" centers. Weight: Approximately 5 ozs. DC Coils only.



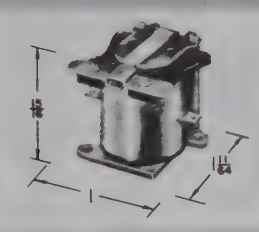
LM5	6.3MA	2,500	100MW	SPDT	5	3.90
LM5	4.5MA	5,000	100MW	SPDT	5	4.10
LM5	3.2MA	10,000	100MW	SPDT	5	4.40
LM11	9MA	2,500	200MW	DPDT	5	5.55
LM11	6.3MA	5,000	200MW	DPDT	5	5.75
LM11	4.5MA	10,000	200MW	DPDT	5	6.30

PW SERIES (In both voltage and current actuated models.) Sensitivity 40 mw for current actuated models. 180 mw for voltage actuated models. Precision, light weight, hermetically sealed relay for aircraft and missile applications. Will withstand 10G vibration to 500 cps. Mounting: Standard 7-pin miniature tube base. Weight: Approx. 1 oz.



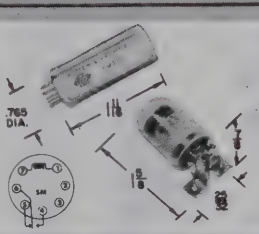
PW5DS†	6V	202	180MW	SPDT	1	10.25
PW5DS†	12V	810	180MW	SPDT	1	10.25
PW5DS†	24V	3,240	180MW	SPDT	1	10.25
PW5LS†	2.8MA	5,000	40MW	SPDT	1	10.60
PW5LS†	2.0MA	10,000	40MW	SPDT	1	11.00

RS SERIES (In both voltage and current actuated models.) 60 mw. sensitivity. Low-cost, small, light weight, sensitive relay for radio-sonde, light dimmer and model applications. Mounting: Two No. 4-40 tapped holes on diagonal ¾" x ⅝" centers. Contacts: Bar palladium. Weight: 1½ ozs.



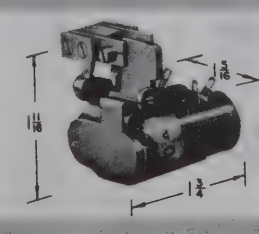
RS5D	6V	335	110MW	SPDT	2	2.60
RS5D	12V	1,350	110MW	SPDT	2	2.75
RS5D	5MA	2,500	60MW	SPDT	2	2.85
RS5D	3.5MA	5,000	60MW	SPDT	2	3.15
RS5D	2.5MA	10,000	60MW	SPDT	2	3.60

SM SERIES (In both voltage and current actuated models.) Sensitivity 75 mw for current actuated models. Medium cost, light weight, dust covered (right) or hermetically sealed (left) relay for light contact loads found in computers, model airplanes and similar applications. Extremely long mechanical life because of reed armature. Mounting: Sealed, standard 7-pin miniature tube socket; dust cover, two 3/32" dia. holes on 1 7/32" centers. Contacts: Stationary silver; movable rhodium. Weight: 1 oz. max.



SM5DS†	6V	80	500MW	SPDT	.25	6.25
SM5DS†	12V	360	500MW	SPDT	.25	6.25
SM5DS†	24V	900	500MW	SPDT	.25	6.25
SM5LS	2.7MA	10,000	75MW	SPDT	.25	5.95
SM5LS†	3.9MA	5,000	75MW	SPDT	.25	6.55
SM5LS†	2.7MA	10,000	75MW	SPDT	.25	7.00

SS SERIES Ultra sensitive precision relay. 10 mw sensitivity. Dual series-connected coils with balanced armature on needle-point bearings for all low energy circuits such as instruments and bridge balancing. May also be used as a differential relay by connecting the two coils in separate circuits. Mounting: Two No. 6-32 tapped holes on 2 3/32" centers. Contacts: ⅛" dia. silver. Weight: Approx. 3½ ozs.



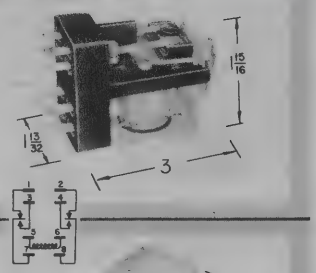
SS5D	1MA	10,000	10MW	SPDT	2	12.60

†Sealed Relay
§Enclosed Relay

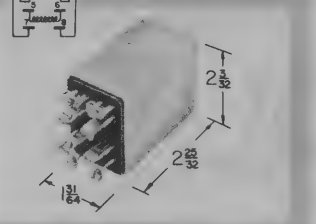
See ordering information on page 1.

Potter & Brumfield Relays

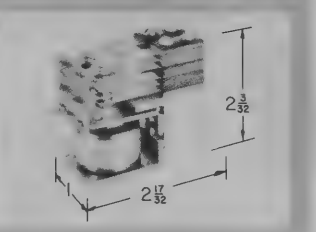
AB SERIES For appliance and general purpose applications where rugged construction, long life and quiet operation are required. All equipped with terminals to fit snap-on connectors and may also be applied to printed circuits using dip soldering. Snap-on screw adaptors packed with each relay. All AC models carry U/L and CSA* listings. Mounting: Two No. 8-32 tapped holes, on 1¼" centers. Weight: Approx. 5 ozs. Silver contacts.



ABC SERIES Medium duty power relay with dust cover. For small motors, industrial control and similar applications. All equipped with terminals to fit snap-on connectors and may also be applied to printed circuits using dip soldering. Snap-on screw adaptors packed with each relay. All AC models carry U/L and CSA* listings. Mounting: One No. 8-32 threaded stud ⅜" long and locating tab on 1/16" centers. Contacts: ¼" dia. silver. Weight: Approx. 7 ozs.



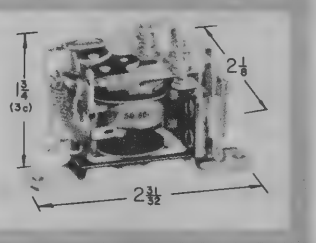
GF SERIES Medium duty power relay for industrial control applications. Long contact arms have ¼" dia. silver contacts rated at 10 amps at 115V AC or 28V DC resistive. Contacts have excellent wipe or self-cleaning action. Tinned, pierced solder terminals. Mounting: 8-32 tapped core with locating boss. Weight: 4.75 ozs. (See GA series for similar voltage actuated relays.)



MR SERIES A medium duty power relay that can handle small motors, transmitters, and general purpose applications. Mounting: Two 5/32" dia. holes on 2¼" centers for MR3 and 11, 2⅝" centers for MR2, 5 and 14. Contacts: 7/32" dia. silver. Weight: 4 ozs.

MS/MR Metal dust cover 3⅝"x2⅜" x 2 1/32". Weight: 7.5 ozs.

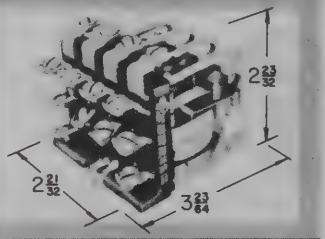
35D130 fits MS/MR NET $1.90



PM SERIES A compact heavy duty 4PDT power relay for polyphase and heavy duty switching applications. Screw terminals. Has ¼" silver-cadmium-oxide contacts rated at 25 amps at 115V., 25 amps at 230V. 50/60 cycle resistive AC, 1 HP per movable arm at 120V. or 240V. AC single phase, U/L and CSA* listed, except 440V. Mounts by one front key-hole and two rear channel slots for 8-32 screws on 2" x 2½" triangular centers. Weight: 14 ozs.

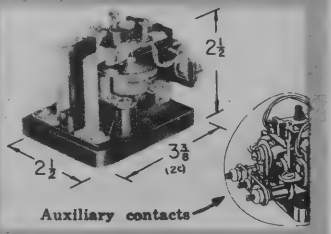
9PM1 Adapter plates for mounting PM on PR mounting holes. Box of 10 Net $1.50

For metal enclosure see below.



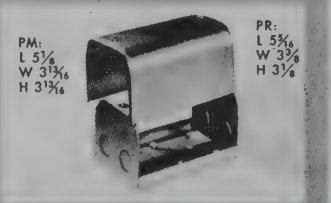
PR SERIES Heavy duty relay for industrial control applications requiring long life and fast action. Heavy duty screw type terminals. All AC and DC models except PR11AL5 carry U/L and CSA* listings.

Mounting: Two 3/16" dia. holes on 1⅞" centers. Weight: 11 ozs. max. Contacts: 5/16" dia. silver. Enclosure: See "PR" cover. The PR11AL5 relay is equipped with 3/16" dia. silver SPDT auxiliary contacts rated at 5 amps.



PM and PR DUST COVERS These dust covers have a sheet metal base with knockouts for ½" dia. conduit and an aluminum cover fitted with two screws. Finished in gray hammertone. Mounting: Three No. 10 holes on 1⅞" x 4⅛" centers. Approx. weight: 1 lb.

35D227 Metal cover for PM only NET $3.00
35D013 Metal cover for PR only NET $3.00



POWER TYPE RELAYS

TYPE	COILS: Voltage or Current	COILS: Resistance in Ohms	COILS: Nominal Power	CONTACTS: Arrangement	CONTACTS: Rate in Amps	SUGG. RESALE PRICE
AB11AY	**6V**	**1.3**	**6.4VA**	**DPDT**	**10**	**$5.30**
AB11AY	24V	23	6.4VA	DPDT	10	5.30
AB11AY	115V	510	6.4VA	DPDT	10	5.30
AB11AY	230V	2,050	6.4VA	DPDT	10	5.70
AB11D	12V	72	2.0W	DPDT	10	5.20
AB11D	24V	288	2.0W	DPDT	10	5.20
AB11D	110V	6,050	2.0W	DPDT	10	5.70
ABC11AY§	**6V**	**1.3**	**6.4VA**	**DPDT**	**10**	**6.40**
ABC11AY§	24V	23	6.4VA	DPDT	10	6.40
ABC11AY§	115V	510	6.4VA	DPDT	10	6.40
ABC11AY§	230V	2,050	6.4VA	DPDT	10	6.80
ABC11D§	6V	18	2.0W	DPDT	10	6.30
ABC11D§	12V	72	2.0W	DPDT	10	6.30
ABC11D§	24V	288	2.0W	DPDT	10	6.30
ABC11D§	110V	6,050	2.0W	DPDT	10	6.80
GF17A	6V	1.7	6VA	4PDT	10	6.65
GF17A	12V	6.8	6VA	4PDT	10	6.65
GF17A	24V	24	6VA	4PDT	10	6.65
GF17A	115V	690	6VA	4PDT	10	6.65
GF17A	230V	2,950	6VA	4PDT	10	7.05
GF17D	6V	18	2.0W	4PDT	10	6.65
GF17D	12V	72	2.0W	4PDT	10	6.65
GF17D	24V	288	2.0W	4PDT	10	6.65
GF17D	110V	6,050	2.0W	4PDT	10	7.10
MR3A	**6V**	**2.75**	**3.25VA**	**SPST-NO-DB**	**10**	**3.85**
MR3A	24V	50	3.25VA	SPST-NO-DB	10	3.85
MR3A	115V	1,250	3.25VA	SPST-NO-DB	10	3.85
MR3D	6V	24	1.6W	SPST-NO-DB	10	3.50
MR3D	12V	96	1.6W	SPST-NO-DB	10	3.50
MR3D	24V	360	1.6W	SPST-NO-DB	10	3.50
MR5A	6V	2.75	3.25VA	SPDT	8	3.45
MR5A	12V	13.25	3.25VA	SPDT	8	3.45
MR5A	24V	50	3.25VA	SPDT	8	3.45
MR5A	115V	1,250	3.25VA	SPDT	8	3.45
MR5A	230V	4,600	3.25VA	SPDT	8	3.85
MR5D	6V	24	1.6W	SPDT	8	3.20
MR5D	12V	96	1.6W	SPDT	8	3.20
MR5D	24V	360	1.6W	SPDT	8	3.20
MR5D	110V	8,000	1.6W	SPDT	8	3.70
MR11A	6V	2.75	3.25VA	DPDT	8	4.85
MR11A	12V	13.25	3.25VA	DPDT	8	4.85
MR11A	24V	50	3.25VA	DPDT	8	4.85
MR11A	115V	1,250	3.25VA	DPDT	8	4.85
MR11A	230V	4,600	3.25VA	DPDT	8	5.25
MR11D	6V	24	1.6W	DPDT	8	4.60
MR11D	12V	96	1.6W	DPDT	8	4.60
MR11D	24V	360	1.6W	DPDT	8	4.60
MR11D	110V	8,000	1.6W	DPDT	8	5.10
MR14A	6V	2.75	3.25VA	3PDT	8	5.80
MR14A	12V	13.25	3.25VA	3PDT	8	5.80
MR14A	24V	50	3.25VA	3PDT	8	5.80
MR14A	115V	1,250	3.25VA	3PDT	8	5.80
MR14A	230V	4,600	3.25VA	3PDT	8	6.20
MR14D	6V	24	1.6W	3PDT	8	5.45
MR14D	12V	96	1.6W	3PDT	8	5.45
MR14D	24V	360	1.6W	3PDT	8	5.45
MR14D	110V	8,000	1.6W	3PDT	8	5.95
PM17AY	**6V**	**37**	**14VA**	**4PDT**	**25**	**12.35**
PM17AY	12V	1.4	14VA	4PDT	25	12.35
PM17AY	24V	5.0	14VA	4PDT	25	12.35
PM17AY	115V	120	14VA	4PDT	25	12.35
PM17AY	230V	587	14VA	4PDT	25	12.75
PM17A	440V	1,790	14VA	4PDT	25	13.60
PM17DY	**6V**	**8.2**	**4.4W**	**4PDT**	**25**	**$11.80**
PM17DY	12V	33	4.4W	4PDT	25	11.80
PM17DY	24V	132	4.4W	4PDT	25	11.80
PM17DY	110V	2,760	4.4W	4PDT	25	12.40
PR1AY	**24V**	**12**	**9.8VA**	**SPST-NO**	**25**	**4.05**
PR3AY	6V	0.86	9.8VA	SPST-NO-DB	25	4.15
PR3AY	12V	3.2	9.8VA	SPST-NO-DB	25	4.15
PR3AY	24V	12	9.8VA	SPST-NO-DB	25	4.15
PR3AY	115V	290	9.8VA	SPST-NO-DB	25	4.15
PR3AY	230V	1,200	9.8VA	SPST-NO-DB	25	4.50
PR3DY	6V	18	2.0W	SPST-NO-DB	25	4.15
PR3DY	12V	71	2.0W	SPST-NO-DB	25	4.15
PR3DY	24V	288	2.0W	SPST-NO-DB	25	4.15
PR3DY	110V	6,050	2.0W	SPST-NO-DB	25	4.75
PR5AY	6V	0.86	9.8VA	SPDT	25	4.35
PR5AY	12V	3.2	9.8VA	SPDT	25	4.35
PR5AY	24V	12	9.8VA	SPDT	25	4.35
PR5AY	115V	290	9.8VA	SPDT	25	4.35
PR5AY	230V	1,200	9.8VA	SPDT	25	4.75
PR5DY	6V	18	2.0W	SPDT	25	4.35
PR5DY	12V	71	2.0W	SPDT	25	4.35
PR5DY	24V	288	2.0W	SPDT	25	4.35
PR5DY	110V	6,050	2.0W	SPDT	25	4.95
PR7AY	6V	0.86	9.8VA	DPST	25	4.90
PR7AY	12V	3.2	9.8VA	DPST	25	4.90
PR7AY	24V	12	9.8VA	DPST	25	4.90
PR7AY	115V	290	9.8VA	DPST	25	4.90
PR7AY	230V	1,200	9.8VA	DPST	25	5.35
PR7DY	6V	18	2.0W	DPST	25	4.90
PR7DY	12V	71	2.0W	DPST	25	4.90
PR7DY	24V	288	2.0W	DPST	25	4.90
PR7DY	110V	6,050	2.0W	DPST	25	5.50
PR11AY	6V	0.86	9.8VA	DPDT	25	6.45
PR11AY	12V	3.2	9.8VA	DPDT	25	6.45
PR11AY	24V	12	9.8VA	DPDT	25	6.45
PR11AY	115V	290	9.8VA	DPDT	25	6.45
PR11AY	230V	1,200	9.8VA	DPDT	25	6.95
PR11AY	440V	4,500	9.8VA	DPDT	25	7.80
PR11AL5	6V	0.86	9.8VA	DPDT	20	8.15
PR11AL5	12V	3.2	9.8VA	DPDT	20	8.15
PR11AL5	24V	12	9.8VA	DPDT	20	8.15
PR11AL5	115V	290	9.8VA	DPDT	20	8.15
PR11AL5	230V	1,200	9.8VA	DPDT	20	8.55
PR11DY	6V	18	2.0W	DPDT	25	6.45
PR11DY	12V	71	2.0W	DPDT	25	6.45
PR11DY	24V	288	2.0W	DPDT	25	6.45
PR11DY	110V	6,050	2.0W	DPDT	25	7.05

*Canadian Standards Association

§Enclosed Relay

See ordering information on page 1.

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SOLID STATE

TIME DELAY RELAYS

Excellent operational characteristics of the CD series solid state time delay relays make them applicable to a wide range of critical applications. Includes models for AC or DC operation. Three modes of timing are available: knob-adjustable, resistor-adjustable and fixed. All relays listed under "Notes" from 1 to 6 provide time delay "on operate," Note 7 features relays with time delay "on release."

CD-38 SERIES Knob-adjustable with internally mounted DPDT relay with contacts rated to 10 amps. See Fig. 1.

CD-38 SERIES Time delay "on release." Otherwise same as above. See Fig. 1A.

CD-21 SERIES Knob-adjustable. Use with P&B KRP relays (see page 10) as listed under Note 2. See Fig. 2.

CD-31 SERIES Use with KHP relay (see page 9) as listed under Note 4. Time delay adjustable with external resistor, Note 5. See Fig. 3.

CD-45 SERIES Knob-adjustable. For heavy duty when used with PR power relay (see page 4) as listed under Note 6. See Fig. 4.

WIDE TIME DELAY RANGE

Type	Outline Drawing	Time Delay In Seconds	Input Voltage	Notes	Sugg. Resale Price
CDB-38-70003	Fig. 1	0.1 - 10	115V AC	1	43.80
CDB-38-70004	Fig. 1	0.6 - 60	115V AC	1	43.80
CDB-38-70005	Fig. 1	1.8 - 180	115V AC	1	43.80
CDD-38-30003	Fig. 1	0.1 - 10	24V DC	1	41.55
CDD-38-30004	Fig. 1	0.6 - 60	24V DC	1	41.55
CDD-38-30005	Fig. 1	1.8 - 180	24V DC	1	41.55
CDB-21-70003	Fig. 2	0.1 - 10	115V AC	2	38.70
CDB-21-70001	Fig. 2	1.8 - 180	115V AC	2	38.70
CDD-21-30003	Fig. 2	0.1 - 10	24V DC	3	38.35
CDD-21-30001	Fig. 2	1.8 - 180	24V DC	3	38.35
CDH-31-30005	Fig. 3	180 Max.	24V DC	4 & 5	38.90
CDB-45-70002	Fig. 4	0.6 - 60	115V AC	6	37.05
CDB-38-70012	Fig. 1A	0.6 - 60	115V AC	1 & 7	52.45
CDD-38-30012	Fig. 1A	0.6 - 60	24V DC	1 & 7	49.50

NOTES

1. Has internal relay with DPDT contacts rated at 10 amperes, 115V AC. **2.** Use with Potter & Brumfield relay KRP5AG—115V AC, KRP11AG —115V AC or KRP14AG—115V AC. **3.** Use with Potter & Brumfield KRP5DG—24V DC, KRP11DG—24V DC or KRP14DG—24V DC relay. **4.** Use with Potter & Brumfield KHP17D11—24V DC relay. **5.** Supplied with 180 seconds delay; adjustable to 1.8 seconds with external resistor. **6.** Use with Potter & Brumfield PR11AY—115V. AC relay. **7.** Provides delay on release; all others have delay on operate.

SPECIFICATIONS: *Timing Accuracy: ±10%* *Repeatability: ±2%* *Fast Reset Time: 60 milliseconds* *Temperature: −40°C to +55°C* *Duty: Continuous* *Enclosures: Rugged plastic*

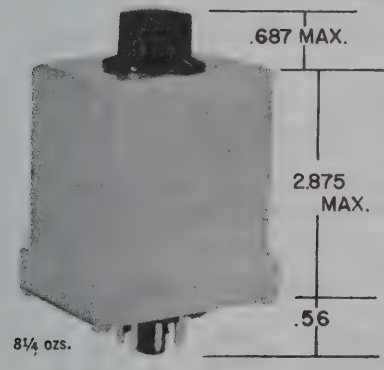


Fig. 1

CDB-38-70003
CDB-38-70004
CDB-38-70005
CDD-38-30003
CDD-38-30004
CDD-38-30005

Fig. 1A

CDB-38-70012
CDD-38-30012
Delayed release occurs when "Control" circuit is de-energized; "Supply" circuit must be energized continuously.

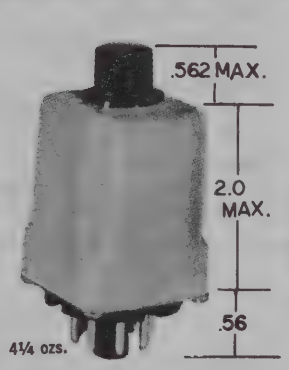


Fig. 2

CDB-21-70003
CDB-21-70001
CDD-21-30003
CDD-21-30001

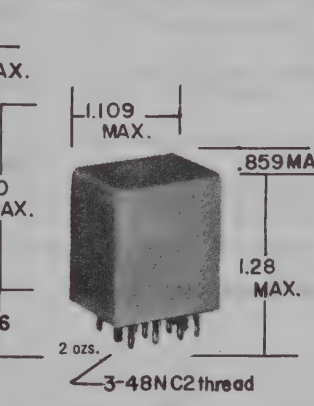


Fig. 3

CDH-31-30005
Fixed time delay or adjustable with external resistor (not furnished).

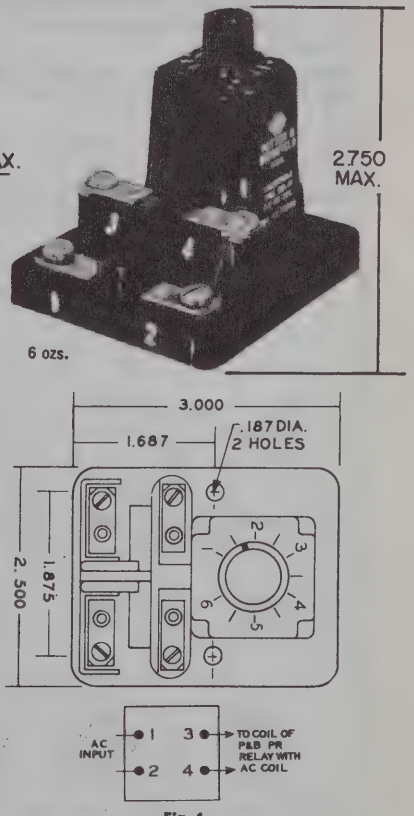


Fig. 4

CDB-45-70002
Knob-adjustable.

DEPENDABILITY • LONGEVITY • HIGH SPEED

Mercury-Wetted Contact Relays



AVAILABLE IN THESE SERIES:

JML- SENSITIVE, FORM C NON-BRIDGING — single-side-stable, bi-stable, chopper

JMP- POLARIZED FORM D BRIDGING — single-side-stable, bi-stable, chopper

JM- BRIDGING FORM D

1 CAPSULE	SPDT	single coil, dual coil
2 CAPSULES	DPDT	single coil
3 CAPSULES	3PDT	single coil
4 CAPSULES	4PDT	single coil

Rare long life, high speed, and unvarying dependability—all are the result of the basic component of these relays: a hermetically sealed glass capsule. It contains the contact arrangement and a small reservoir of mercury sealed under a high pressure hydrogen atmosphere. A film of mercury is renewed for every operation—that's why you can think in terms of billions of operations without contact bounce, pits or welds.

TWO TYPES OF CAPSULES

The capsule used in JML relays has a SPDT, break-before-make (Form C), non-bridging contact arrangement. Each capsule used in JMP, and JM1 to JM4 relays has a SPDT, make-before-break, (form D), bridging contact arrangement. Both JML and JMP series achieve a high rate of sensitivity by factory-adjusted magnet biasing.

Single-Side-Stable: The relay will release (open its normally open contacts) when the coil current is reduced to less than must release value.

Bi-Stable: The armature remains in the last operated position until opposite polarity is applied.

Chopper: Approximately equal dwell exists on the normally open and closed contacts when the coil is driven by 60 cps sine waves.

QUALITY SPECIFICATIONS

CONTACT RATINGS:

JML: 500V max., and 2 amps max., 100 VA max.*
JMP and JM1 to JM4: 500V max., and 5 amps max., 250 VA max.*
*With contact protection unless low level current is applied. Details of simple circuit consisting of resistor and capacitor in series are packed with each relay.

SENSITIVITY:

Minimum sensitivities are
JML: 27.3 ampere turns
JMP: 70 ampere turns
JM1: 190 ampere turns
JM2 and 3: 250 ampere turns
JM4: 260 ampere turns

TIMING:

JML: 200 operations per sec.
JMP and JM1: 100 operations per sec.
JM2, 3 and 4: 60 operations per sec.

SHOCK RESISTANCE:

All series: 30G for 11 milliseconds, non-operating. Vibrations up to 10G, 10-500 cps.

TEMPERATURES:

All series: −39°C (mercury freezes), 107°C internal (potting compound softens).

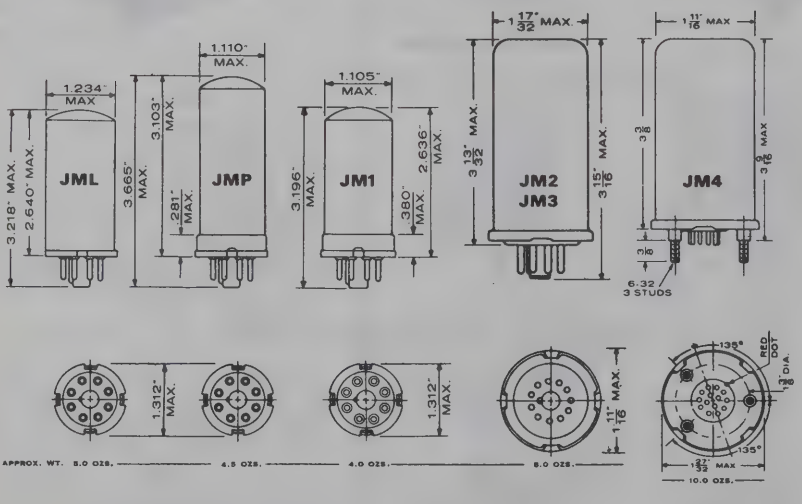
TERMINATIONS:

All series: Octal style plugs, except figures 23, 32, and 42 (Hook Solder), figure 41 (14-pin miniature plug).

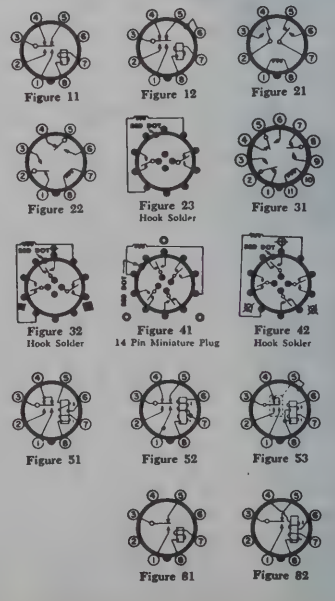
ENCLOSURES:

Five steel case sizes, one each for JML, JMP, JM1, JM2 and JM3, and JM4. Required mounting position: Vertical.

OUTLINE DIMENSIONS



TERMINATIONS



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AVAILABLE FROM STOCK FOR FAST DELIVERY

JML Sensitive

SERIES Capsule	Coil	Terminal Fig. No.	COIL CHARACTERISTICS RESISTANCE (Ohms ±10%)	SOAK* ma DC	MUST OPERATE ma DC	MUST RELEASE ma DC	SUGG. RESALE PRICE
SINGLE-SIDE-STABLE							
JML	1061	81	40	36.0	9.75	1.68	$11.60
JML	1110	81	350	13.1	3.56	0.61	11.60
JML	1160	81	1000	8.1	2.21	0.38	11.60
JML	1190	81	2500	4.0	1.43	0.17	12.40
JML	1200	81	4000	3.4	1.25	0.25	12.40
JML	1240	81	11000	2.6	0.72	0.12	12.40
JML	1260	81	25000	1.9	0.52	0.09	12.40
JML	1440	82	(1) 4000 (2) 800	2.7	0.86 11.60	0.10	13.60
BI-STABLE							
JML	5160	81	1000		±1.24	−1.24	12.10
JML	5200	81	4000		±0.53	−0.53	12.40
JML	5430	82	(1) 1100 (2) 1100		±1.76	−1.76	13.60
CHOPPER				Voltage RMS 60cps			
JML	8130	81	600		6.3V		12.10

JMP Polarized

SERIES Capsule	Coil	Terminal Fig. No.	COIL CHARACTERISTICS RESISTANCE (Ohms ±10%)	SOAK* ma DC	MUST OPERATE ma DC	MUST RELEASE ma DC	SUGG. RESALE PRICE
SINGLE-SIDE-STABLE							
JMP	1081	11	90	46.25	16.0	1.3	15.20
JMP	1160	11	1000	16.2	5.60	0.40	15.20
JMP	1200	11	4000	8.55	2.96	0.24	16.30
JMP	1260	11	25000	3.77	1.32	0.15	16.30
JMP	1340	52	(1) 700 (2) 3300	33.80	14.20 5.70	2.80	17.25
JMP	1470	53	(1) 1020 (2) 970	25.2	14.0 16.0	6.0	18.95
BI-STABLE							
JMP	5200	11	4000		±1.5	−1.5	16.30
JMP	5340	52	(1) 700 (2) 3300		±6.0 ±2.4	−6.0 −2.4	17.75
CHOPPER				Voltage RMS 60cps			
JMP	8120	12	500		6.3V		15.70
JMP	8200	12	4000		18.5V		16.80
JMP	8240	11	11000		117.0V with 12000 ohm (±5%) ½ watt resistor in series with coil		16.80

*Current to be applied to the coil winding for at least 2 seconds just prior to current flow tests.

JM1 Single Capsule

SERIES Capsule	Coil	Terminal Fig. No.*	COIL CHARACTERISTICS RESISTANCE (Ohms ±10%)	MUST OPERATE Current ma DC	MUST OPERATE Voltage DC @ 25°C	MAX. VOLTAGE (at 35°C.)	SUGG. RESALE PRICE
SPDT Single Coil							
JM1	106	12	40	67.7	2.98	9.0	14.05
JM1	109	12	130	38.8	5.55	16.1	14.05
JM1	112	11	500	20.1	11.10	31.6	14.05
JM1	114	11	700	20.0	15.40	37.4	14.05
JM1	114	12	700	20.0	15.40	37.4	14.05
JM1	118	11	2500	10.1	27.80	70.7	14.30
JM1	119	11	4000	8.1	35.60	89.5	8.15 (ANY QTY.)
JM1	119	12	4000	8.1	35.60	89.5	14.80
JM1	120	11	7000	6.0	46.20	117.0	14.80
JM1	121	11	11000	5.0	60.50	148.0	14.80
JM1	123	11	25000	3.6	99.00	224.0	14.80
SPDT Dual Coil							
JM1	405	51	(1) 700 (2) 3300	(1) 32.0 (2) 12.3		(1) 37.4 (2) 81.0	16.20

JM2 2 Capsules

SERIES Capsule	Coil	Terminal Fig. No.*	COIL CHARACTERISTICS RESISTANCE (Ohms ±10%)	MUST OPERATE Current ma DC	MUST OPERATE Voltage DC @ 25°C	MAX. VOLTAGE (at 35°C.)	SUGG. RESALE PRICE
DPDT Single Coil							
JM2	104	22	50	110.0	6.04	12.25	22.80
JM2	106	22	140	66.5	10.00	20.5	22.80
JM2	109	22	315	44.0	15.30	30.7	22.80
JM2	110	22	500	34.8	19.20	38.7	22.80
JM2	111	22	700	30.5	23.50	45.8	22.80
JM2	112	22	1250	22.1	30.40	61.2	22.80
JM2	112	23	1250	22.1	30.40	61.2	22.80
JM2	115	21	5000	11.3	62.10	122.0	22.80
JM2	115	22	5000	11.3	62.10	122.0	22.80
JM2	115	23	5000	11.3	62.10	122.0	22.80

JM3 3 Capsules

SERIES Capsule	Coil	Terminal Fig. No.*	COIL CHARACTERISTICS RESISTANCE (Ohms ±10%)	MUST OPERATE Current ma DC	MUST OPERATE Voltage DC @ 25°C	MAX. VOLTAGE (at 35°C.)	SUGG. RESALE PRICE
3PDT Single Coil							
JM3	109	31	315	44.0	15.30	30.7	29.50
JM3	110	31	500	34.8	19.20	38.7	29.50
JM3	111	31	700	30.5	23.50	45.8	29.50
JM3	112	31	1250	22.1	30.40	61.2	29.50
JM3	115	31	5000	11.3	62.10	122.0	29.50
JM3	115	32	5000	11.3	62.10	122.0	29.50

JM4 4 Capsules

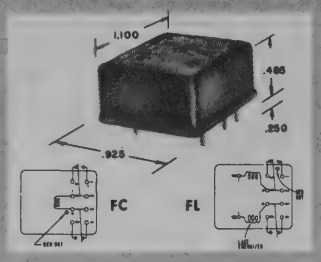
SERIES Capsule	Coil	Terminal Fig. No.*	COIL CHARACTERISTICS RESISTANCE (Ohms ±10%)	MUST OPERATE Current ma DC	MUST OPERATE Voltage DC @ 25°C	MAX. VOLTAGE (at 35°C.)	SUGG. RESALE PRICE
4PDT Single Coil							
JM4	106	41	65	100.0	7.15	15.1	38.00
JM4	110	41	390	42.0	18.00	37.0	38.00
JM4	110	42	390	42.0	18.00	37.0	38.00
JM4	112	41	700	35.4	27.20	49.5	38.00
JM4	114	41	1400	23.0	35.40	70.0	38.00
JM4	114	42	1400	23.0	35.40	70.0	38.00
JM4	117	41	4000	15.6	68.50	118.0	38.00
JM4	117	42	4000	15.6	68.50	118.0	38.00
JM4	118	41	6500	10.5	75.00	151.0	38.00
JM4	118	42	6500	10.5	75.00	151.0	38.00
JM4	119	41	10000	8.6	94.30	187.0	38.00
JM4	119	42	10000	8.6	94.30	187.0	38.00

*Octal style plugs, except Fig. 23, 32, 42 (Hook Solder), Fig. 41 (14-Pin miniature plug).

Potter & Brumfield High Performance Relays

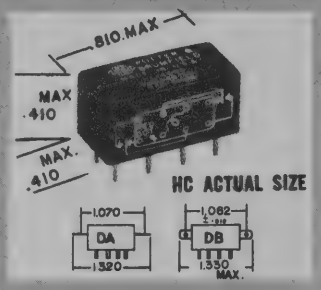
FC SERIES Conventional micro-miniature relay lies flat on printed circuit board. Withstands 100g shock, 400g linear acceleration, 30g vibration to 2000 cps. Ambient temperature range: −65° to +125°C. Hermetically sealed. Bifurcated contacts. Plugs in on .2" grid. Meets applicable sect. MIL-R-5757D, and MSFC-SPEC-339. Weight: .75 ozs.

FL SERIES Dual-coil latching relay has same specs as above, except operates by pulsing each coil alternately (observing coil polarity); or connecting the coils in series from a reversing (polarized) source. Remains latched without coil power.



TYPE Hermetically Sealed	COILS Voltage or Current	Resistance in Ohms	Nominal Power	CONTACTS Arrangement	Rate # in Amps	SUGG. RESALE PRICE
FC11D	6V	60	.65W	DPDT	3	$ 16.00
FC11D	12V	210	.65W	DPDT	3	16.00
FC11D	24V	900	.65W	DPDT	3	16.00
FC4037	26.5V	MIL-R-5757D or RY4ZZ4B3P				16.00
FL11D	6V	67.5	.65W	DPDT	3	18.00
FL11D	12V	230	.65W	DPDT	3	18.00
FL11D	24V	1,000	.65W	DPDT	3	18.00
FL4027	26.5V	MIL-R-5757D or RY4ZZ4B3P				18.00

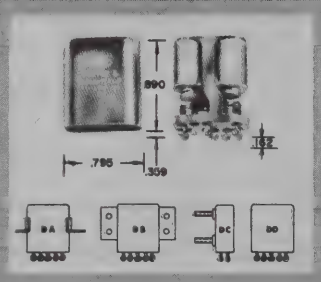
HC SERIES A micro-miniature, non-polarized, non-latching half-size crystal case relay for high reliability performance. Its high-torque motor structure and bifurcated, gold-plated silver DPDT contacts, rated dry circuit to 2 amps @ 28V DC resistive, provide positive performance in low level applications. Temperature range: −65°C to +125°C. Hermetically sealed. HC11D has plug-in, plain case; HC11DA has hook-end solder terminals and shoulder brackets; HC11DB has hook-end solder terminals and flat mounting plate with 2 holes. The HC series meets or exceeds all applicable sections of MIL-R-5757D/9, and complies with ABMA-PD-R-187 and MSFC-SPEC-339. Size: Plain case .8" x .4" x .4" (seated). Weight: ¼ oz.



HC11D	24V	814	.72W	DPDT	2	$17.50
HC11DA	24V	814	.72W	DPDT	2	17.50
HC11DB	24V	814	.72W	DPDT	2	17.50

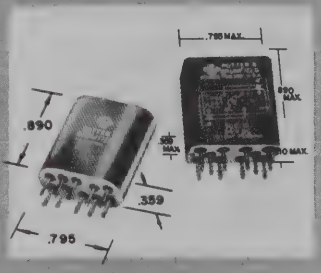
SC SERIES Micro-miniature permanent magnet relay for low power, high shock/vibration applications. 100g shock, 30g vibration to 2000cps with no contact openings. Ambient temperature range: −65°C. to +125°C. Features single coil action and conforms to standard micro-miniature coil operation except polarized connections because of magnetic circuit. Positive terminal marked with red dot. Mounting: SC11D**, −DA, −DB, DC and DD correspond to similarly designed SL mountings. SCG11D has rectangular header with terminals on .2" grid. Weight: ¾ oz.

**Cinch No. 54A20730 and Armel No. HRK-1, 8-pin receptacles available from distributors for plug-in applications.



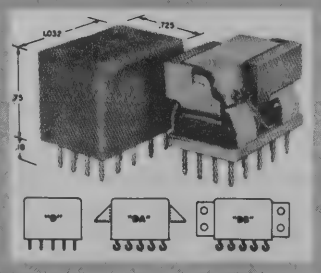
SC11D	6V	35	1W	DPDT	3	15.75
SC11D	12V	135	1W	DPDT	3	15.75
SC11D	24V	550	1W	DPDT	3	15.75
SC11DA	6V	35	1W	DPDT	3	15.75
SC11DA	12V	135	1W	DPDT	3	15.75
SC11DA	24V	550	1W	DPDT	3	15.75
SC11DB	6V	35	1W	DPDT	3	15.75
SC11DB	12V	135	1W	DPDT	3	15.75
SC11DB	24V	550	1W	DPDT	3	15.75
SC11DC	24V	550	1W	DPDT	3	15.75
SC11DD	24V	550	1W	DPDT	3	15.75
SCG11D	24V	550	1W	DPDT	3	15.75
SC7141	26.5V	MIL-R-5757/10A or RY4NA3B3L01				15.85

SL SERIES Dual coil micro-miniature magnetic latching relay with same shock/vibration, resistance and ambient temperature range as SC. Coils may be connected in series for polar operation. Mounting: SL11D* for plug-in applications: −DA has shoulder flangers with two .104" x .136" holes on a 1.062" center; −DB has a welded bracket with four .125" dia. holes on 1.062" x .281" centers; −DC has two No. 4-40 NC 2A threaded studs on .488" x .220" diagonal centers; −DD has plain case with hook end solder terminals. SLG11D has plug-in terminals on .2" grid.
*Viking No. P/N VB10/3DV 1 10-pin receptacles available from distributors for plug-in applications.



SL11D	6V	40	1W	DPDT	3	17.25
SL11D	12V	160	1W	DPDT	3	17.25
SL11D	24V	630	1W	DPDT	3	17.25
SL11DA	6V	40	1W	DPDT	3	17.25
SL11DA	12V	160	1W	DPDT	3	17.25
SL11DA	24V	630	1W	DPDT	3	17.25
SL11DB	6V	40	1W	DPDT	3	17.25
SL11DB	12V	160	1W	DPDT	3	17.25
SL11DB	24V	630	1W	DPDT	3	17.25
SL11DC	24V	630	1W	DPDT	3	17.25
SL11DD	24V	630	1W	DPDT	3	17.25
SLG11D	24V	630	1W	DPDT	3	17.25

TL SERIES High performance 4PDT micro-miniature magnetic latching relay for severe environments. Encapsulated and hermetically sealed coils within hermetically sealed relay case can't contaminate contacts by outgassing. Strong permanent magnetic forces keep contacts locked in desired position when relay is de-energized. Approx. 0.5ms transfer time. Temperature range: −65°C to 125°C. Meets or exceeds applicable sections MIL-R-5757D and MSFC-SPEC-339. Weight: Approx. 1¼ ozs. Mountings: D = plain case, plug-in header. DA = shoulder bracket .300" from base, hook-end solder. DB = flat plate, .598" wide x 1.60" long, 4−.125" dia. holes on .281" x 1.30" centers, hook-end solder.

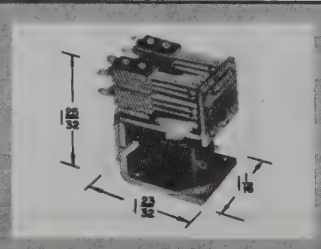


TL17D	24V	600	1W	4PDT	3	25.00
TL17DA	24V	600	1W	4PDT	3	25.00
TL17DB	24V	600	1W	4PDT	3	25.00

GENERAL PURPOSE RELAYS

GA SERIES Low cost, all purpose, multiple contact, voltage switching relay. Used for many industrial control applications. Tinned, pierced solder type terminals. Contacts: 3/16" dia. silver, designed for maximum self-cleaning action. Mounting: No. 8-32 tapped core with locating boss. Weight: 3½ ozs.

See GF series for similar relays having 10 amp ratings.



GA11A	6V	1.7	6VA	DPDT	5	$ 3.35
GA11A	12V	6.8	6VA	DPDT	5	3.35
GA11A	24V	24	6VA	DPDT	5	3.35
GA11A	115V	690	6VA	DPDT	5	3.35
GA11D	6V	18	2.0W	DPDT	5	3.35
GA11D	12V	72	2.0W	DPDT	5	3.35
GA11D	24V	288	2.0W	DPDT	5	3.35
GA11D	110V	6,050	2.0W	DPDT	5	3.80
GA14A	24V	24	6VA	3PDT	5	4.05
GA14A	115V	690	6VA	3PDT	5	4.05
GA14D	24V	288	2.0W	3PDT	5	4.05
GA17A	6V	1.7	6VA	4PDT	5	4.85
GA17A	12V	6.8	6VA	4PDT	5	4.85
GA17A	24V	24	6VA	4PDT	5	4.85
GA17A	115V	690	6VA	4PDT	5	4.85
GA17A	230V	2,950	6VA	4PDT	5	5.25
GA17D	6V	18	2.0W	4PDT	5	4.85
GA17D	12V	72	2.0W	4PDT	5	4.85
GA17D	24V	288	2.0W	4PDT	5	4.85
GA17D	110V	6,050	2.0W	4PDT	5	5.30

See ordering information on page 1.

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GENERAL PURPOSE RELAYS Potter & Brumfield Relays

GP SERIES Separate AC and DC coils to match with 2PDT or 4PDT switches. AC coils (GPA) available in 6, 12, 24, 115 and 230 volts. DC coils (GPD) available in 6, 12, 24 and 110 volts; current coils: 2,500 5,000 and 10,000 ohms. Contacts: 3/16" dia. silver.

GP11	Switch Assembly	DPDT	5 amps	$1.70
GP17	Switch Assembly	4PDT	5 amps	2.95

GP-100 A complete kit of GP Series coils and switches consisting of the following: AC coils: Two 6 V., two 12 V., four 24 V., six 115 V., two 230 V. DC coils: Two 6 V., two 12 V., two 24 V., four 110 V. Also two 2,500 and four 10,000 ohm coils; eighteen DPDT switch assemblies. Fourteen 4PDT switch assemblies. The complete kit is ideal for experimenters, school and industrial laboratories.

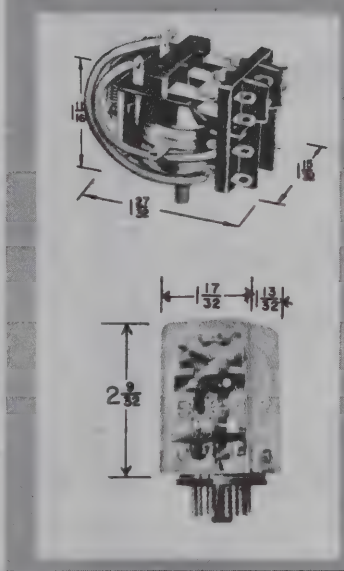
NET $133.65



KA and KAP SERIES Small, low cost, highly efficient general purpose relays for handling light power loads such as small motors, solenoids and other relays, and general automation work. All KA models carry U/L listings. Only AC models are CSA• listed. KAP relays with "Y" suffix bear CSA• seal and are recognized under the Component Program of U/L. Mechanical life expectancy: 10 million operations. Duty: continuous. Contacts: Movable, 1/8" dia. gold-flashed silver; stationary, 5/32" dia. wide silver overlay.

The KA is the open version of this series. Mounting: One No. 6-32 threaded stud and locating tab on 7/16" centers. Weight: 2 ozs. The KAP is the enclosed model and is protected by a clear, high impact plastic dust cover. Terminals: 8 or 11-pin plug. Weight: 3 ozs.

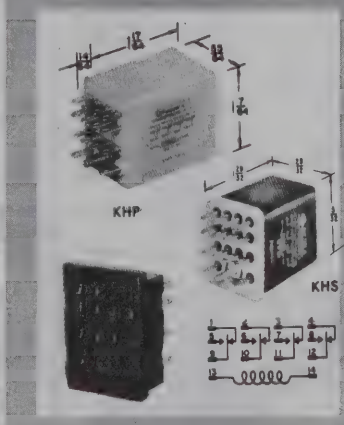
"G" suffix indicates silver-cadmium-oxide contacts on movables rated 10 amps.



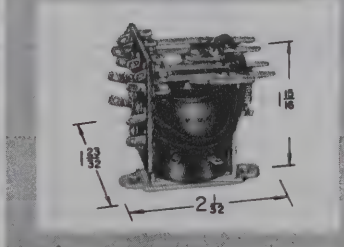
KHP and KHS SERIES Small, rugged, 4PDT, available for AC or DC operation. KHP has Nylon dust cover; KHS is hermetically sealed in metal enclosure. These relays are designed to meet the exacting requirements of data processing, computer and process control applications. Contacts are 3/32" gold-flashed silver and are rated 3 amps @ 30V DC or 115V AC resistive for 100,000 operations. "12" suffix indicates silver-cadmium-oxide contacts. Mounting: Solder terminals with a 3—48 stud 2 3/64" long. Adaptable to sockets (below) with printed circuit or solder lug terminals. Weights without sockets: KHP 1 1/8 ozs; KHS 1 5/8 ozs.

KHP hold down spring (similar to KCP-KRP, page 10)
9KH3 50 per box, weight 3 ozs. Net $5.00

9KH1 Solder terminal sockets and retainers, Box of 10 Net $6.00
9KH2 Printed circuit terminal sockets, Box of 10 Net $6.00
Weight per box: 4 ozs.



KL SERIES Multiple contact relay. Varied contact combinations and high dielectric phenolic insulation affords extreme versatility and utility. Widely used in such applications as industrial controls, elevator controls, communications equipment and electronic measuring devices. Mounting: All models—Two No. 6-32 tapped holes on 1 7/16" centers. Contacts: 1/8" dia. gold-flashed silver. Weight: 5 ozs.



TYPE	COILS Voltage or Current	COILS Resistance in Ohms	COILS Nominal Power	CONTACTS Arrangement	CONTACTS Rate in Amps	SUGG. RESALE PRICE
GPA	6V	1.7	6VA	None	-	1.65
GPA	12V	6.8	6VA	None	-	1.65
GPA	24V	24	6VA	None	-	1.65
GPA	115V	690	6VA	None	-	1.65
GPA	230V	2,950	6VA	None	-	2.10
GPD	—	2,500	—	None	-	1.50
GPD	—	5,000	—	None	-	1.75
GPD	—	10,000	—	None	-	2.10
GPD	6V	18	2.0W	None	-	2.10
GPD	12V	72	2.0W	None	-	2.10
GPD	24V	288	2.0W	None	-	2.10
GPD	110V	6,050	2.0W	None	-	3.15
KA5AY	6V	5.1	2VA	SPDT	5	3.20
KA5AY	12V	21	2VA	SPDT	5	3.20
KA5AY	24V	75	2VA	SPDT	5	3.20
KA5AY	115V	2,250	2VA	SPDT	5	3.20
KA5AY	230V	9,110	2VA	SPDT	5	3.60
KA5AG	6V	5.1	2VA	SPDT	10	3.25
KA5AG	12V	21	2VA	SPDT	10	3.25
KA5AG	24V	75	2VA	SPDT	10	3.25
KA5AG	115V	2,250	2VA	SPDT	10	3.25
KA5AG	230V	9,110	2VA	SPDT	10	3.65
KA5DY	6V	32.1	1.2W	SPDT	5	3.05
KA5DY	12V	120	1.2W	SPDT	5	3.05
KA5DY	24V	472	1.2W	SPDT	5	3.05
KA5DY	110V	10,000	1.2W	SPDT	5	3.65
KA5DG	6V	32.1	1.2W	SPDT	10	3.10
KA5DG	12V	120	1.2W	SPDT	10	3.10
KA5DG	24V	472	1.2W	SPDT	10	3.10
KA5DG	110V	10,000	1.2W	SPDT	10	3.70
KA11AY	6V	5.1	2VA	DPDT	5	3.85
KA11AY	12V	21	2VA	DPDT	5	3.85
KA11AY	24V	75	2VA	DPDT	5	3.85
KA11AY	115V	2,250	2VA	DPDT	5	3.85
KA11AY	230V	9,110	2VA	DPDT	5	4.25
KA11AG	6V	5.1	2VA	DPDT	10	3.95
KA11AG	12V	21	2VA	DPDT	10	3.95
KA11AG	24V	75	2VA	DPDT	10	3.95
KA11AG	115V	2,250	2VA	DPDT	10	3.95
KA11AG	230V	9,110	2VA	DPDT	10	4.35
KA11DY	6V	32.1	1.2W	DPDT	5	3.40
KA11DY	12V	120	1.2W	DPDT	5	3.40
KA11DY	24V	472	1.2W	DPDT	5	3.40
KA11DY	110V	10,000	1.2W	DPDT	5	4.00
KA11DG	6V	32.1	1.2W	DPDT	10	3.50
KA11DG	12V	120	1.2W	DPDT	10	3.50
KA11DG	24V	472	1.2W	DPDT	10	3.50
KA11DG	110V	10,000	1.2W	DPDT	10	4.10
KA14AY	6V	5.1	2VA	3PDT	5	4.25
KA14AY	12V	21	2VA	3PDT	5	4.25
KA14AY	24V	75	2VA	3PDT	5	4.25
KA14AY	115V	2,250	2VA	3PDT	5	4.25
KA14AY	230V	9,110	2VA	3PDT	5	4.65
KA14AG	6V	5.1	2VA	3PDT	10	4.40
KA14AG	12V	21	2VA	3PDT	10	4.40
KA14AG	24V	75	2VA	3PDT	10	4.40
KA14AG	115V	2,250	2VA	3PDT	10	4.40
KA14AG	230V	9,110	2VA	3PDT	10	4.80
KA14DY	6V	32.1	1.2W	3PDT	5	3.85
KA14DY	12V	120	1.2W	3PDT	5	3.85
KA14DY	24V	472	1.2W	3PDT	5	3.85
KA14DY	110V	10,000	1.2W	3PDT	5	4.45
KA14DG	6V	32.1	1.2W	3PDT	10	4.00
KA14DG	12V	120	1.2W	3PDT	10	4.00
KA14DG	24V	472	1.2W	3PDT	10	4.00
KA14DG	110V	10,000	1.2W	3PDT	10	4.60
KAP5AG§	24V	75	2VA	SPDT	10	5.50
KAP5AG§	115V	2,250	2VA	SPDT	10	5.50
KAP5DG§	24V	472	1.2W	SPDT	10	5.45
KAP5DG§	110V	10,000	1.2W	SPDT	10	6.05
KAP11AY§	24V	75	2VA	DPDT	5	6.05
KAP11AY§	115V	2,250	2VA	DPDT	5	6.05
KAP11AY§	230V	9,110	2VA	DPDT	5	6.45
KAP11AG§	6V	5.1	2VA	DPDT	10	6.15
KAP11AG§	24V	75	2VA	DPDT	10	6.15
KAP11AG§	115V	2,250	2VA	DPDT	10	6.15
KAP11DG§	24V	472	1.2W	DPDT	10	6.10
KAP11DG§	110V	10,000	1.2W	DPDT	10	6.70
KAP11DY§	12V	120	1.2W	DPDT	5	6.00
KAP11DY§	24V	472	1.2W	DPDT	5	6.00
KAP11DY§	110V	10,000	1.2W	DPDT	5	6.60
KAP14AY§	24V	75	2VA	3PDT	5	7.50
KAP14AY§	115V	2,250	2VA	3PDT	5	7.50
KAP14AY§	230V	9,110	2VA	3PDT	5	7.90
KAP14AG§	24V	75	2VA	3PDT	10	7.65
KAP14AG§	115V	2,250	2VA	3PDT	10	7.65
KAP14DG§	24V	472	1.2W	3PDT	10	7.60
KAP14DG§	110V	10,000	1.2W	3PDT	10	8.20
KAP14DY§	12V	120	1.2W	3PDT	5	7.45
KAP14DY§	24V	472	1.2W	3PDT	5	7.45
KAP14DY§	110V	10,000	1.2W	3PDT	5	8.05
KHP17A11§	6V	10.5	1.2VA	4PDT	3	5.85
KHP17A11§	12V	43	1.2VA	4PDT	3	5.85
KHP17A11§	24V	160	1.2VA	4PDT	3	5.85
KHP17A11§	115V	3,900	1.2VA	4PDT	3	6.25
KHP17D11§	6V	40	900MW	4PDT	3	4.80
KHP17D11§	12V	160	900MW	4PDT	3	4.80
KHP17D11§	24V	650	900MW	4PDT	3	4.80
KHP17D12§	24V	650	900MW	4PDT	3	4.95
KHP17D11§	48V	2,600	900MW	4PDT	3	5.00
KHP17D11§	90V	9,000	900MW	4PDT	3	5.60
KHP17D11§	110V	11,000	900MW	4PDT	3	5.60
KHP17D12§	110V	11,000	900MW	4PDT	3	5.75
KHS17A11†	6V	10.5	1.2VA	4PDT	3	10.60
KHS17A11†	12V	43	1.2VA	4PDT	3	10.60
KHS17A11†	24V	160	1.2VA	4PDT	3	10.60
KHS17A11†	115V	3,900	1.2VA	4PDT	3	11.00
KHS17D11†	6V	40	900MW	4PDT	3	7.75
KHS17D11†	12V	160	900MW	4PDT	3	7.75
KHS17D11†	24V	650	900MW	4PDT	3	7.75
KHS17D11†	110V	11,000	900MW	4PDT	3	8.55
KL5A	115V	760	2.9VA	SPDT	5	3.85
KL5B	12V	140	1.1W	SPDT	5	3.60
KL5D	24V	600	1.1W	SPDT	5	3.60
KL11A	12V	7.8	2.9VA	DPDT	5	4.80
KL11A	24V	33	2.9VA	DPDT	5	4.80
KL11A	115V	760	2.9VA	DPDT	5	4.80
KL14A	24V	33	2.9VA	3PDT	5	5.35
KL14A	115V	760	2.9VA	3PDT	5	5.35
KL14D	24V	600	1.1W	3PDT	5	5.15
KL14D	110V	10,000	1.1W	3PDT	5	5.75
KL17A	6V	2.25	2.9VA	4PDT	5	6.30
KL17A	24V	33	2.9VA	4PDT	5	6.30
KL17A	115V	760	2.9VA	4PDT	5	6.30
KL17D	12V	140	1.1W	4PDT	5	6.00
KL17D	24V	600	1.1W	4PDT	5	6.00
KL17D	110V	10,000	1.1W	4PDT	5	6.60

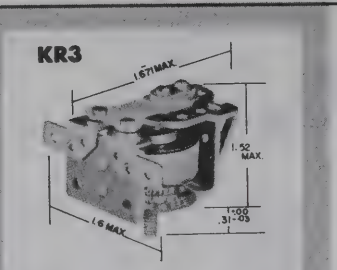
•Canadian Standards Association

†Sealed Relay
§Enclosed Relay

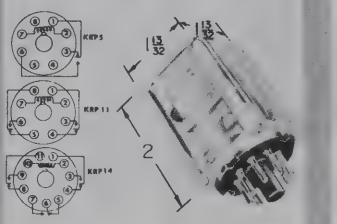
See ordering information on page 1.

Potter & Brumfield Relays

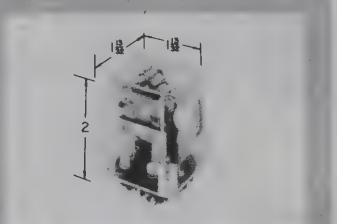
KR3 SERIES Ruggedly constructed but of small size, the KR3 is a heavy duty relay especially designed for applications where limited space is a factor. Furnished in an open version only. Its heavy duty copper alloy movable contact carrier has twin ¼" dia. silver-cadmium-oxide contacts rated 20 amps @ 115V AC 60 cycles resistive, or 28V DC; 1 HP 115/230V 60 cycles. Contact arrangement is 1 Form X (SPST-NO-DB) only. Terminals: suitable for ¼" quick connect, also solder, for contacts; solder only for coil. Size: 1.6" x 1.671" x 1.52". Seated height: 1.21". Mounting: One 6-32 stud on .437" center. Weight: 2 ozs.



KRP SERIES Versatile, multi-contact arrangement. Enclosed in a clear high impact plastic dust cover. Standard 8-pin octal-type plug for KRP5 and KRP11, 11-pin for KRP14. Weight: Approx. 3 ozs. Contacts: 5 amp, 3/16" dia. gold-flashed silver. 10 amp 3/16" dia. silver cadmium-oxide. See KCP-KRP hold down spring for special mounting applications. See KRP indicator lamp relay for current monitoring applications.

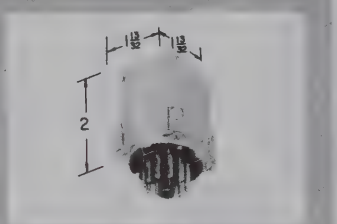


KRP-N INDICATOR LAMP RELAY A general purpose relay incorporating a lamp to indicate current or voltage availability in power circuit. Contacts: 3/16" dia. silver cadmium-oxide. Enclosure: Clear, high impact plastic dust cover. Mounting: Standard octal plug. Weight: Approx. 3 ozs. See KCP-KRP Hold Down Spring for special mountings.



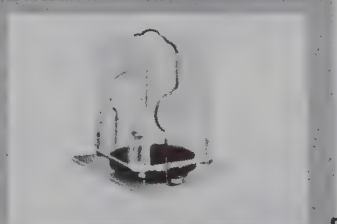
"P"— CASE A clear high impact plastic case for mounting rectifiers, capacitors, resistors or a combination of these. Available with octal-type plug with 8 or 11-pins. Comes complete with four screws. Weight: .5 ozs. each. See KCP-KRP Hold Down Spring for special mounting applications.

35DO70 Case (8-pin plug) NET $.55
35DO72 Case (11-pin plug) NET $.70



KCP-KRP HOLD DOWN SPRING
Designed to insure secure mounting of relay in any position. Fits all KCP or KRP plug-in relays. Durable stainless steel spring can be moved aside for relay removal or installation. Mounting: Two 5/32" dia. holes on 1 5/16" centers; will accommodate machine screws or rivets. Available in quantities of 50 per box. Weight: 3 ozs. per box.

9-KR-15 NET $5.00

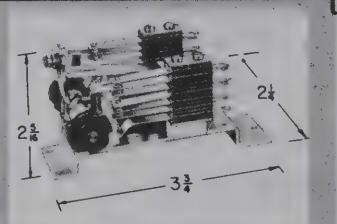


GENERAL PURPOSE RELAYS

TYPE	COILS: Voltage or Current	COILS: Resistance in Ohms	COILS: Nominal Power	CONTACTS: Arrangement	CONTACTS: Rate in Amps	SUGG. RESALE PRICE
KR3AH	6V	6	2VA	SPST-NO-DB	20	$3.90
KR3AH	12V	21	2VA	SPST-NO-DB	20	3.90
KR3AH	24V	75	2VA	SPST-NO-DB	20	3.90
KR3AH	115V	2,250	2VA	SPST-NO-DB	20	3.90
KR3DH	6V	32	1.2W	SPST-NO-DB	20	3.70
KR3DH	12V	120	1.2W	SPST-NO-DB	20	3.70
KR3DH	24V	472	1.2W	SPST-NO-DB	20	3.70
KR3DH	110V	10,000	1.2W	SPST-NO-DB	20	4.30
KRP5A§	6V	6	2VA	SPDT	5	5.45
KRP5A§	24V	75	2VA	SPDT	5	5.45
KRP5A§	115V	2,250	2VA	SPDT	5	5.45
KRP5AG§	6V	6	2VA	SPDT	10	5.55
KRP5AG§	24V	75	2VA	SPDT	10	5.55
KRP5AG§	115V	2,250	2VA	SPDT	10	5.55
KRP5D§	6V	32.1	1.2W	SPDT	5	5.40
KRP5D§	12V	120	1.2W	SPDT	5	5.40
KRP5D§	24V	472	1.2W	SPDT	5	5.40
KRP5D§	110V	10,000	1.2W	SPDT	5	6.00
KRP5DG§	6V	32.1	1.2W	SPDT	10	5.50
KRP5DG§	12V	120	1.2W	SPDT	10	5.50
KRP5DG§	24V	472	1.2W	SPDT	10	5.50
KRP5DG§	110V	10,000	1.2W	SPDT	10	6.10
KRP11A§	6V	6	2VA	DPDT	5	6.05
KRP11A§	12V	21	2VA	DPDT	5	6.05
KRP11A§	24V	75	2VA	DPDT	5	6.05
KRP11A§	115V	2,250	2VA	DPDT	5	6.05
KRP11A§	230V	9,110	2VA	DPDT	5	6.45
KRP11AG§	6V	6	2VA	DPDT	10	6.25
KRP11AG§	12V	21	2VA	DPDT	10	6.25
KRP11AG§	24V	75	2VA	DPDT	10	6.25
KRP11AG§	115V	2,250	2VA	DPDT	10	6.25
KRP11AG§	230V	9,100	2VA	DPDT	10	6.65
KRP11D§	6V	32.1	1.2W	DPDT	5	6.00
KRP11D§	12V	120	1.2W	DPDT	5	6.00
KRP11D§	24V	472	1.2W	DPDT	5	6.00
KRP11D§	110V	10,000	1.2W	DPDT	5	6.60
KRP11DG§	6V	32.1	1.2W	DPDT	10	6.20
KRP11DG§	12V	120	1.2W	DPDT	10	6.20
KRP11DG§	24V	472	1.2W	DPDT	10	6.20
KRP11DG§	110V	10,000	1.2W	DPDT	10	6.80
KRP14A§	6V	6	2VA	3PDT	5	7.50
KRP14A§	12V	21	2VA	3PDT	5	7.50
KRP14A§	24V	75	2VA	3PDT	5	7.50
KRP14A§	115V	2,250	2VA	3PDT	5	7.50
KRP14A§	230V	9,110	2VA	3PDT	5	7.90
KRP14AG§	6V	6	2VA	3PDT	10	7.80
KRP14AG§	12V	21	2VA	3PDT	10	7.80
KRP14AG§	24V	75	2VA	3PDT	10	7.80
KRP14AG§	115V	2,250	2VA	3PDT	10	7.80
KRP14AG§	230V	9,100	2VA	3PDT	10	8.20
KRP14D§	6V	32.1	1.2W	3PDT	5	7.45
KRP14D§	12V	120	1.2W	3PDT	5	7.45
KRP14D§	24V	472	1.2W	3PDT	5	7.45
KRP14D§	110V	10,000	1.2W	3PDT	5	8.05
KRP14DG§	6V	32.1	1.2W	3PDT	10	7.75
KRP14DG§	12V	120	1.2W	3PDT	10	7.75
KRP14DG§	24V	472	1.2W	3PDT	10	7.75
KRP14DG§	110V	10,000	1.2W	3PDT	10	8.35
KRP11AN§	6V	6	2VA	DPDT	10	7.15
KRP11AN§	12V	21	2VA	DPDT	10	7.15
KRP11AN§	24V	75	2VA	DPDT	10	7.15
KRP11AN§	115V	2,250	2VA	DPDT	10	7.15
KRP11AN§	230V	9,110	2VA	DPDT	10	7.55
KRP11DN§	6V		1.2W	DPDT	10	7.10
KRP11DN§	12V	120	1.2W	DPDT	10	7.10
KRP11DN§	24V	420	1.2W	DPDT	10	7.10
KRP11DN§	110V	10,000	1.2W	DPDT	10	7.70
KRP14AN§	6V	6	2VA	3PDT	10	8.70
KRP14AN§	12V	21	2VA	3PDT	10	8.70
KRP14AN§	24V	75	2VA	3PDT	10	8.70
KRP14AN§	115V	2,250	2VA	3PDT	10	8.70
KRP14AN§	230V	9,110	2VA	3PDT	10	9.10

SPECIAL PURPOSE RELAYS

AP SERIES RATCHET, IMPULSE A reliable compact unit for applications requiring on-off or reversing action on alternate operations. Positive ratchet operation at all speeds on impulses as short as 60 ms. Intermittent operation only. Mounting: Three 5/32" dia. holes on 3 3/16" x 1 7/8" triangular centers. Contacts: 5/16" dia. silver. Weight: 7 ozs. Coils for intermittent duty only.



AP11A	6V	0.6	18.5VA	DPDT	5	8.70
AP11A	12V	2.28	18.5VA	DPDT	5	8.70
AP11A	24V	8.8	18.5VA	DPDT	5	8.70
AP11A	115V	240	18.5VA	DPDT	5	8.70
AP11A	230V	900	18.5VA	DPDT	5	9.15
AP11D	6V	4.0	9.0W	DPDT	5	8.70
AP11D	24V	65	9.0W	DPDT	5	8.70
AP11D	110V	1,350	9.0W	DPDT	5	9.35
AP17A	24V	8.8	19.5VA	4PDT	5	10.50
AP17A	115V	240	18.5VA	4PDT	5	10.50
AP17D	12V	15.5	9.0W	4PDT	5	10.50
AP17D	24V	65	9.0W	4PDT	5	10.50
AP17D	110V	1,350	9.0W	4PDT	5	11.15

BU BUZZER AC operated coil with a spring steel armature which buzzes when coil is energized. Used extensively in test equipment, laboratories and a host of other applications where a small light weight, dependable buzzer is required. Weight: 1⅝ ozs. Mounting: No. 6-32 tapped core.



BU	6V	2.75	4.6VA	-	-	1.70
BU	12V	13.25	4.6VA	-	-	1.70
BU	24V	50	4.6VA	-	-	1.70
BU	115V	1,250	4.6VA	-	-	1.70

§Enclosed Relay **See ordering information on page 1.**

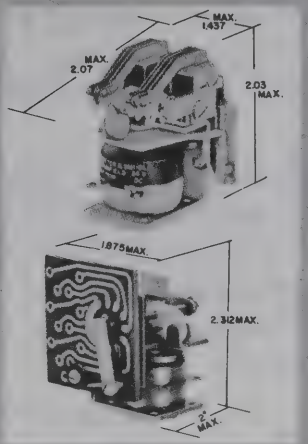
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Potter & Brumfield Relays

SPECIAL PURPOSE RELAYS

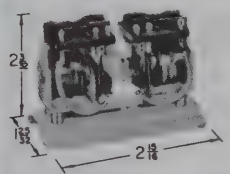
GM SERIES Unusually versatile switching makes this impulse/sequencing relay especially suitable for single coil latching. The 2 Form C contact arrangement is switched alternately by cam action during drop-out of the armature. It can also be furnished with additional 2 Form C auxiliary contacts (designated by "L"). AC version operates on a 50% coil duty cycle (5 Min. max.). Mounting: 8-32 tapped core with locating boss. Weights: With aux. contacts 4¾ ozs. Without aux. contacts 4 ozs.

The GM1N10 and GM1N12 AC or DC use the basic GM structure with uni-directional printed circuit boards with 10 or 12-steps, respectively. The board is attached to an extension of the ratchet shaft. The movable contact arm advances one position each time the armature *drops out*. Contact rating: .25 amps. Contact arrangement: SP-10 pos. and SP-12 pos. Size: 2.312" x 1.875" x 2".



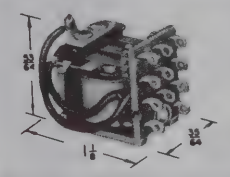
TYPE	COILS: Voltage or Current	COILS: Resistance in Ohms	COILS: Nominal Power	CONTACTS: Arrangement	CONTACTS: Rate in Amps	SUGG. RESALE PRICE
GM11A	24V	16	9.4VA	DPDT	3	$ 7.15
GM11A	115V	425	9.4VA	DPDT	3	7.15
GM11AL11	24V	16	9.4VA	DPDT / DPDT	3	10.20
GM11AL11	115V	425	9.4VA	DPDT / DPDT	3	10.20
GM11D	12V	36	4W	DPDT	3	6.90
GM11D	24V	144	4W	DPDT	3	6.90
GM11D	110V	3025	4W	DPDT	3	7.35
GM11DL11	12V	36	4W	DPDT / DPDT	3	10.00
GM11DL11	24V	144	4W	DPDT / DPDT	3	10.00
GM11DL11	110V	3025	4W	DPDT / DPDT	3	10.45
GM1N10A	115V	510	9.4VA	SP-10 pos.	.25	$ 8.85
GM1N12A	115V	510	9.4VA	SP-12 pos.	.25	8.95
GM1N10D	24V	144	4W	SP-10 pos.	.25	8.65
GM1N12D	24V	144	4W	SP-12 pos.	.25	8.75

KB SERIES LATCHING RELAY Both release and trip coils must be for the same voltage. One coil operates relay to set latch and other coil releses it. Ideal for memory work and overload applications. Operates on momentary impulse to either coil. Mounting: Two 5/32" dia. holes on 1⅜" centers. Weight: 6 ozs. Contacts: ⅛" dia. silver rated 5 amps; "G" suffix indicates silver cadmium-oxide contacts on movables rated 10 amps. AC relays with 5 amp. contacts are U/L nd CSA• listed. AC coil for intermittent duty only.



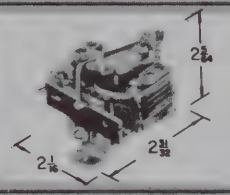
KB17AY	6V	2.3	5VA	4PDT	5	10.50
KB17AY	12V	10	5VA	4PDT	5	10.50
KB17AY	24V	42	5VA	4PDT	5	10.50
KB17AY	115V	1,030	5VA	4PDT	5	10.50
KB17AY	230V	4,100	5VA	4PDT	5	11.30
KB17AG	6V	2.3	5VA	4PDT	10	10.60
KB17AG	12V	10	5VA	4PDT	10	10.60
KB17AG	24V	42	5VA	4PDT	10	10.60
KB17AG	115V	1,030	5VA	4PDT	10	10.60
KB17AG	230V	4,100	5VA	4PDT	10	11.40
KB17D	6V	13.1	2.7W	4PDT	5	9.45
KB17D	12V	52.0	2.7W	4PDT	5	9.45
KB17D	24V	230	2.7W	4PDT	5	9.45
KB17D	110V	4,560	2.7W	4PDT	5	10.65
KB17DG	6V	13.1	2.7W	4PDT	10	9.65
KB17DG	12V	52.0	2.7W	4PDT	10	9.65
KB17DG	24V	230	2.7W	4PDT	10	9.65
KB17DG	110V	4,560	2.7W	4PDT	10	10.85
KB23AY	24V	27	7.8VA	6PDT	5	12.60
KB23AY	115V	700	7.8VA	6PDT	5	12.60
KB23AG	24V	27	7.8VA	6PDT	10	12.80
KB23AG	115V	700	7.8VA	6PDT	10	12.80
KB23D	24V	230	2.7W	6PDT	5	11.45
KB23DG	24V	230	2.7W	6PDT	10	11.75
KB23DG	110V	4,560	2.7W	6PDT	10	12.95

KM SERIES Subminiature relay for applications requiring unusually small relays with up to 3-poles. 3/32" dia. silver contacts. Withstands 30g mechanical shock and .06" excursion 10 to 55 cps mechanical vibration. Used extensively in small business machines, alarm systems, automatic toys and communications systems. Mounting: One 2-56 tapped core and locating half-punch. Solder terminals. Weight: .58 ozs.



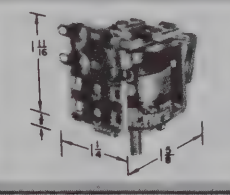
KM5D	6V	36	1.1W	SPDT	2	3.35
KM5D	12V	144	1.1W	SPDT	2	3.35
KM5D	24V	500	1.1W	SPDT	2	3.35
KM11D	6V	36	1.1W	DPDT	2	3.70
KM11D	12V	144	1.1W	DPDT	2	3.70
KM11D	24V	500	1.1W	DPDT	2	3.70
KM14D	6V	36	1.1W	3PDT	2	4.25
KM14D	12V	144	1.1W	3PDT	2	4.25
KM14D	24V	500	1.1W	3PDT	2	4.25

PC SERIES Single coil impulse latching relay for on-off and current reversal switching on alternate pulses. Operates on 30 millisecond pulses to the coil. Mounting: Two 5/32" dia. holes on 2⅝" centers. Weight: 5 ozs. Contacts: ⅛" dia. gold-flashed silver cadmium -oxide. Coils for intermittent duty only.



PC11A	6V	0.6	18.5VA	DPDT	7.5	5.50
PC11A	12V	2.28	18.5VA	DPDT	7.5	5.50
PC11A	24V	8.8	18.5VA	DPDT	7.5	5.50
PC11A	115V	240	18.5VA	DPDT	7.5	5.50
PC11D	6V	4.0	9.0W	DPDT	7.5	5.35
PC11D	12V	15.5	9.0W	DPDT	7.5	5.35
PC11D	24V	65.0	9.0W	DPDT	7.5	5.35
PC17A	24V	8.8	18.5VA	4PDT	7.5	7.60
PC17A	115V	240	18.5VA	4PDT	7.5	7.60
PC17D	24V	65	9.0W	4PDT	7.5	7.45

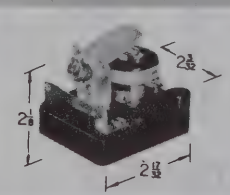
KT SERIES ANTENNA SWITCHING RELAY Glass base insulation for minimum RF loss to switch 300 ohm line. Mounting: One No. 6-32 threaded stud. Contacts: ⅛" dia. gold-flashed silver. Weight: 1½" ozs.



KT11A	6V	5.1	2VA	DPDT	5	3.70
KT11A	115V	2,250	2VA	DPDT	5	3.70
KT11D	6V	32.1	1.2W	DPDT	5	3.70
KT11D	12V	120	1.2W	DPDT	5	3.70

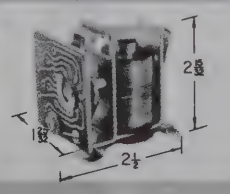
SPECIFY COIL VOLTAGE OR RESISTANCE WHEN ORDERING

MS SERIES MOTOR STARTING RELAYS For starting capacitor start, induction-run motors. Operates on back EMF of start winding. Armature gap can be altered to change pull-in. Meets all U/L spacing requirements. Mounting: Two 5/32" dia. holes on 1 9/16" centers. Contacts: ¾ HP, 7/32" dia. fine silver. 3 HP, 7/32" dia. silver cadmium. Weight: 5 ozs. max.
MS/MR Metal dust cover 3 5/16" x 2⅜" x 2 19/32".
Weight: 7.5 ozs.
35D130 fits MS/MR NET $1.90



MS2AY	115V	530	5.9VA	SPST-NC	¾HP	3.55
MS2AY	230V	2,100	5.9VA	SPST-NC	¾HP	3.95
MS4AY	115V	530	5.9VA	SPST-NC-DB	3HP	4.15
MS4AY	230V	2,100	5.9VA	SPST-NC-DB	3HP	4.55

SA SERIES STEPPING SWITCH A twelve position stepping relay with printed circuit strips to switch currents up to 250 milliamps. Armature-driven pawl operates a ratchet wheel to drive the movable contact in steps of 30 degrees over 12 positions. Used widely for audio-level switching in TV remote control units, scoreboards and process controls. Mounting: Two 6-32 holes on 1 13/16" centers. Weight: 4 ozs. AC coil for intermittent duty only.



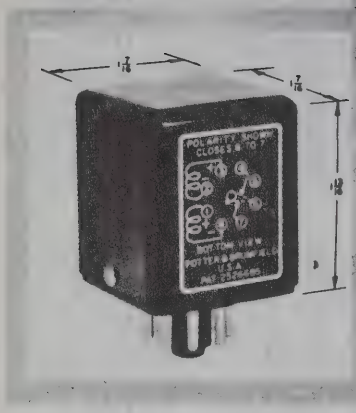
SA-1N-12A	115V	140	20VA	12-steps	.25	6.60

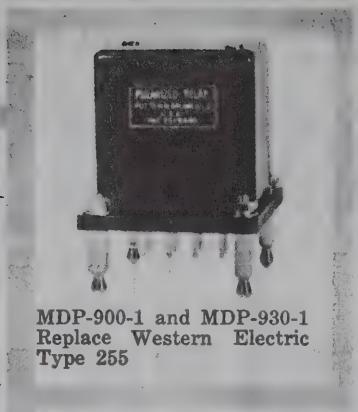
POTTER & BRUMFIELD
IS A MEMBER OF THE
NATIONAL ASSOCIATION OF RELAY MANUFACTURERS

See ordering information on page 1.

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MDP SERIES SMALL POLARIZED RELAYS





MDP-900-1 and MDP-930-1 Replace Western Electric Type 255

- **Sensitive**
- **High Speed**
- **Bounce-free**

For Bi-Stable or Center-Stable Operation

Small size, ultra-sensitivity and high speed switching together with efficient, bounce-free contact action characterize P&B MDP polarized relays. Their operation depends on both the magnitude and direction of the coil current. Two types of contact arrangements provide the following action when the coils are de-energized: *Bi-stable* – armature remains in its last energized position; *Center-stable* – armature remains in center-off position with contacts open. Contact materials as listed. Temperatures: −60°C to +85°C. Measuring only 1 7/16" sq. by 1 13/16" high (seated), MDP relays are equipped with a plastic dust cover and 8 or 12-pin plugs. Weight: 4¼ ozs.

Types MDP-900-1 and MDP-930-1 (with extra long life contacts) will directly replace Western Electric Type 255 relays. 2-11/16" square x 3-3/4" overall height. Weight: 10 ozs.

9MDP51 Hold-down Bracket to adapt MDP relays to Barber-Colman socket. Box of 10 Net $2.50

TYPE	COILS: Pull-In Current In MA	COILS: Resistance In Ohms Each Coil*	COILS: Pull-In Power In Micro Watts	CONTACTS: Arrangement	CONTACTS: Rate In Amps Resistive	SUGG. RESALE PRICE
Center-stable: MDP-306-5	1.5	250 (4)	562	1 Form K①	.005-.5A† 5-150V	31.80
Bi-stable: MDP-300-1	1.5	150 (2)	338	1 Form C②	.01-.1A† 25-150V	21.30
MDP-900-1	2.0	150 (2)	600	1 Form C②	.01-.1A† 25-150V	27.60
MDP-930-1	2.4	150 (2)	863	1 Form C③	.01-.5A† 25-150V	28.15
MDP-1300-1	1.4	150 (2)	294	1 Form C②	.01-.1A† 25-150V	21.30
MDP-1300-8	0.28	4000 (2)	314	1 Form C②	.01-.1A† 25-150V	21.30
Center-stable: MDP-1001	1.75	12 (1)	36.8	1 Form K①	3 @ 28 VDC	24.35
MDP-1004	0.49	130 (1)	31.2	1 Form K①	3 @ 28 VDC	24.35
MDP-1006	0.32	330 (1)	33.8	1 Form K①	3 @ 28 VDC	24.35
MDP-1007	0.27	480 (1)	35.0	1 Form K①	3 @ 28 VDC	24.35
MDP-1008	0.23	900 (1)	47.6	1 Form K①	3 @ 28 VDC	24.35
MDP-1009	0.18	1460 (1)	47.3	1 Form K①	3 @ 28 VDC	24.35
MDP-1011	0.10	3500 (1)	35.0	1 Form K①	3 @ 28 VDC	24.35
MDP-1013	0.067	7200 (1)	32.3	1 Form K①	3 @ 28 VDC	24.35
MDP-2001	3.50	6 (2)	73.5	1 Form K①	3 @ 28 VDC	24.35
MDP-2008	0.46	360 (2)	76.2	1 Form K①	3 @ 28 VDC	24.35
MDP-2009	0.32	1000 (2)	102.0	1 Form K①	3 @ 28 VDC	24.35
MDP-2011	0.17	2300 (2)	66.5	1 Form K①	3 @ 28 VDC	24.35
MDP-2101	5.30	6 (2)	169	1 Form K①	3 @ 28 VDC	24.35
MDP-2107	0.80	240 (2)	154	1 Form K①	3 @ 28 VDC	24.35
MDP-2112	0.22	3300 (2)	160	1 Form K①	3 @ 28 VDC	24.35

*Number of coils shown in ( ) parenthesis. †With suitable arc suppression

Contact materials shown in O circles:
① *Silver.*
② *Tungsten and Paliney.*
③ *Silver-tungsten-carbide.*

TRY

HUGHES-PETERS

FIRST,

IT IS

PROBABLY

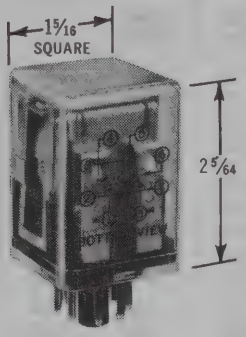
IN STOCK

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The representative Sigma Relays described in this catalog are selected from an extensive line of more than one hundred thousand standard types including latching and non-latching, electromagnetic and solid-state relays. Whenever a control signal must open or close electrical contacts, more than likely a standard Sigma Relay will meet the requirement reliably and economically.

This catalog provides brief, concise ordering information on those relay types most widely used in many kinds of industrial, commercial and military service and usually stocked locally by Sigma distributors. Individual catalog bulletins containing more comprehensive data on each relay series — as well as application engineering assistance where required — are available either direct or through regional Sigma sales offices.

GENERAL PURPOSE *SERIES 46B, DPDT*



Type 46BRO, 46BROZ
Transparent plastic dust cover, octal plug.

CONTACT LOAD RATING	COIL DATA, NOMINAL AT 25°			CATALOG NUMBER			PRICE
	Rated Power (Pull-in Power)	Must Operate Voltage	Suggested Source Voltage	Relay Type	Ohms and Adjustment	Contact Material	
10 A	1 w (.5 w)	4.3 v	6 VDC	46BRO	— 43 LG	— SCO	$6.00
		8.5 v	12 "	46BRO	— 180 LG	— SCO	6.00
		17 v	24 "	46BRO	— 630 LG	— SCO	6.00
		34 v	48 "	46BRO	— 2800 LG	— SCO	6.20
		85 v	120 "	46BRO	— 17000 LG	— SCO	6.60
5 A	1 w (.5 w)	4.3 v	6 "	46BRO	— 43 LG	— SIL	6.00
		8.5 v	12 "	46BRO	— 180 LG	— SIL	6.00
		17 v	24 "	46BRO	— 630 LG	— SIL	6.00
		34 v	48 "	46BRO	— 2800 LG	— SIL	6.20
		85 v	120 "	46BRO	— 17000 LG	— SIL	6.60
10 A	2 va (1 va)	4.3 v	6 VAC	46BROZ	— 2800M ACL	— SCO	6.05
		8.5 v	12 "	46BROZ	— 11 ACL	— SCO	6.05
		17 v	24 "	46BROZ	— 43 ACL	— SCO	6.05
		34 v	48 "	46BROZ	— 180 ACL	— SCO	6.05
		85 v	120 "	46BROZ	— 1100 ACL	— SCO	6.05
		170 v	240 "	46BROZ	— 4500 ACL	— SCO	6.45
5 A	2 va (1 va)	4.3 v	6 "	46BROZ	— 2800M ACL	— SIL	6.05
		8.5 v	12 "	46BROZ	— 11 ACL	— SIL	6.05
		17 v	24 "	46BROZ	— 43 ACL	— SIL	6.05
		34 v	48 "	46BROZ	— 180 ACL	— SIL	6.05
		85 v	120 "	46BROZ	— 1100 ACL	— SIL	6.05
		170 v	240 "	46BROZ	— 4500 ACL	— SIL	6.45

For heavy-duty switching, from on-off input signals, of AC or DC loads in industrial applications, including control of fractional horsepower motors.

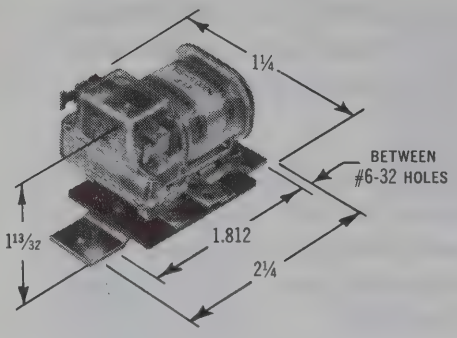
Release Voltage (as % of operate), minimum: LG: 10%; ACL: 50%

Temperature Range: —65 to 70°C (—85 to 158°F)

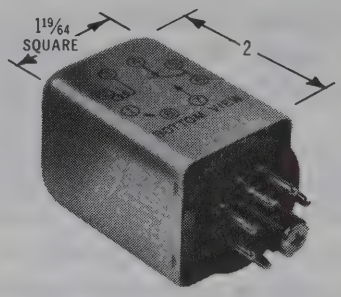
Typical Life at Load: 5 x 10^5 operations at 10 A 120 VAC or 5 A 240 VAC; 3 x 10^6 operations at 5 A 120 VAC; 5 x 10^6 operations at 3 A 120 VAC; 10 x 10^6 operations at 1 A 28 VDC. All loads non-inductive. Ratings above 5 A apply only to SCO (silver-cadmium oxide) contacts.

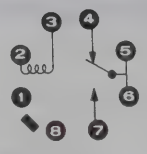
Prices (U.S. Dollars) subject to change without notice. Effective May 1, 1964

GENERAL PURPOSE *SERIES 41 SPDT*



TYPE 41F, 41FZ
Unenclosed, screw mounting, 5 solder terminals, insulated from chassis

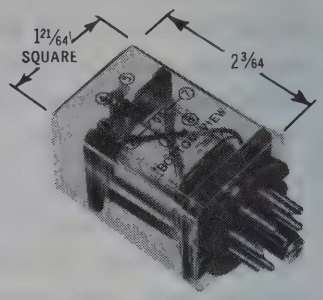




41RO, 41ROZ

TYPE 41RO, 41ROZ
Aluminum dust cover, octal plug

TYPE 41RZ
Same as 41RO except 1½" sq. x 1⅞", 5-pin plug





41RO6

TYPE 41RO6
Transparent plastic dust cover, octal plug

CONTACT LOAD RATING	COIL DATA, NOMINAL AT 25° C			CATALOG NUMBER			PRICE
	Rated Power (Pull-in Power)	Must Operate Voltage or Current	Suggested Source Voltage	Relay Type	Ohms and Adjustment	Contact Material	
10 A	450 mw (200 mw)	4 v	6 VDC	41F	80 VG	BSL	$3.50
		8 v	12 "	41F	250 VG	BSL	3.50
		16 v	24 "	41F	1000 VG	BSL	3.50
		32 v	48 "	41F	5000 VG	BSL	3.65
5 A	450 mw (200 mw)	4 v	6 "	41RO	80 VG	BSL	5.00
		4 v	6 "	41RO6	80 VG	BSL	5.00
		8 v	12 "	41RO	250 VG	BSL	5.00
		8 v	12 "	41RO6	250 VG	BSL	5.00
		16 v	24 "	41RO	1000 VG	BSL	5.00
		16 v	24 "	41RO6	1000 VG	BSL	5.00
		32 v	48 "	41RO	5000 VG	BSL	5.15
		32 v	48 "	41RO6	5000 VG	BSL	5.15
		4.5 ma	—	41RO6	10000 G	BSL	5.35
2 A	100 mw (40 mw)	15 ma	—	41F	200 S	SIL	3.85
		4 v	6 "	41F	500 VS	SIL	3.85
		4 v	6 "	41RO	500 VS	SIL	5.50
		4 v	6 "	41RO6	500 VS	SIL	5.50
		8 v	12 "	41F	1600 VS	SIL	3.85
		8 v	12 "	41RO	1600 VS	SIL	5.50
		8 v	12 "	41RO6	1600 VS	SIL	5.50
		16 v	24 "	41F	5000 VS	SIL	4.00
		16 v	24 "	41RO	5000 VS	SIL	5.65
		16 v	24 "	41RO6	5000 VS	SIL	5.65
		2 ma	—	41F	10000 S	SIL	4.25
10 A	.7 va (.4 va)	4 v	6 VAC	41FZ	10 ACG	BSL	3.50
		9 v	12 "	41FZ	50 ACG	BSL	3.50
		18 v	24 "	41FZ	200 ACG	BSL	3.50
		90 v	115 "	41FZ	5000 ACG	BSL	3.65
		140 v	230 "	41FZ	12000 ACG	BSL	4.15
5 A	.7 va (.4 va)	18 v	24 "	41RZ	200 ACG	BSL	5.00
		18 v	24 "	41ROZ	200 ACG	BSL	5.00
		90 v	115 "	41RZ	5000 ACG	BSL	5.15
		90 v	115 "	41ROZ	5000 ACG	BSL	5.15
		140 v	230 "	41RZ	12000 ACG	BSL	5.65
		140 v	230 "	41ROZ	12000 ACG	BSL	5.65
2 A	.25 va (.2 va)	4 v	6 "	41FZ	35 ACS	SIL	4.00
		8.5 v	12 "	41FZ	100 ACS	SIL	4.00
		18 v	24 "	41FZ	500 ACS	SIL	4.00
		85 v	115 "	41FZ	10000 ACS	SIL	4.45
		95 v	150 "	41ROZ	12000 ACS	SIL	6.50

Versatile, long-life relays — AC for on-off, DC for on-off or gradually changing signals. High release for use in circuits with high idle current. Series 41 relays are listed by Underwriters' Laboratories, Inc., and Canadian Standards Association.

Release Current or Volts (as % of operate), minimum: S, VS, G, VG: 30%; ACG: 20%; ACS: 10%

Temperature Range: —55 to 85°C (—67 to 185°F) except plastic covers, to 70°C (158°F)

Vibration (to 55 cps): S, VS and ACS: 5 g; G, VG and ACG: 10 g

Shock (non-operating): 100 g

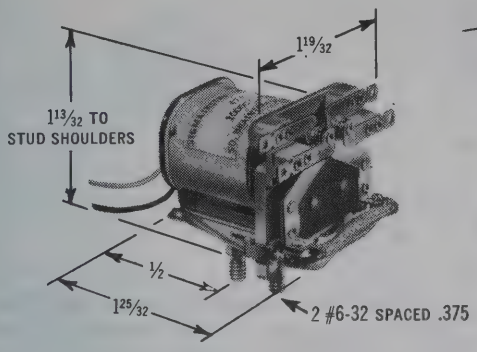
Typical Life at Load: S, VS, ACS: 10^5 operations at 2 A 28 VDC; 10^6 at 2 A 120 VAC or 1.2 A 28 VDC; 10^7 at .5 A AC or DC; 5 x 10^9 at 50 ma

G, VG, ACG: Unenclosed types: 10^5 operations at 10 A 28 VDC or 120 VAC; all types: 3 x 10^5 operations at 5 A; 10^6 at 2 A: 10^7 at .5 A; and 5 x 10^9 at 50 ma

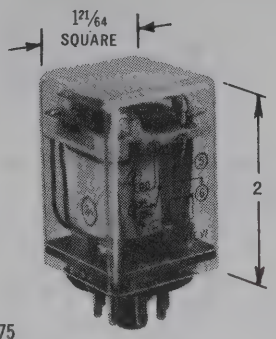
Other Standard Features Available: Palladium, silver cadmium oxide, tungsten, and gold alloy contacts; various open and enclosed body types

SIGMA DIVISION SIGMA INSTRUMENTS INC
Assured Reliability With Advanced Design

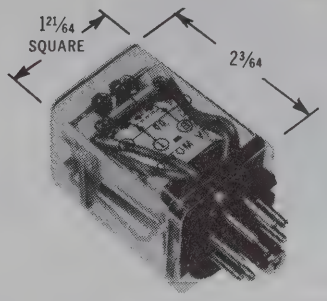
GENERAL PURPOSE *SERIES 42 DPDT*



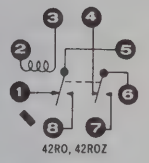
TYPE 42F, 42FZ
Unenclosed, stud mounting, 6 solder terminals, 2 coil leads, non-insulated base

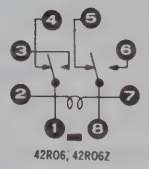


TYPE 42RO, 42ROZ
Transparent plastic dust cover, octal plug



TYPE 42RO6, 42RO6Z
Transparent plastic dust cover, octal plug





CONTACT LOAD RATING	COIL DATA, NOMINAL AT 25°C. Rated Power (Pull-in Power)	Must Operate Voltage or Current	Suggested Source Voltage	CATALOG NUMBER Relay Type	Ohms and Adjustment	Contact Material	PRICE
10 A	450 mw (200 mw)	4 v	6 VDC	42F	80 VG	SIL	$4.60
		8 v	12 "	42F	250 VG	SIL	4.60
		16 v	24 "	42F	1000 VG	SIL	4.60
		32 v	48 "	42F	5000 VG	SIL	4.80
5 A	450 mw (200 mw)	4 v	6 "	42RO	80 VG	SIL	6.20
		4 v	6 "	42RO6	80 VG	SIL	6.20
		32 ma	—	42RO	200 G	SIL	6.20
		8 v	12 "	42RO	250 VG	SIL	6.20
		8 v	12 "	42RO6	250 VG	SIL	6.20
		20 ma	—	42RO	500 G	SIL	6.20
		16 v	24 "	42RO	1000 VG	SIL	6.20
		16 v	24 "	42RO6	1000 VG	SIL	6.20
		32 v	48 "	42RO	5000 VG	SIL	6.40
		32 v	48 "	42RO6	5000 VG	SIL	6.40
		4.5 ma	—	42RO	10000 G	SIL	6.60
		4.5 ma	—	42RO6	10000 G	SIL	6.60
2 A	230 mw (100 mw)	4 v	6 "	42F	150 VS	SIL	5.05
		4 v	6 "	42RO	150 VS	SIL	6.80
		4 v	6 "	42RO6	150 VS	SIL	6.80
		8 v	12 "	42F	500 VS	SIL	5.05
		8 v	12 "	42RO	500 VS	SIL	6.80
		8 v	12 "	42RO6	500 VS	SIL	6.80
		10 ma	—	42RO	1000 S	SIL	6.80
		16 v	24 "	42F	2500 VS	SIL	5.05
		16 v	24 "	42RO	2500 VS	SIL	6.80
		16 v	24 "	42RO6	2500 VS	SIL	6.80
		32 v	48 "	42F	10000 VS	SIL	5.50
		32 v	48 "	42RO	10000 VS	SIL	7.25
		32 v	48 "	42RO6	10000 VS	SIL	7.25
5 A	.7 va (.5 va)	4 v	6 VAC	42ROZ	8 ACG	SIL	6.20
		9 v	12 "	42ROZ	50 ACG	SIL	6.20
		18 v	24 "	42ROZ	200 ACG	SIL	6.20
		90 v	115 "	42ROZ	4000 ACG	SIL	6.20
		90 v	115 "	42RO6Z	4000 ACG	SIL	6.20
		150 v	230 "	42ROZ	12000 ACG	SIL	6.80
2 A	.3 va (.3 va)	4.5 v	6 "	42FZ	25 ACS	SIL	5.30
		8.5 v	12 "	42FZ	62 ACS	SIL	5.30
		19 v	24 "	42FZ	340 ACS	SIL	5.30
		90 v	115 "	42FZ	7000 ACS	SIL	5.50
		90 v	115 "	42ROZ	7000 ACS	SIL	7.35

Versatile, long-life, for on-off signals. High release for use in circuits with high idle current.

Release Current or Volts (as % of operate), minimum: S, VS, G, VG: 30%

ACG: 20%; ACS: 10%

Temperature Range: —55 to 85°C (—67 to 185°F) except plastic covers, to 70°C (158°F)

Vibration (to 55 cps): S, VS and ACS: 5 g; G, VG and ACG: 10 g

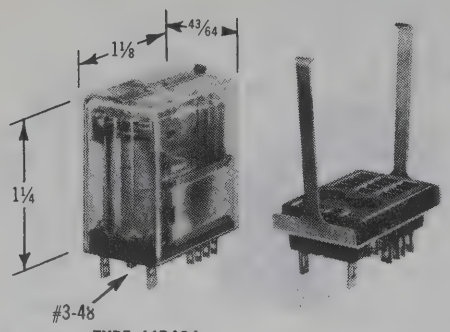
Shock (non-operating): 100 g

Typical Life at Load: S, VS, ACS: 10^5 operations at 2 A 28 VDC; 10^6 at 2 A 120 VAC or 1.2 A 28 VDC; 10^7 at .5 A AC or DC; 5 x 10^9 at 50 ma

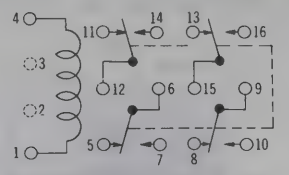
G, VG, ACG: Unenclosed types: 10^5 operations at 10 A 28 VDC or 120 VAC; all types: 3 x 10^5 operations at 5 A; 10^6 at 2 A; 10^7 at .5 A; and 5 x 10^9 at 50 ma

Other Standard Features Available: Palladium, silver cadmium oxide, tungsten, and gold alloy contacts; various additional open and enclosed body types

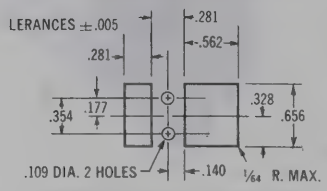
GENERAL PURPOSE *SERIES 44 4PDT*



TYPE 44R4G4
Removable plastic dust cover and socket



WIRING DIAGRAM, BOTTOM VIEW



TEMPLATE, RELAY OR SOCKET

CONTACT LOAD RATING	COIL DATA, NOMINAL AT 25°C. Rated Power (Pull-in Power)	Must Operate Voltage	Suggested Source Voltage	CATALOG NUMBER Relay Type	Ohms and Adjustment	Contact Material	PRICE
5 A	800 mw (425 mw)	4.3 v	6 VDC	44R4G4	45 VG	SIL	$4.40
		8.5 v	12 "	44R4G4	170 VG	SIL	4.40
		17 v	24 "	44R4G4	680 VG	SIL	4.40
		85 v	110 "	44R4G4	17000 VG	SIL	5.80
				Socket, grounding spring, screw, nut and lock washer:		AD15-3	.65

Compact, universal-mounting relay with high contact rating, for on-off applications. Same unit plugs into socket or can be stud-mounted on a panel for solder connections. Interchangeable with similar commercial relays.

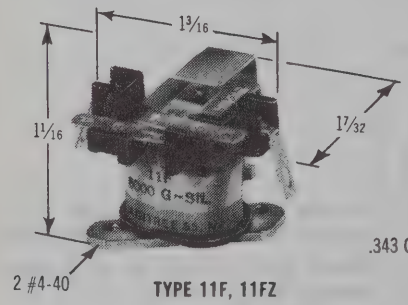
Release Voltage (as % of operate), at 25°C, minimum: 15%

Temperature Range: —20 to 70°C (—4 to 158°F)

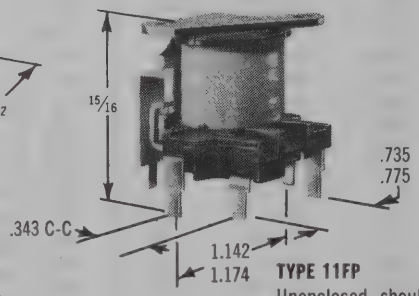
Typical Life at Load: 4 x 10^5 operations at 5 A 28 VDC; 1.5 million at 3 A

Other Standard Features Available: Body types with two studs or without stud

GENERAL PURPOSE *SERIES 11 SPDT*



TYPE 11F, 11FZ
Unenclosed, tapped holes in frame, 5 solder terminals, armature common to mounting bracket



TYPE 11FP
Unenclosed, shoulder lug mounting and connections for printed circuit installation

CONTACT LOAD RATING	COIL DATA, NOMINAL AT 25°C. Rated Power (Pull-in Power)	Must Operate Current	Suggested Source Voltage	CATALOG NUMBER Relay Type	Ohms and Adjustment	Contact Material	PRICE
2 A	150 mw (50 mw)	14.0 ma	6 VDC	11F	250 G	SIL	$1.95
		7.0 ma	12 "	11F	1000 G	SIL	1.95
		4.6 ma	—	11F	2300 G	SIL	1.95
		4.6 ma	—	11FP	2300 G	SIL	2.05
		3.7 ma	24 "	11F	3500 G	SIL	2.10
		2.9 ma	—	11F	6000 G	SIL	2.15
		2.4 ma	—	11F	9000 G	SIL	2.35
		2.4 ma	—	11F2	9000 G	SIL	2.45
2 A	(.3 va)	—	6 VAC	11FZ	25 ACS	SIL	2.75
		—	24 "	11FZ	550 ACS	SIL	2.75
		—	115 "	11FZ	9000 ACS	SIL	3.25

Small, low cost. DC types are suitable for either slowly changing or suddenly applied signals; AC for on-off circuits only. Series 11 relays are listed by Underwriters' Laboratories, Inc., and Canadian Standards Association.

Release Current (as % of operate), minimum: 10%

Coil Tolerance: ±15%

Temperature Range: —20 to 50°C (—4 to 122°F)

Vibration (to 55 cps): 10 g

Shock (non-operating): 75 g

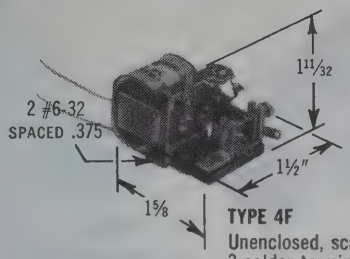
Typical Life at Load: G: 10^5 operations at 2 A; 10^6 at 0.7 A; .2 x 10^8 at 50 ma

ACS: 10^5 operations at 2 A; 10^6 at 0.7 A; 2 x 10^8 at 50 ma

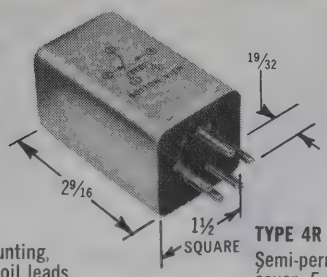
Other Standard Features Available: Palladium contacts

SIGMA DIVISION SIGMA INSTRUMENTS INC
Assured Reliability With Advanced Design

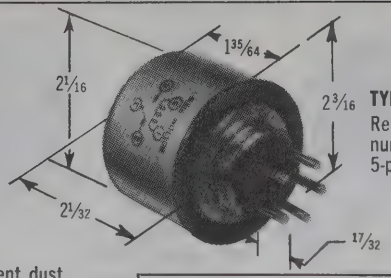
SENSITIVE *SERIES 4 SPDT*



TYPE 4F
Unenclosed, screw mounting, 3 solder terminals, 2 coil leads, armature common with mounting bracket



TYPE 4R
Semi-permanent dust cover, 5-pin plug



TYPE 4A
Removable aluminum dust cover, 5-pin plug

CONTACT LOAD RATING	COIL DATA, NOMINAL AT 25°C. Rated Power (Pull-in Power)	Must Operate Current	Suggested Source Voltage	CATALOG NUMBER Relay Type	Ohms and Adjustment	Contact Material	PRICE
2 A	45 mw (20 mw)	4.5 ma	6 VDC	4F	1000 S	SIL	$6.20
		4.5 ma	6 "	4R	1000 S	SIL	8.45
		3.0 ma	12 "	4F	2500 S	SIL	6.20
		3.0 ma	12 "	4A	2500 S	SIL	9.60
		3.0 ma	12 "	4R	2500 S	SIL	8.45
		2.0 ma	—	4F	5000 S	SIL	6.50
		2.0 ma	—	4R	5000 S	SIL	8.75
		1.6 ma	—	4F	8000 S	SIL	6.75
		1.6 ma	—	4R	8000 S	SIL	9.00
		1.4 ma	24 "	4F	10000 S	SIL	6.75
		1.4 ma	24 "	4R	10000 S	SIL	9.00
3 A	(50 mw)	2.5 ma	—	4F	8000 LG	SIL	6.75
		2.5 ma	—	4R	8000 LG	SIL	9.00

Useful for vacuum tube and transistor drives, for applications requiring high release or narrow differential, and for gradually changing as well as suddenly applied signals. Type 4R is listed for use in burglary protection equipment by Underwriters' Laboratories, Inc.

Release Current (as % of operate), minimum: S: 45%; LG: 40%

Temperature Range: S: 0 to 50°C (32 to 122°F); LG: —55 to 85°C (—67 to 185°F)

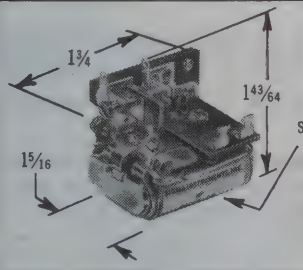
Vibration (to 55 cps): S: 5 g; LG: 10 g

Shock (non-operating): 75 g

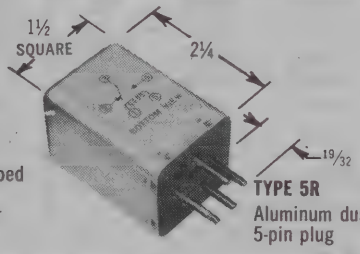
Typical Life at Load: S: 10^5 operations at 2.4 A; 10^6 at 1 A; 7×10^6 at 50 ma. LG: 10^5 operations at 3 A; 10^6 at 1.2 A; 7×10^6 at 50 ma

Other Standard Features Available: Palladium and tungsten contacts; hermetically sealed enclosures; insulated open-frame types; octal plugs

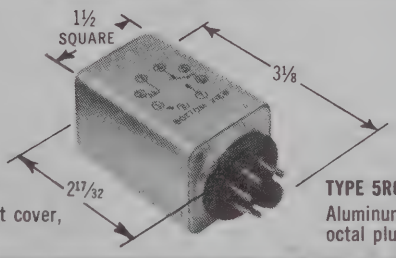
SENSITIVE *SERIES 5 SPDT*



TYPE 5F
Unenclosed, 2 tapped holes for screw mounting, 5 solder terminals



TYPE 5R
Aluminum dust cover, 5-pin plug



TYPE 5RO
Aluminum dust cover, octal plug

CONTACT LOAD RATING	COIL DATA, NOMINAL AT 25°C. Rated Power (Pull-in Power)	Must Operate Current	Suggested Source Voltage	CATALOG NUMBER Relay Type	Ohms and Adjustment	Contact Material	PRICE
.25 A	2 mw (1 mw)	1.0 ma	1.5 VDC	5F	1000 SS	PAL	$9.80
		1.0 ma	1.5 "	5R	1000 SS	PAL	12.10
		.65 ma	—	5RO	2500 SS	PAL	12.10
		.45 ma	3 "	5RO	5000 SS	PAL	12.70
		.35 ma	—	5RO	8000 SS	PAL	13.60
		.30 ma	—	5F	10000 SS	PAL	11.30
		.30 ma	—	5R	10000 SS	PAL	13.60
		.25 ma	6 "	5F	16000 SS	PAL	12.10
		.25 ma	6 "	5R	16000 SS	PAL	14.45
1 A	12 mw (5 mw)	2.3 ma	—	5F	1000 S	SIL	8.65
		2.3 ma	—	5R	1000 S	SIL	10.95
		1.4 ma	6 "	5F	2500 S	SIL	8.65
		1.0 ma	—	5F	5000 S	SIL	9.25
		.80 ma	—	5F	8000 S	SIL	10.15
		.70 ma	—	5F	10000 S	SIL	10.15
		.70 ma	—	5R	10000 S	SIL	12.40
		.55 ma	12 "	5F	16000 S	SIL	10.95
		.55 ma	12 "	5R	16000 S	SIL	13.30
3 A	35 mw (10 mw)	3.2 ma	6 "	5R	1000 G	SIL	10.95

Recommended for vacuum tube and transistor drives, especially for applications requiring highly stable, precise operation and high release. For either gradually changing or suddenly applied signals. Series 5 relays are listed for use in burglary protection equipment by Underwriters' Laboratories, Inc.

Release Current (as % of operate), minimum: SS: 40%; S: 30%; G: 40%

Temperature Range: SS: 10 to 40°C (50 to 140°F) S and G: —20 to 70°C (—4 to 158°F)

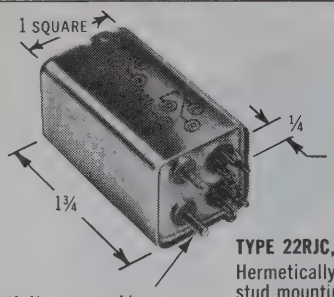
Vibration (to 40 cps): S, G: 5 g with no contact chatter

Shock (non-operating): 100 g

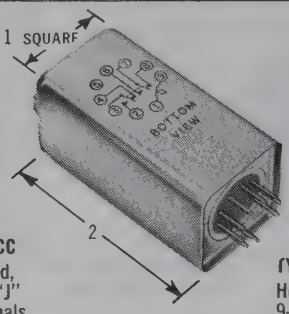
Typical Life at Load: SS: 10^4 operations at 0.3 A; S: 5×10^4 operations at 2 A DC or 1 A, 120 VAC; 6×10^6 operations at no load; G: 10^5 operations at 3 A, 28 VDC or 120 VAC; 6×10^6 operations at no load

Other Standard Features Available: Several open, dust-covered, hermetically sealed enclosures; AC types using rectifiers

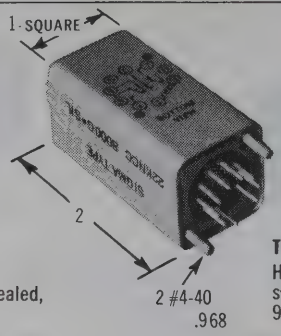
SENSITIVE *SERIES 22 SPDT, DPDT*



TYPE 22RJC, 22RJCC
Hermetically sealed, stud mounting, 8 "J" hook solder terminals



TYPE 22JNCC
Hermetically sealed, 9-pin plug



TYPE 22KNCC
Hermetically sealed, stud mounting, 9-pin plug

CONTACT LOAD RATING	COIL DATA, NOMINAL AT 25°C. Rated Power (Pull-in Power)	Must Operate Current	Suggested Source Voltage	CATALOG NUMBER Relay Type	Ohms and Adjustment	Contact Material	PRICE
SPDT							
		14 ma	3 VDC	22RJC	100 G	SIL	$13.00
		6.3 ma	6 "	22RJC	500 G	SIL	13.00
2 A	75 mw	4.5 ma	—	22RJC	1000 G	SIL	13.00
	(20 mw)	2.8 ma	12 "	22RJC	2500 G	SIL	13.50
		2.0 ma	—	22RJC	5000 G	SIL	14.00
		1.6 ma	24 "	22RJC	8000 G	SIL	14.50
DPDT							
		14 ma	6 "	22RJCC	200 G	SIL	14.50
		9 ma	—	22JNCC	500 G	SIL	14.85
		9 ma	—	22RJCC	500 G	SIL	14.50
		6.3 ma	12 "	22KNCC*	1000 G	SIL	15.00
		6.3 ma	12 "	22RJCC	1000 G	SIL	14.50
2 A	150 mw	4 ma	—	22JNCC	2500 G	SIL	15.35
	(40 mw)	4 ma	—	22RJCC	2500 G	SIL	15.00
		2.8 ma	24 "	22JNCC	5000 G	SIL	15.85
		2.8 ma	24 "	22KNCC*	5000 G	SIL	16.00
		2.8 ma	24 "	22RJCC	5000 G	SIL	15.50
		2.3 ma	—	22RJCC	8000 G	SIL	16.00
		1.8 ma	48 "	22KNCC*	12000 G	SIL	18.00
		1.8 ma	48 "	22RJCC	12000 G	SIL	17.50
1 A	(40 mw)	2.3 ma	—	22RJCC	8000 HG	SGP	18.50
1 A	(80 mw)	2.6 ma	—	22RJCC	12000 W	SGP	23.00
				*AT-155 Socket Assembly			.35

Miniature high-reliability relays with excellent stability and high release. For airborne or ground-based military equipment.

Release Current (as % of operate), minimum: 33%

Temperature Range: —65 to 125°C

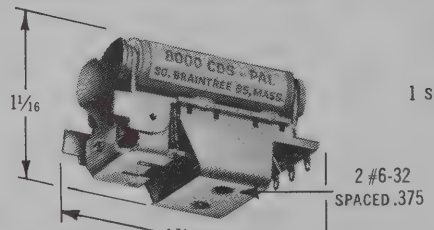
Vibration: G (SPDT or DPDT): 10 g to 300 cps; HG: 10 g to 500 cps; W: 15 g to 500 cps, 5 g to 2000 cps

Shock: 30 g, no contact opening; 100 g, no damage

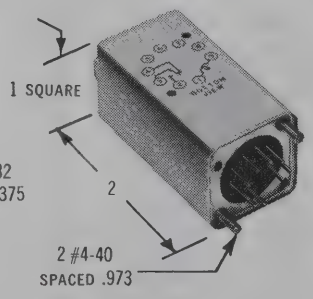
Rated Life at Load: 10^5 operations at load ratings listed

Other Standard Features Available: Palladium and gold contacts; adjustments to 12.5 milliwatts; additional hermetically sealed types

SENSITIVE *SERIES 26 SPDT*



TYPE 26F
Unenclosed, tapped holes for screw mounting, 5 solder terminals



TYPE 26KN
Hermetically sealed, stud mounting, 9-pin plug

CONTACT LOAD RATING	COIL DATA, NOMINAL AT 25°C. Rated Power	Must Operate Current	Suggested Source Voltage	CATALOG NUMBER Relay Type	Ohms and Adjustment	Contact Material	PRICE
		2.3 ma	—	26F	1000 S	SIL	$8.20
1 A	5 mw	2.3 ma	—	26KN	1000 S	SIL	13.55
1 A	10 mw	2.0 ma	—	26F	2500 G	SIL	7.90
0.5 A	4 mw	0.7 ma	—	26F	8000 CDS	SIL	10.05
0.5 A	4 mw	0.7 ma	—	26F	8000 CDS	PAL	10.55

Miniature, rugged relays with long mechanical life and high release.

Release Current (as % of operate), minimum: 50%

Temperature Range: G: —65 to 120°C (—85 to 258°F); S: —65 to 100°C (—85 to 212°F); CDS: 10 to 45°C (50 to 104°F)

Vibration: S and CDS: 5 g to 55 cps; G: 10 g to 55 cps without contact chatter

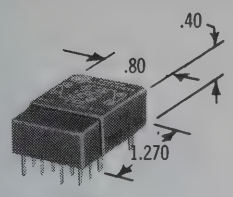
Shock (non-operating): 100 g

Rated Life at Load: 10^5 operations at load ratings listed

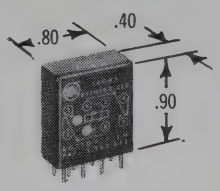
Other Standard Features Available: Four additional hermetically sealed enclosures

SIGMA DIVISION SIGMA INSTRUMENTS INC
Assured Reliability With Advanced Design

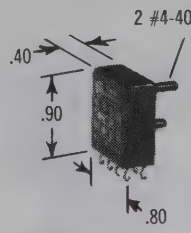
SENSITIVE *SERIES 33 DPDT*



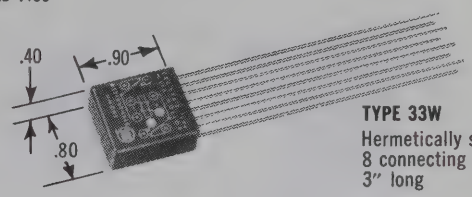
TYPE 33E
Hermetically sealed, tabs for printed circuit mounting, 8 pins



TYPE 33J
Hermetically sealed, 9-pin plug



TYPE 33RJK
Hermetically sealed, side stud mounting, 8 "J" hook solder terminals



TYPE 33W
Hermetically sealed, 8 connecting wires 3" long

CONTACT LOAD RATING	COIL DATA, NOMINAL AT 25°C. Rated Power (Pull-in Power)	Must Operate Voltage 25°C	Must Operate Voltage 125°C	Suggested Source Voltage	CATALOG NUMBER Relay Type	Ohms and Adjustment	Contact Material	PRICE
2 A	580 mw (100 mw)	13 v	18 v	26.5 VDC	33E	1200 FG	SIL	$21.50
					33J	1200 FG	SIL	20.00
					33RJK	1200 FG	SIL	20.00
					33W	1200 FG	SIL	20.50
2 A	875 mw (200 mw)	14 v	19 v	26.5 "	33E	800 FW	SIL	19.50
					33J	800 FW	SIL	18.00
					33RJK	800 FW	SIL	18.00
					33W	800 FW	SIL	18.50
		13 v	18 v	26.5 "	33RJP7 — 94900* Qualifies to MIL-R-5757D U.S. Govt. Part No. RY4NA3B3L01			19.25

High reliability subminiature relays with exceptional shock and vibration immunity. Meets MIL-R-5757D. Actuated by on-off signals of proper polarity. Reverse polarity does not operate the relay.

Release Voltage at 25°C: FG: 1.6 VDC; FW: 1.3 VDC

Temperature Range: —65 to 125°C

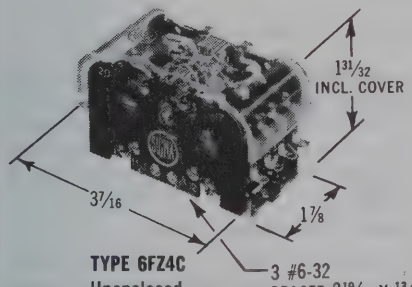
Vibration (to 5000 cps): 30 g will not cause contact chatter

Shock: FG: 70 g will not cause contact chatter; FW: 10 g

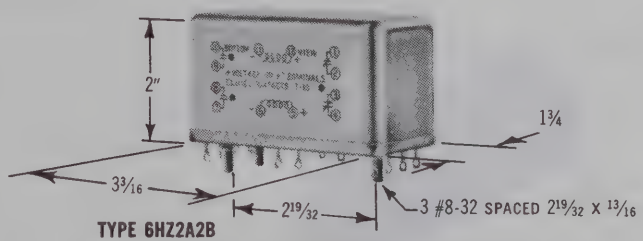
Rated Life at Load: 10^5 operations, 2 A 28 VDC through rated temperature range. Typical life at 25°C is 7×10^5 operations, 2 A 28 VDC

Other Standard Features Available: Gold contacts; additional hermetically sealed enclosures

POLAR *SERIES 6 UP TO 4PDT* *(Latching, Non-Latching, Center-Off)*



TYPE 6FZ4C
Unenclosed, tapped holes for screw mounting, solder terminals



TYPE 6HZ2A2B
Hermetically sealed, stud mounting, solder terminals

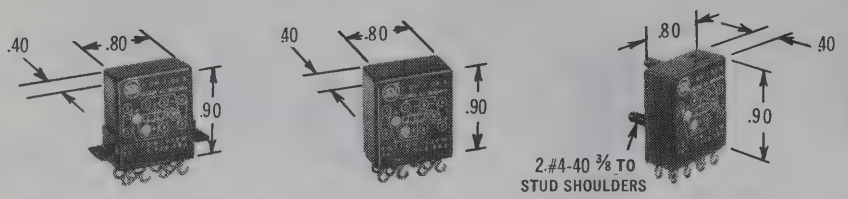
TYPE 6HXAA
Same as 6HZ2A2B except for contact arrangement

CONTACT LOAD RATING AND POLES	Switching Form	COIL DATA Must Operate (One Coil) Power DC volts or ma 25°C	25°C	100°C	Suggested Source Voltage	CATALOG NUMBER Relay Type	Ohms and Adjustment	Contact Material	PRICE
5 A 2NO-2NC	Latching — 2-position	450 mw	4.5 v	5.8 v	6 VDC	6HZ2A2B —	50 GD	SIL	$39.20
5 A 4PDT	Latching — 2-position	450 mw	30 v	39 v	50 "	6FZ4C	2000 GD	SIL	29.10
5 A 2NO	Center-Off — 3-position	22 mw	1.7 ma	—	24 "	6HXAA	8000 GD	SIL	43.00
5 A 4PDT	Non-Latching — 2-position	32 mw	1.8 ma	—	24 "	6FY4C	10000 G	SIL	36.70

Three types, high contact capacity for positive operation. Latching types remain in either of two positions until input polarity is reversed or second coil is used. Three-position types return to center-off condition when coil signal is removed. Non-latching two-position types are like general purpose relays except that coil input must be of proper polarity to operate the relay. Dual coils (identified by Suffix D in Adjustment Code) have listed ohms in each coil. Dual coils may be used separately, for opposite armature action, or simultaneously for either aiding or differential operation.

Other Standard Features Available: Palladium contacts; operate sensitivities from 8 to 500 milliwatts; contact ratings to 20 amperes; 4-pole in 6 and 61 Series

POLAR *SERIES 32 DPDT*



TYPE 32RJPD
Hermetically sealed flange mounting, 10 "J" hook solder terminals

TYPE 32RJD
Hermetically sealed, 10 "J" hook solder terminals

TYPE 32RJKD
Hermetically sealed, side stud mounting, 10 "J" hook solder terminals

CONTACT LOAD RATING	COIL DATA, NOMINAL AT 25°C. (One Coil)			CATALOG NUMBER			PRICE
	Rated Power (Pull-in Power)	Must Operate Current	Suggested Source Voltage	Relay Type	Ohms and Adjustment	Contact Material	
SINGLE COIL							
2 A	225 mw (50 mw)	4.0 ma	26.5 VDC	32RJP	3100 G	SIL	$23.50
DUAL COIL							
		17.5 ma	12 "	32RJPD	325 GD	SIL	26.00
2 A	575 mw	9.0 ma	26.5 "	32RJKD	1200 GD	SIL	26.50
	(100 mw)	9.0 ma	26.5 "	32RJPD	1200 GD	SIL	26.50
		6.0 ma	—	32RJD	2800 GD	SIL	27.50

High reliability subminiature relays with unusual shock and vibration immunity. Single or dual coil meets MIL-R-5757D. Positive snap action for slowly changing or on-off. signals. Stays latched, either position, until reset by reverse current or by use of second coil in dual coil types.

Temperature Range: —65 to 125°C

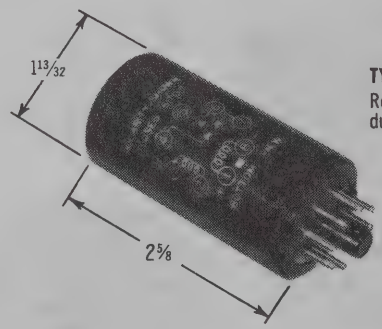
Vibration (to 5000 cps): 30 g with no contact chatter

Shock: 100 g will not cause contact chatter

Rated Life at Load: 10^5 operations, 2 A 28 VDC through rated temperature range. Typical life at 25°C is 2×10^5 at 3 A; 10^6 at 0.5 A

Other Standard Features Available: Gold contacts; additional hermetically sealed enclosures; single coil types

POLAR *SERIES 72 SPDT*



TYPE 72AOZ
Removable plastic dust cover, octal plug

CONTACT LOAD RATING	COIL DATA, NOMINAL AT 25°C.			CATALOG NUMBER			PRICE
	Rated Power (Pull-in Power)	Must Operate Current	Suggested Source Voltage	Relay Type	Ohms and Adjustment	Contact Material	
	2.1 mw	3.6 ma		72AOZ	160 TG	TCP	$33.00
See	0.31 mw	1.4 ma	See	72AOZ	160 TS	TCP	33.00
Text		0.56 ma	Text	72AOZ	1000 TS	TCP	33.00
		0.28 ma		72AOZ	4000 TS	TCP	34.10

For applications requiring very sensitive relays and for pulse repetition or telegraphy at 100 words/minute. Remains magnetically latched in either of two positions until either coil is energized with proper polarity, or until sum or difference of currents in the coils reaches the Must Operate Current listed.

Temperature Range: 0 to 50°C (32 to 122°F) to trip within specified limits. For telegraphy may be used —65 to 85°C (—85 to 185°F).

Vibration: To 20 g (depending on overdrive). In telegraph circuits the circuit power is usually 1 to 7 watts, with coil resistance about 5 to 15% of total circuit resistance.

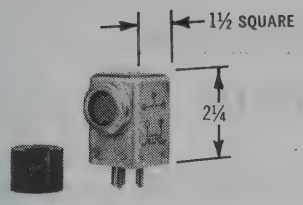
Shock (non-operating): 100 g

Typical Life at Load: With TCP (tungsten vs. copper palladium) contacts, 500 million operations with 60 ma, ±120 VDC polar inductive load, arc-suppressed; with SIL contacts, 10^5 operations at 3 A, non-inductive

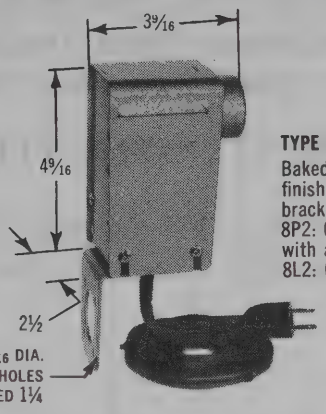
Other Standard Features Available: Silver, palladium, and gold contacts; center-off three-position adjustments; non-latching two-position adjustments; grounded metal dust cover; hermetically sealed body types

SIGMA DIVISION SIGMA INSTRUMENTS INC
Assured Reliability With Advanced Design

SPECIAL PURPOSE *SERIES 8 PHOTORELAYS SPDT*



TYPE 8RC01A, 8RC02A
Removable aluminum dust cover, 5-pin plug



TYPE 8PL2
Baked gray enamel finish dust covers, bracket mounted
8P2: 6-ft. 3-wire cord with adapter plug
8L2: 6-ft. 2-wire cord



Contacts rated 3A. For 120 VAC supply. **8PL2:** Includes a beamed light source for counting, sorting, door opening, machine safety control or other on-off use in high ambient light. **8RC01A:** Operates on 5 ft-candles, either on-off or slowly changing natural or artificial light. (Light source not included.) Releases at 0.1 ft-c. **8RC02A:** Same as 8RC01A except releases at 0.5 ft-c. **Prices: 8PL2:** $44.00; **8RC01A:** $16.50; **8RC02A:** $17.05

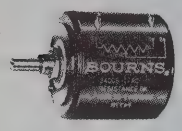
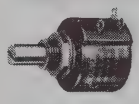
OTHER SPECIAL PURPOSE RELAYS

Slow Release	Break delay to 150 milliseconds: DC relays Series 5, Adjustments BDS, BDG or BDW.
Fast Release	Fast break of single-pole NO contacts, to 0.5 millisecond: Series 41, Adjustments SK, GK or FK. Double-pole NO contacts, to 1.5 milliseconds: Series 42, Adjustment G.
High Release	Release, as percent of Must Operate: AC types: Series 5, Adjustment ACE, 85%; 5 ACD, 50%. DC types: Series 4, Adjustment S, 45%; 5 CD, 80%; 5 CDS, CDG and CDW, 60%; 26 CDS 50%. Also, Series 4, adjusted to specification to 80%.
Undervoltage	See listing for High Release.
Constant Voltage (Temperature-Compensated)	Operate point constant within 5% at temperatures from —54 to 100°C (—65 to 212°F): Series 5, Adjustments CVS, VCG and CVW.
Fast Operate	For protection of meters, transistors, rectifiers: Series 5, Adjustments CP or VP; 4, Adjustment S; 26, Adjustment S wired as overload interrupter.
Dual Coil	For differential inputs. Available as standard in Series 5, 6, 23, 32, 61 and 72.
Telegraph	For polar or neutral input to 100 words/minute: Series 72; for neutral input to 60 words/minute: Series 41, Adjustments SK, GK and FK.
Center-Off, 3-Position	Series 23, available in SPDT and DPDT, 6 to 24 mw, 10 g, hermetically sealed. Series 72 and 7 available in SPDT, 1 to 2 mw. Series 6 available to 4PDT, 16 to 44 mw.
Magnetic Amplifier	Series 8000 relays operate one-ampere contacts with inputs as low as 0.1 microwatt; Series 8200, 0.02 microwatt. For military or industrial use.
Photochopper Modulator	Series PC3 are photoconductive choppers 95% efficient at 400 cps and useful to 10 kc. Noiseless, solid-state switching.
Photoconductive	Logitron relays are low noise, solid state, isolated input, multipole relays operating on photoelectric principle.
Binary Decoding	Photoconductive relays packaged in compact assemblies for converting binary inputs to Nixie, Pixie, Amperex, neon and other outputs.

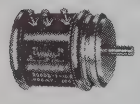
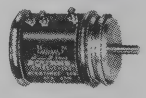
BOURNS® PRECISION

with smaller housings, higher resistances, better linearity, finer resolution, and higher operating temperatures than any other line

BOURNS® BUSHING-MOUNT POTENTIOMETERS

MODEL		DESCRIPTION	RESISTANCE① (OHMS)	TOLERANCE (%)	LINEARITY (%)	ELECTRICAL AND MECHANICAL ROTATION	MECHANICAL LIFE (CYCLES)	POWER (WATTS)	MAXIMUM OPERATING TEMP. RANGE (°C)
3400		1⅜₁₆" dia., 10 turns	100-250K 500K 1 meg	±3	±0.15	3600° (+4°/−0°)	100,000	5.0 at 40°C	−65 to +105
3410		2" dia. Single Turn	50Ω-100K	±3	0.3	350° (±2°)③	500,000	4W at 70°C	−65 to +125
3500		⅞" dia., 10 turns	50-125K 150K, 250K 500K	±3	±0.2	3600° (+10°/−0°)	100,000	2.0 at 70°C	−65 to +125
3510		⅞" dia., 3 turns	25-50K 100K	±3	±0.30	1080° (+10°/−0°)	100,000	1.0 at 70°C	−65 to +125
3520		⅞" dia., 5 turns	25-75K 100K 250K	±3	±0.30	1800° (+10°/−0°)	100,000	1.5 at 70°C	−65 to +125
3530		⅞" dia., single turn	25-20K 50K	±3	±0.50	350° (±2°)③	500,000	1.0 at 70°C	−65 to +125
3507		⅞" dia., 10 turns	100 to 100K 250K	±5	±0.50	3600° (+10°/−2°)④	10,000	2.0 at 25°C	−55 to +105
3700		½" dia., 10 turns	50-100K 250K	±5	±0.25	3600° (+10°/−0°)	50,000	1.0 at 70°C	−65 to +125
3707		½" dia., 10 turns	100-50K	±5	±1.0	3600° (+10°/−5°)	10,000	1.0 at 40°C	−55 to +105

BOURNS® SERVO-MOUNT POTENTIOMETERS

MODEL		DESCRIPTION	RESISTANCE (OHMS)	TOLERANCE (%)	LINEARITY (%)	ELECTRICAL AND MECHANICAL ROTATION	MAXIMUM GANGING (CUPS)	MECHANICAL LIFE (CYCLES)	POWER (WATTS)	MAXIMUM OPERATING TEMP. RANGE (°C)
3460		2" dia. Single Turn	50Ω-100K	±3	0.3	350° (±2°)②	19	500,000	4W at 70°C	−65 to +125
3550		⅞" dia., 10 turns	50-125K 150K, 200K 250K, 500K	±3	±0.20	3600°(+10°/−0°)	5	100,000	2.5 at 70°C	−65 to +125
3560		⅞" dia., 3 turns	25-50K 100K	±3	±0.25	1080°(+10°/−0°)	8	100,000	1.5 at 70°C	−65 to +125
3570		⅞" dia., 5 turns	25-75K 100K 250K	±3	±0.25	1800°(+10°/−0°)	6	100,000	2.0 at 70°C	−65 to +125
3580		⅞" dia., single turn	25-20K 50K	±3	±0.5	350°(±2°)③	24	1,000,000	1.0 at 70°C	−65 to +125
3750		½" dia., 10 turns	50-100K 250K	±5	±0.25	3600°(+10°/−0°)		50,000	1.0 at 70°C	−65 to +125

BOURNS KNOBPOT® (CLOCK FACE) POTENTIOMETERS

MODEL		DESCRIPTION	RESISTANCE (OHMS)	TOLERANCE (%)	DIAL ACC. (%)	DIAL REPEATABILITY (% V/R)	ELECTRICAL AND MECHANICAL ROTATION	MECHANICAL LIFE (CYCLES)	POWER (WATTS)	MAXIMUM OPERATING TEMP. RANGE (°C)
3600		¾" dia., 10 turns	100-100K 150K, 200K 250K	±5	±0.5	0.1	3600° (+10°/−0°)	10,000	1.5 at 25°C	−65 to +125
3640		1¼" dia., 10 turns	100-250K 500K	±3	±0.1	0.05	3600° (+10°/−0°)	10,000	2.5 at 25°C	−65 to +125

① Special resistances are available above and below the standard range shown. Consult factory for price and technical information.
② Std. Models exceed steady state requirements of MIL-STD-203, METHOD 103. Optional models are available meeting humidity cycling requirements of MIL-STD-202, METHOD 106.
③ Mechanical rotation continuous.
④ Electrical rotation only.

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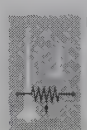
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POTENTIOMETERS

HUMIDITY (MIL-R-12934C)	SHOCK	VIBRATION	SIZE (INCHES) DIA.- CASE LENGTH	PRICES 1-9	10-24	25-49	50-99	100-249
Yes	50G	10G	1 13/64 x 1 3/4	10.00 19.00 28.00	9.50 18.05 26.60	9.00 17.10 25.20	8.50 16.15 23.80	8.00 15.20 22.40
Yes	50G	15G	2 x 5/8	19.00	18.05	17.10	16.15	15.20
Yes②	100G	20G	7/8 x 1	10.00 19.00 28.00	9.50 18.05 26.60	9.00 17.10 25.20	8.50 16.15 23.80	8.00 15.20 22.40
Yes②	100G	20G	7/8 x 9/16	15.00 33.00	14.25 31.35	13.50 29.70	13.50 29.70	12.75 28.05
Yes②	100G	20G	7/8 x 11/16	13.50 22.50 31.50	12.83 21.38 29.93	12.15 20.25 28.35	11.48 19.13 26.78	10.80 18.00 25.20
Yes	50G	15G	7/8 x 1/2	9.00 27.00	8.55 25.65	8.10 24.30	7.65 22.95	7.20 21.60
No	50G	10G	7/8 x 1 1/8	7.50 16.50	6.50 14.31	6.00 13.20	6.00 13.20	5.50* 12.09*
Yes	100G	20G	1/2 x 1	24.50 32.00	23.28 30.40	22.05 28.80	20.83 27.20	19.60 25.60
No	50G	10G	1/2 x 1	12.50	11.88	11.25	10.63	10.00

HUMIDITY (MIL-R-12934C)	SHOCK	VIBRATION	SIZE (INCHES) DIA.- CASE LENGTH	PRICES 1-9	10-24	25-49	50-99	100-249
Yes	50G	15G	2 x 5/8	21.00	19.95	18.90	17.85	16.80
Yes	100G	20G	1 x 1 5/16	20.00 29.00 38.00	19.00 27.55 36.10	18.00 26.10 34.20	17.00 24.65 32.30	16.00 23.20 30.40
Yes	100G	20G	7/8 x 1 3/64	20.00 38.00	19.00 36.10	18.00 34.20	18.00 34.20	17.00 32.30
Yes	100G	20G	7/8 x 1 3/16	18.50 27.50 36.50	17.58 26.13 34.68	16.65 24.75 32.85	16.65 24.75 32.85	15.73 23.38 31.03
Yes	50G	15G	7/8 x 5/8	25.00 43.00	23.75 40.85	22.50 38.70	21.25 36.55	20.00 34.40
Yes	100G	20G	1/2 x 1 3/16	34.00 41.50	32.30 39.43	30.60 37.35	28.90 35.28	27.20 33.20

HUMIDITY (MIL-R-12934C)	SHOCK	VIBRATION	SIZE (INCHES) DIA.- CASE LENGTH	PRICES 1-9	10-24	25-49	50-99	100-249
Yes	50G	10G	3/4 x 1	20.52 30.24	19.00 28.00	17.10 25.20	16.23 23.91	15.20 22.40
Yes	50G	10G	1 1/4 x 1 1/2	20.52 30.24	19.00 28.00	17.10 25.20	16.23 23.91	15.20 22.40

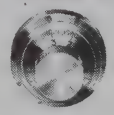


BOURNS

ACCESSORIES

1-INCH TURNS COUNTING DIALS





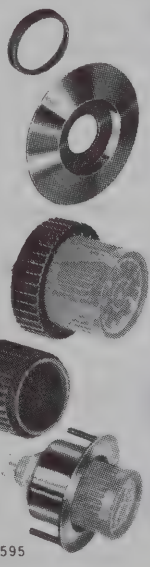
PART NO. BLACK	PART NO. CLEAR	SHAFT DIA.	BRAKE	1-9	10-24	25-99	100-249
H-412	H-462	1/4"	Yes	8.95	8.50	8.06	7.61
H-411	H-461	1/4"	No	7.75	7.36	6.98	6.59
H-432	H-482	3/32"	Yes	9.30	8.84	8.37	7.91
H-431	H-481	3/32"	No	8.10	7.70	7.29	6.89
H-422	H-472	1/8"	Yes	8.95	8.50	8.06	7.61
H-421	H-471	1/8"	No	7.75	7.36	6.98	6.59

1/2"-DIAMETER TURNS COUNTING DIALS



PART NO.	DESCRIPTION	1-9	10-24	25-99	100-249
H-351	10-Turn, clock-dial readout. Accepts 1/8" or 3/32" Dia. shafts.	8.00	7.60	7.20	6.40
H-353	Adapter for shaft extensions	.50	.48	.45	.40
H-354	Turns Counting Dial with brake	8.50	8.08	7.65	6.80
H-355	Snap-on Color rings*	.35	.35	.30	.25

KNOBPOT POTENTIOMETER ACCESSORIES



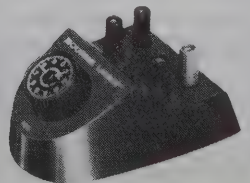
PART NO.	DESCRIPTION	1-24	25-99	100-500	501-999
H-93 (3600) H-99 (3640)	Snap-on Color Rings*	.35	.30	.25	.20
H-95 (3600) H-98 (3640)	Stainless Steel Skirt	1.50	1.25	1.00	.75
H-103 (3600) H-97 (3640)	Plastic Slip-over friction brake	1.25	1.07	.97	.90
H-100	MIL-SPEC 1-inch diameter slip-over Knob (Model 3600 only)	1.25	1.07	.97	.90
H-101 (3600) H-102 (3640)	Stainless Steel Recessed Mounting Bracket	1.25	1.07	.97	.90

*Per FED STD 595

LABPOT™ POTENTIOMETERS

MODEL 3660 LABPOT PRECISION POTENTIOMETER

A compact, dial-readout precision potentiometer designed as a convenient tool for a variety of laboratory applications. Incorporates Bourns exclusive KNOBPOT® potentiometer for high readability through its unique "clock-dial" face. Portable, lightweight, yet remains firmly in place when in use. Large five-way binding posts permit easy hookup of any kind of leads. Fused for protection against burnout. An extra fuse is provided inside for added convenience.



Specifications:

Std. Resistances.....1K, 10K, 100K (others available on request)
Resistance Tolerance .....±1%
Dial Accuracy.....0.15% 1K
0.10% 10K and 100K
Repeatability ± 0.05% voltage ratio
Operating Temp. Range.....−65 to +125°C
Power Rating 2.5W at room temp.
Mechanical Life 200,000 dial rev.
Weight .....14 ounces

Prices.....

1-9	10-24	25-49	50-99
42.20	40.00	36.00	34.16

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BOURNS TRIMPOT®

Industry's largest selection –

HUMIDITY-PROOF

Description	Name	Model	Resistance (Ohms) ②	Terminals ①	Abs. Min. Res. (%)	Tolerance (%) ③	Power Rating (Watt)	Max. Operating Temp. (°C)	Adj. Turns	Humidity Proof ⑦ (Mil Spec)	Size (Inches) H	W	L	Standard Resistances (Ohms)	Price 1 - 9	10-24	25-49
GENERAL PURPOSE RESISTON® CARBON ELEMENT	TRIMPOT®	235	5K to 5 Meg	L*,S*,P	0-1.0	±20	0.25	125	22	Yes	23/64	19/64	1-11/32	5K-5 Meg	7.02	6.50	5.85
GENERAL PURPOSE WIREWOUND	TRIMPOT	236	10 to 1K 2K to 50K 100K	L*,S*,P L*	0-0.2 ④ 0-0.1 0-5.0	±10	0.80	135	25	Yes	23/64	19/64	1-11/32	10 -10K 20K-25K 50K 100K	7.02 8.64 9.18 11.34	6.50 8.00 8.50 10.50	5.85 7.20 7.65 9.45
MICRO-MINIATURE HIGH TEMPERATURE WIREWOUND	TRIMPOT	3000	50 to 20K	P	0-0.1 ⑤	±10	0.50	175	15	Yes	5/16	5/32	3/4	50 -10K 20K	9.72 10.80	9.00 10.00	8.10 9.00
HIGH TEMPERATURE RESISTON CARBON ELEMENT	TRIMPOT	3001	20K to 1 Meg	P	0-1.0	±20	0.20 ⑩	150	15	Yes	5/16	5/32	3/4	20K-1 Meg	9.18	8.50	7.65
SUB-MINIATURE HIGH TEMPERATURE WIREWOUND	TRIMPOT	220	10 to 30K	L*, W*	0-0.1 ⑤	±10	1.00	175	15	Yes	5/16	3/16	1	10 -10K 20K-30K	8.64 10.26	8.00 9.50	7.20 8.55
HIGH TEMPERATURE WIREWOUND	TRIMPOT	224	10 to 1K 2K to 50K 100K	L*,S*,P	0-0.2 0-0.1 0-5.0	±5	1.00	175	22	Yes	5/16	3/16	1-1/4	10 -10K 20K-25K 50K 100K	7.02 8.64 9.18 11.34	6.50 8.00 8.50 10.50	5.85 7.20 7.65 9.45
ULTRA-RELIABLE HIGH TEMPERATURE WIREWOUND	TRIMPOT	224-500	100 to 1K 2K to 20K	L, P	0-0.2 ④ 0-0.1	±5	0.50	150	22	Yes	5/16	3/16	1-1/4	100-10K 20K	14.58 16.20	13.50 15.00	12.15 13.50
HIGH TEMPERATURE RESISTON CARBON ELEMENT	TRIMPOT	3051	5K to 5 Meg	L*,S*,P	0-1.0	±20	0.25 ⑩	150	22	Yes	5/16	3/16	1-1/4	5K-5 Meg	7.02	6.50	5.85
HIGH TEMPERATURE PALIRIUM® ELEMENT	TRIMPOT	3052	20K to 1 Meg	L*, P	0-0.1	±10	1.00 ⑪	175	25	Yes	5/16	3/16	1-1/4	20K-1 Meg	5.94	5.50	4.95
HIGH TEMPERATURE PALIRIUM ELEMENT	TRIMPOT	3053	2 to 10 20 to 100	P L*,P	S 1-15 ⑨	±10	0.50	175	25	Yes	5/16	3/16	1-1/4	(L) 20-100 (P) (S) 2-5 10-100	5.94 9.18 5.94	5.50 8.50 5.50	4.95 7.65 4.95
HIGH TEMPERATURE WIREWOUND	TRIMPOT	3010	10 to 1K 2K to 50K 100K	L*, P	0-0.2 ④ 0-0.1 0-5.0	± 5	1.00	175	25	Yes	5/16	9/32	1-1/4	10 -10K 20K-25K 50K 100K	7.02 8.64 9.18 11.34	6.50 8.00 8.50 10.50	5.85 7.20 7.65 9.45
HIGH TEMPERATURE RESISTON CARBON ELEMENT	TRIMPOT	3011	5K to 5 Meg	L*, P	0-1.0	±20	0.25 ⑩	150	22	Yes	5/16	9/32	1-1/4	5K-5 Meg	7.02	6.50	5.85
HIGH TEMPERATURE PALIRIUM ELEMENT	TRIMPOT	3012	20K to 1 Meg	L*, P	0-0.1	±10	1.00	175	25	Yes	5/16	9/32	1-1/4	20K-1 Meg	5.94	5.50	4.95
MICRO-MINIATURE WIREWOUND	BOURNS	3280	10 to 50K	L, P, W	0-0.1 ⑤	±5	1.00	175	25	Yes	13/64	3/8	3/8	10 -10K 20K-25K 50K	7.56 9.18 9.72	7.00 8.50 9.00	6.30 7.65 8.10
MICRO-MINIATURE RESISTON CARBON ELEMENT	BOURNS	3281	20K to 1 Meg	L, P, W	0-1.0	±20	0.50 ⑩	150	25	Yes	13/64	3/8	3/8	20K-1 Meg	7.56	7.00	6.30
SUB-MINIATURE HIGH TEMPERATURE WIREWOUND	TRIMPOT	3250	10 to 50K	L P, W	0-0.1 ⑤	±5	1.00	175	25	Yes	3/16 7/32	1/2 1/2	1/2 1/2	10 -10K 20K-25K 50K 10 -10K 20K-25K 50K	6.71 7.56 10.01 7.23 7.97 10.53	6.22 7.00 9.27 6.69 7.38 9.75	5.59 6.30 8.34 6.02 6.64 8.78
SQUARE HIGH TEMPERATURE RESISTON CARBON ELEMENT	TRIMPOT	3251	20K to 1 Meg	L P,W	1.0	±20	0.50 ⑩	150	25	Yes	3/16 7/32	1/2 1/2	1/2 1/2	20K-1 Meg	7.83	7.25	6.53

① Key to terminal types: L = Insulated stranded leads; S = Solder lugs (includes panel mounting bushing on Models 3367S, 3368S, 3300S & 3301S only); P = Printed circuit pins; W = Uninsulated wires (edge mounting 3250, 3251, 3280, 3281, 3300 & 3301).

② The following resistances are standard if they fall within the limits listed: Wirewound—10, 20, 50, 100, 200, 500, 1K, 2K, 5K, 10K, 25K, 50K, 100K, RESISTON, RESISTALOY—5K, 10K, 20K, 50K, 100K, 200K, 500K, 750K, 1, 2, 5 Meg. PALIRIUM—2, 5, 10, 20, 50, 100, 10K, 20K, 100K, 200K, 500K, 750K, 1 Meg. Other resistances available on special order.

③ Or 0 to 0.5 ohms, whichever is greater. ④ Or 0 to 1.0 ohms, whichever is greater. ⑤ Closer tolerances available on request, except commercial models. ⑥ All models are sealed against sand and dust.

⑦ Humidity-proof version available on special order. Contact factory for part number, price and delivery.

⑧ BOURNS, TRIMPOT, TWINPOT, TRIMIT, E-Z-TRIM, RESISTALOY, RESISTON, PALIRIUM, SILVERWELD, KNOBPOT are registered trademarks of Bourns, Inc. Other products made by Bourns, Inc., are identified by trademarks which include: TRIMISTOR, TRIMM, MIL-E-TRIM, CARBOLON, PANLTRIM, MILISEAL, RESISTRON, CLOCKPOT. Bourns, Inc., is the owner of rights under the following listed United States Letters Patents relating to certain of its adjustment potentiometers: 2,706,230 / 2,777,926 / 2,805,307 / 2,831,949 / 2,873,337 / 2,882,375 / 2,922,976 / 2,935,716 / 2,945,198 / 2,946,975 / 2,952,825 / 2,989,718 / 3,010,092 / 3,018,459 / 2,898,569. Other patents pending. Certain Bourns products are under issued and pending foreign patents.

⑨ End setting varies from 1 to 15% to account for lead resistance.

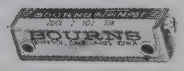
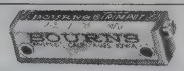
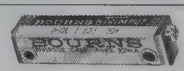
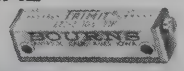
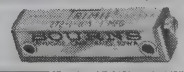
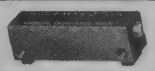
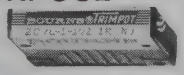
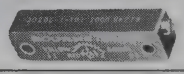
⑩ Or 300 volts maximum. ⑪ Or 500 volts maximum.

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adjustment potentiometers

Military, Industrial, Commercial, Wirewound, RESISTON® Carbon

Description		Name	Model	Resistance (Ohms) ②	Terminals ①	Abs. Min. Res. (%)	Tolerance (%) ⑤	Power Rating (Watt)	Max. Operating Temp. (°C)	Adj. Turns	Humidity Proof ⑪ (Mil Spec)	Size (Inches) H	W	L	Standard Resistances (Ohms)	Price 1 - 9	10-24	25-49
UNSEALED																		
GENERAL PURPOSE WIREWOUND		TRIMPOT ⑥	200	10 to 50K 100K	L*,S*,P L*	0-0.7 ⑬ 0-5.0	±10	0.50	105	25	Steady State Only	5/16	1/4	1-1/4	10 -10K 20K-25K 50K 100K	4.86 6.48 7.56 9.18	4.50 6.00 7.00 8.50	4.05 5.40 6.30 7.65
GENERAL PURPOSE RESISTON® CARBON ELEMENT		TRIMPOT	215	5K to 5 Meg	L*,S*,P	0-1.0	±20	0.25 ⑩	125	22	Steady State Only	5/16	1/4	1-1/4	5K-5 Meg	4.86	4.50	4.05
HIGH TEMPERATURE WIREWOUND		TRIMPOT	260	10 to 1K 2K to 50K 100K	L*,S*,P L*	0-0.2 ③ 0-0.1 0-5.0	±10	1.00	175	25	Steady State Only	5/16	1/4	1-1/4	10 -10K 20K-25K 50K 100K	5.94 7.56 8.10 9.72	5.50 7.00 7.50 9.00	4.95 6.30 6.75 8.10
SINGLE-TURN																		
MICRO-MINIATURE HIGH TEMPERATURE HUMIDITY-PROOF WIREWOUND		BOURNS ⑥	3300	10 to 20K	W P S	0-1.0 ④	±5	0.50	175	300°	Yes	3/8 5/16 dia.	15/64 x 3/16	7/32 5/16 dia. x 15/32	10 -10K 20K 10 -10K 20K	5.94 7.56 8.91 10.53	5.50 7.00 8.25 9.75	4.95 6.30 7.43 8.78
MICRO-MINIATURE HIGH TEMPERATURE HUMIDITY-PROOF RESISTON CARBON ELEMENT		BOURNS	3301	10K to 1 Meg	W P S	0-1.0	±20	0.25 ⑩	150	300°	Yes	3/8 5/16 dia.	15/64 x 3/16	7/32 5/16 dia. x 15/32	10K-1 Meg 10K-1 Meg	5.94 8.91	5.50 8.25	4.95 7.43
SUB-MINIATURE SINGLE-TURN WIREWOUND		BOURNS	3367	10 to 20K	P S	0-1.0	±5	0.50	105	285°	Steady State Only	1/2 dia. x 15/64 1/2 dia. x 15/32			10 -20K 10 -20K	4.86 5.67	4.50 5.25	4.05 4.73
SUB-MINIATURE SINGLE-TURN RESISTON CARBON ELEMENT		BOURNS	3368	20K to 1 Meg	P S	0-1.0	±20	0.25 ⑩	105	285°	Steady State Only	1/2 dia. x 15/64 1/2 dia. x 15/32			20K-1 Meg 20K-1 Meg	5.94 6.75	5.50 6.25	4.95 5.63
COMMERCIAL																		
COMMERCIAL WIREWOUND		TRIMIT ⑥	271 273 275	50 to 20K	L* S* P	0-2.0	±10	0.50	105	25	No	5/16	1/4	1-1/4	50-10K 20K	3.19 4.32	2.95 4.00	2.66 3.60
COMMERCIAL RESISTALOY® CARBON ELEMENT		TRIMIT	272 274 276	5K to 5 Meg	L* S* P	0-5.0	±20	0.20	105	25	No	5/16	1/4	1-1/4	5K-5 Meg	3.78	3.50	3.15
COMMERCIAL WIREWOUND		E-Z-TRIM ⑥	3067	10 to 20K	S, P	0-2.0	±10	0.50	85	15	No	23/64	9/32	1	10-20K	1.85	1.71	1.54
COMMERCIAL CARBON ELEMENT		E-Z-TRIM	3068	20K to 1 Meg	S, P	0-5.0	±20	0.20	85	15	No	23/64	9/32	1	20K-1 Meg	1.85	1.71	1.54
SPECIAL-PURPOSE																		
HIGH POWER (2-WATT) HIGH TEMPERATURE WIREWOUND		TRIMPOT	207	100 to 100K	L*	0-0.2 ①	±10	2.00	175	25	No ⑦	13/16	9/32	1-1/4	100-50K 100K	10.26 11.88	9.50 11.00	8.55 9.90
HIGH POWER (5-WATT) HUMIDITY-PROOF		TRIMPOT	3020	100 to 50K	L*	0-0.1 ①	±5	5.00	200	25	Yes	21/64	1/4	1-1/4	100-10K 20K-25K 50K	14.04 15.66 16.20	13.00 14.50 15.00	11.70 13.05 13.50
DUAL-ELEMENT WIREWOUND		TWINPOT ⑥	209	10 to 1K 2K to 50K	L*	0-0.2 ③ 0-0.1	±10	0.50 (each element)	135	25	No ⑦	5/16	1/2	1-1/4	10 -10K 20K-25K 50K	12.96 14.58 16.20	12.00 13.50 15.00	10.80 12.15 13.50
HIGH-POWER (15-WATT) HIGH TEMPERATURE WIREWOUND		TRIMPOT	3030	10 to 10K	L	0-5.0	±10	15	265	25	No	1-1/16	33/64	1-17/64	10 -10K	14.58	13.50	12.15
RADIATION PROOF WIREWOUND		TRIMPOT	3040	500 to 20K	W	0-1.0	±10	5.00	350	17	No	3/8	19/64	1-1/4	500-20K	27.00	25.00	22.50

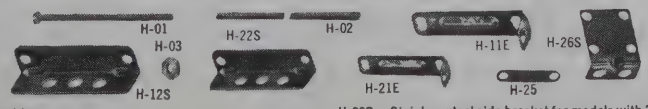
PANEL MOUNTING



	add to price of basic unit		
209	2.16	2.00	1.80
All Others	.81	.75	.68

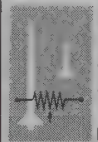
*Models so designated are available with the added convenience of panel mounting. Unique design permits quick factory conversion of "off-the-shelf" units. Clip brackets, mounting brackets and mounting screws are available for other mounting requirements.

TRIMPOT POTENTIOMETER MOUNTING HARDWARE



H-01 —1½", 2-56 machine screw
H-02 —2-56 stainless steel rod stock (12" length only)
H-03 —2-56 Hex nut, stainless steel for use on H-01 and H-02
H-12S—Stainless steel side bracket for models with 1" mounting centers
H-22S—Stainless steel side bracket for models with 3/4" mounting centers
H-25 —Stainless steel stacking straps for models with 0.520" mounting centers
H-11E—Stainless steel end bracket for models with 1" mounting centers
H-21E—Stainless steel end bracket for models with 3/4" mounting centers
H-26S—Stainless steel side bracket for models with 0.520" mounting centers

IMMEDIATE DELIVERY, TECHNICAL SERVICE—TENS OF THOUSANDS OF UNITS STOCKED IN FACTORY WAREHOUSES



BOURNS

DALE® *Total Capability in Precision Resistance*

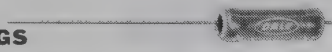
WIREWOUND PRECISION RESISTORS, ULTRA-HIGH RELIABILITY

Produced under stringently controlled, white room conditions of materials meeting rigid specifications, these resistors are manufactured to have failure rate less than .00045% per thousand hours of operation at 50% of rated power at 25° C. Environmental tests are conducted on each production lot, and test data is supplied with each order. Types RS and G also meet the requirements of the new precision power specification, MIL-R-23379.



TYPE ARS

Selected wire is wound with accurately controlled tension on high purity ceramic rod, centerless ground for dimensional accuracy, then welded to special alloy end caps which are press fitted. Axial leads welded to end caps. Rated at 2, 5, 10 watts in three sizes. Temperature coefficient 20 ppm/°C., 10 ohms and above; 40 ppm/°C., 1 ohm to 10 ohms; 80 ppm/°C., below 1 ohm.



TYPE AGS

An advanced version of the ARS series. Beryllium oxide cores are used for optimum thermal conductivity, operational stability, and increased reliability. Significantly smaller size compared to standard resistors of comparable wattages. The ultimate reliability goal is a 0.0001% per 1000 hours failure rate at 50% rated power, 25° C ambient temperature. Available in four sizes, 1, 2.25, 4 and 7 watts.

STANDARD ELECTRICAL SPECIFICATIONS

DALE TYPE	MIL-R-39007 TYPE	POWER RATING (WATTS)	MINIMUM RESISTANCE (OHMS)	MAX. RESISTANCE (OHMS)	MAX. WORKING VOLTAGE	MAX. WEIGHT (GRAMS)
ARS-2	RWR-71	2	0.1	16.2K	180	1.6
ARS-5	RWR-67	5	0.1	12K	250	4.75
ARS-10	RWR-68	10	0.1	40K	650	12.25
AGS-1		1	0.5	1.0K	25	.35
AGS-3	RWR-70	2.25	0.1	2.67K	52	.375
AGS-5		4	0.1	4.12K	112	1.25
AGS-10		7	0.1	12.4K	275	4.25

WIREWOUND PRECISION RESISTORS, SILICONE COATED *(Available with Weldable Leads)*

Designed to give a wide choice of precision power requirements where space is at a premium. Outstanding molded and silicone coatings protect against moisture and salt spray, maintain stable performance under other severe environmental conditions. Types RS, G meet functional requirements of MIL-R-26C. Type RLS meets applicable paragraphs of MIL-R-26C, characteristic G. Both RS and G Series resistors have established outstanding reliability records. (Write for test reports).



TYPE RS, RLS

Complete welded construction from terminal to terminal. RS has axial leads, RLS (not pictured) has radial leads for printed circuits. Rated at ¼, ½ (RS only), 1, 2, 2½, 3, 5, 7, 10 watts.



TYPE G

Type G resistors have significantly decreased size and greatly improved heat dissipation when compared with standard resistors of comparable wattage. Silicone coating gives excellent protection in all environments. Weldable leads standard. Patent Pending.

NOTE:
Special Resistances and Tolerances available on request. Dale precision wirewound resistors are available with covering of special shock absorbing material enclosed in metal tube suitable for clip mounting (Type RSE). A full line of non-inductively wound resistors with axial (Type NS) and radial leads (Type NLS) are also available.

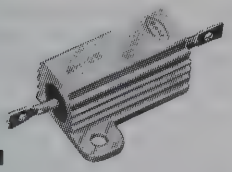
Ask for Catalog A

STANDARD ELECTRICAL SPECIFICATIONS

DALE TYPE	DALE RATING G	DALE RATING V	RESISTANCE RANGE (OHMS) .05%, .1%, .25%	RESISTANCE RANGE (OHMS) .5%, 1%, 3%	MAXIMUM WORKING VOLTAGE G	MAXIMUM WORKING VOLTAGE V	MAX. WT. GRAMS	STANDARD TEMPERATURE COEFFICIENT VALUE RANGES (OHMS) ± 50 PPM	± 30 PPM	± 20 PPM
G-1 RS-¼	1.0 W .25 W	1.5 W	10 to 950	1 to 3.4K	25 12		.19 .10	1 to 6.99	7 to 434.9	435 to 3.4K
G-2 RS-½	1.5 W .50 W	2.0 W	10 to 1.3K	1 to 4.9K	35 20		.20 .15	1 to 9.9	10 to 624.9	625 to 4.9K
G-3 RS-1A RLS-1A	2.25 W 1.0 W 1.0 W	2.75 W 1.25 W 1.25 W	1 to 2.7K	.1 to 10.4K	52 35 35	40	.25 .20 .20	1 to 19.9	20 to 1.09K	1.1K to 10.4K
RS-1B RLS-1B	1.0 W 1.0 W	1.25 W 1.25 W	1 to 4.0K	.1 to 15K	45	50	.50	1 to 24.9	25 to 1.49K	1.5K to 15K
G-6 RS-2 RLS-2	6 W 3.0 W 3.0 W	8.0 W 4.25 W 4.25 W	1 to 12.7K	.1 to 47.1K	185 130 130	160	2.0 2.1 2.1	1 to 79.9	80 to 4.09K	4.1K to 47.1K
G-5A RS-2A RLS-2A	4.5 W 2.0 W 2.0 W	6.5 W 3.0 W 3.0 W	1 to 11.4K	.1 to 42.1K	150 100 100	140	.95 .90 .90	1 to 74.9	75 to 4.39K	4.4K to 42.1K
G-5 RS-2B RLS-2B	4.0 W 3.0 W 3.0 W	5.0 W 3.75 W 3.75 W	1 to 6.5K	.1 to 24.5K	112 100 100	110	.80 .70 .70	1 to 44.9	45 to 2.39K	2.4K to 24.5K
G-5C RS-2C RLS-2C	5 W 2.5 W 2.5 W	7.0 W 3.25 W 3.25 W	1 to 8.6K	.1 to 32.3K	142 100 100	110	1.2 1.6 1.6	1 to 39.9	40 to 2.29K	2.3K to 32.3K
G-10 RS-5 RLS-5	7.0 W 5.0 W 5.0 W	10.0 W 6.5 W 6.5 W	.5 to 25.7K	.1 to 95.2K	295 250 250	290	3.6 4.2 4.2	1 to 149.9	150 to 8.49K	8.5K to 95.2K
G-12 RS-7 RLS-7	10 W 7.0 W 7.0 W	12.0 W 9.0 W 9.0 W	.5 to 41.4K	.1 to 154K	448 375 375	425	4.2 4.7 4.7	1 to 214.9	215 to 12.79K	12.8K to 154K
G-15 RS-10 RLS-10	15 W 10 W 10 W	18 W 13 W 13 W	.5 to 73.4K	.1 to 273K	760 650 650	750	7.6 9.0 9.0	1 to 449	450 to 26.09K	26.1K to 273K

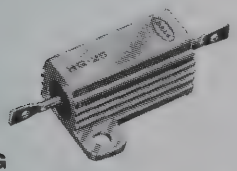
DALE® *Total Capability in Precision Resistance*

WIREWOUND POWER RESISTORS, HEAT SINK ENCASED



TYPE RH

Resistance unit molded with high temperature material into radiator finned aluminum housing. Complete welded construction from terminal to terminal. Rated at 5, 10, 25, 50, 100, 250 watts. Screw mounts on chassis.



TYPE HG

More than doubles Mil. Spec. power requirements at no increase in size. Special molded radiator finned housing gives maximum heat dissipation. Operates under severe environmental conditions. Screw mounts on chassis. Patent Pending.

Designed for applications with high power and precision tolerance requirements. Smallest in size. Completely protected against moisture, salt spray, vibration and shock. Mount on or through chassis for maximum heat dissipation. Types RH and HG meet all requirements of MIL-R-18546C. NOTE: Non-inductive types (Type NH) and models for through-chassis mounting (Type PH) are available. Write for Catalog "A".

STANDARD ELECTRICAL SPECIFICATIONS

DALE TYPE	MIL-R-18546C TYPE	POWER RATING (WATTS)		RESISTANCE RANGES (OHMS)		MAX. WORKING VOLTAGE	MAX. WT. GRAMS	STANDARD TEMPERATURE COEFFICIENT VALUE RANGES (OHMS)		
		DALE	MIL	.05%, .1%, .25%	.5%, 1%, 3%			±50 PPM	±30 PPM	±20 PPM
RH-5	None	7.5	—	1 to 6.5K	.1 to 24.5K	160	3	1 to 44.9	45 to 2.39K	2.4K to 24.5K
RH-10	RE-65	12.5	10	1 to 12.7K	.1 to 47.1K	265	6	1 to 39.9	40 to 2.29K	2.3K to 47.1K
RH-25	RE-70	25	15	.5 to 25.7K	.1 to 95.2K	550	13	1 to 149.9	150 to 8.49K	8.5K to 95.2K
RH-50	RE-75	40	20	.5 to 73.4K	.1 to 273K	1250	28	1 to 449	450 to 26.09K	26.1K to 273K
RH-100	None	100	—	.3 to 50K	.1 to 50K	1900	400	1 to 2.9K	2.9K to 40K	40.1K to 50K
RH-250	RE-80	250	120	.3 to 75K	.1 to 75K	2300	800	1 to 4K	4K to 45K	45.1K to 75K
HG-5	None	15	—	1 to 6.5K	1 to 24.5K	220	3	1 to 44.9	45 to 2.39K	2.4K to 22K
HG-10	RE-65	20	10	1 to 12.7K	.1 to 47.1K	340	6	1 to 39.9	40 to 2.29K	2.3K to 47.1K
HG-25	RE-70	35	15	.5 to 25.7K	.1 to 95.2K	650	13	1 to 149.9	150 to 8.49K	8.5K to 95.2K
HG-50	RE-75	50	20	.5 to 73.4K	.1 to 273K	1400	28	1 to 449	450 to 26.09K	26.1K to 273K

WIREWOUND PRECISION RESISTORS, BOBBIN TYPE

(Available with Weldable Leads)



TYPE WWA

Type WWA has patented features preventing breakage of terminating wire and changes in resistance values due to outside mechanical forces, while allowing more accurate calibration and insuring dependable welds. Need for insulating tape to prevent shorting between pi's is eliminated. Epoxy molding gives complete environmental protection.



TYPE MWA
(Sub-miniature Molded)

MWA Type resistors combine long-lasting stability of Dale's unique bobbin-type design with new molded coating offering excellent protection against severe environmental conditions and mechanical damage.

Non-inductive precision resistors molded in a material with very high dielectric strength. Completely protected against salt spray, moisture, corrosive gases and vapors and other environmental factors. Type WWA meets characteristic requirements of MIL-R-93C, and MIL-R-39005 (High-Rel).

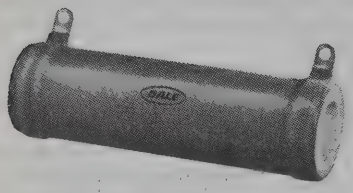
STANDARD ELECTRICAL SPECIFICATIONS

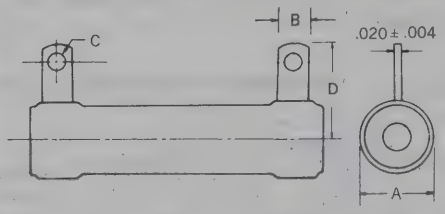
DALE TYPE	MIL-R-93 TYPE	POWER RATING (WATTS)	MINIMUM RESISTANCE RANGE (OHMS)					MAXIMUM RESISTANCE (OHMS) ALL TOLERANCES	MAXIMUM WORKING VOLTAGE	MAXIMUM WEIGHT (GRAMS)
			.05%	.1%	.25%	.5%	1%			
MWA-8	—	.1	50	10	5	2	1	100K	27	.21
MWA-10	—	.125	50	10	5	2	1	125K	37	.23
WWA-13	—	.125	50	10	5	2	1	300K	50	.35
WWA-22	—	.15	1K	100	6	.2	.1	350K	100	.9
WWA-23	RB-56	.15	550	25	4	.2	.1	600K	150	1.0
WWA-24	RB-55	.20	60	15	2.5	.2	.1	800K	200	1.2
WWA-26	RB-54	.25	50	10	1.5	.2	.1	1 Meg.	300	1.5
WWA-36	RB-53	.33	15	4	1	.2	.1	3 Meg.	300	3.1
WWA-38	RB-52	.50	10	3	1	.2	.1	4 Meg.	600	3.8

DALE® *Total Capability in Precision Resistance*

HL WIREWOUND POWER RESISTORS, SILICONE COATED

Multi-layer silicone coating provides a protective barrier resistant to moisture, chipping and crazing. Meet requirements of MIL-R-26C while providing precision tolerances, high resistance values and low temperature coefficients unavailable from vitreous enamel types. Available in both round and space-saving flat configurations.





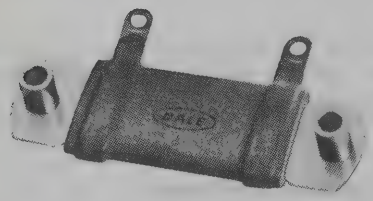
TOLERANCE: 5% is standard on values above 1 ohm, 10% is standard on 1 ohm and lower values. Also available in 3%, 1%, .5%, .25%, .1%, .05%.

TERMINALS: Terminal shown is standard. Other types available upon request.

MOUNTING: May be mounted by terminals or with thru-bolt, or Z-bracket as applicable.

TYPE HL TUBULAR MODELS

DALE TYPE	WATTAGE RATING	MIL-R-26C STYLE	MIL-R-26C V RATING	LENGTH (± 1/16)	CORE O.D.	CORE I.D. (± 1/32)	A (MAX.)	B (± 1/32)	C (± .005)	D (± 1/32)	†MAX. WORKING VOLTAGE	*.00175 WIRE MAXIMUM RESISTANCE	**DALE MAXIMUM RESISTANCE
HL-5	5	–	–	1	1/4	5/32	11/32	1/8	.062	3/8	230	–	85K
HL-10	10	RW-30	11	1	7/16	5/16	9/16	3/16	.093	5/8	400	2.7K	120K
HL-11	11	RW-29	11	1¾	3/8	3/16	1/2	3/16	.093	19/32	600	5.6K	190K
HL-12	12	–	–	1¾	5/16	3/16	13/32	3/16	.093	9/16	500	4.7K	100K
HL-15	15	RW-31	14	1½	7/16	5/16	9/16	3/16	.093	5/8	650	6.8K	60K
HL-20	20	RW-32	17	2	7/16	5/16	9/16	3/16	.093	5/8	880	10K	90K
HL-25	25	–	–	2	9/16	5/16	11/16	3/16	.093	11/16	1.3KV	15K	125K
HL-26	26	RW-33	26	3	7/16	5/16	9/16	3/16	.093	5/8	1.4KV	18K	150K
HL-50	50	–	–	4	9/16	5/16	11/16	3/16	.093	11/16	1.9KV	30K	250K
HL-60	60	RW-35	55	4	3/4	1/2	29/32	1/4	.125	13/16	2.1KV	43K	350K
HL-80	80	RW-36	78	4	1-1/8	3/4	1-5/16	1/4	.125	1-1/8	2.4KV	56K	350K
HL-100	100	–	–	6½	3/4	1/2	29/32	1/4	.125	13/16	2.5KV	70K	400K
HL-120	120	RW-37	113	6	1-1/8	3/4	1-5/16	1/4	.125	1-1/8	3.2KV	91K	500K
HL-160	160	RW-38	159	8	1-1/8	3/4	1-5/16	1/4	.125	1-1/8	4.8KV	150K	750K
HL-225	225	RW-47	210	10½	1-1/8	3/4	1-5/16	1/4	.125	1-1/8	6.1KV	180K	1 MEG.



TYPE HL FLAT MODELS

5 sizes rated at 24, 35, 55, 70, 95 watts. Meet requirements of MIL-R-26C in space-saving configuration. Maximum resistance (.00175 wire) 8.2K ohms to 75K ohms. Dale maximum resistance 15K ohms to 150K ohms.

NOTES:

Power rating is based on 350° C maximum surface temperature (MIL-R-26C, Characteristic V) in free air.

† Supplementary insulation to be provided when potential to ground is greater than 500 V.

*MIL-R-26C limits maximum resistance to .00175 wire.

**Minimum resistance .1 ohm for all standard tolerance models.



TYPE CW–AXIAL LEAD COMMERCIAL GRADE

Commercial resistor with high power to size ratio. Complete welded construction. Temperature coefficient 260 PPM/°C. High temperature silicone coating. Excellent stability in operation.

DALE TYPE	POWER RATING (Max. Hot Spot) 275°C	POWER RATING (Max. Hot Spot) 350°C	RESISTANCE RANGE	BODY LENGTH (± .062)	BODY DIA. (± .032)	LEAD LENGTH (± .125)	LEAD DIA.	TYPICAL WEIGHT (GRAMS)
CW-2	3.0 W	4.25 W	1 Ω to 47.1K	.625	.250	2	.040	2.0
CW-2A	2.0 W	3.0 W	1 Ω to 42.1K	.812	.188	1.5	.032	1.0
CW-2B	3.0 W	3.75 W	1 Ω to 24.5K	.562	.188	1.5	.032	0.7
CW-2C	2.5 W	3.25 W	1 Ω to 32.3K	.500	.250	1.5	.040	1.2
CW-5	5.0 W	6.5 W	1 Ω to 95.2K	.875	.312	2	.040	2.6
CW-7	7.0 W	9.0 W	1 Ω to 154K	1.218	.312	2	.040	3.2
CW-10	10.0 W	13.0 W	1 Ω to 273K	1.781	.375	2	.040	7.0

DALE® Total Capability in Precision Resistance

PRECISION METAL FILM RESISTORS



TYPE MF

Vacuum-deposited molded metal film resistors. Designed to meet a wide variety of both military and commercial applications. Inherently good R.F. characteristics and low noise level. Completely insulated and protected against moisture and other severe environmental factors. Wide choice of tolerances and temperature coefficients offer design flexibility to the user.



TYPE MFH

Hermetically sealed in non-hygroscopic ceramic envelope. Completely impervious to moisture and salt spray. Can be clip mounted. Standard tolerances from 1% to 0.1%. Meets requirements of Char. C, D, E and G of MIL-R-10509E.

STANDARD ELECTRICAL SPECIFICATIONS

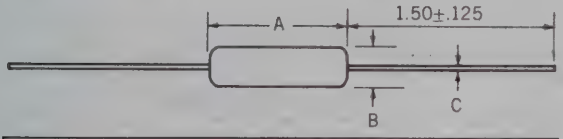
DALE TYPE	MIL TYPE	125° C RATING (Char. C & E)	STANDARD RESISTANCE RANGE (OHMS)	MAX. WT. (Grams)	MAX. WORKING VOLTAGE
MF50	RN-50	1/20 W	49.9 – 60K	.11	200
MF-1/10	RN-55	1/10 W	49.9 – 200K	.25	200
MF-1/8*	RN-60	1/8 W	30 – 550K	.45	300
MF-1/4*	RN-65	1/4 W	30 – 1 Megohm	.84	350
MFS-1/2*	RN-70	1/2 W	49.9 – 2 Megohms	1.6	500
MF-1*	RN-75	1 W	49.9 – 6 Megohms	4.4	500
MF-2*	RN-80	2 W	100 – 15 Megohms	7.9	750
MFH-1/10	RN-55	1/10 W	49.9 – 200K	.3	200
MFH-1/8	–	1/8 W	30 – 550K	.6	300
MFH-1/4	RN-60	1/4 W	30 – 1 Megohm	.7	350
MFH-1/2	–	1/2 W	49.9 – 2 Megohms	1.8	500
MFH-1	RN-75	1 W	49.9 – 6 Megohms	7.9	500
MFH-2	RN-80	2 W	100 – 15 Megohms	11.1	750

***Note:** ⅛ through 2 watt sizes also available in epoxy coated MFF series.

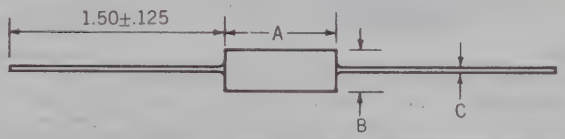
Tolerance: ±1%, ±.5%, ±.25%, ±0.10%, ±0.05% standard
Special tolerances and matching on request.

Temperature Coefficient: MF and MFH resistors are available in 10 standard T.C.'s (T-00 to T-8) ranging from ±150 PPM/° C to ±25 PPM/° C.

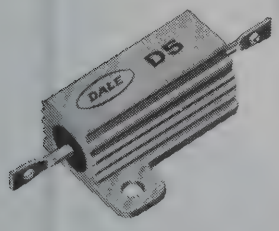
DIMENSIONAL SPECIFICATIONS



DALE TYPE	MIL. TYPE	A	B	C
MF50	RN-50	.140±.010	.065±.010	.016 Dia.
MF-1/10	RN-55	.250±.015	.093±.010	.025 Dia.
MF-1/8	RN-60	.406±.015	.135±.010	.025 Dia.
MF-1/4	RN-65	.593±.015	.203±.015	.025 Dia.
MFS-1/2	RN-70	.730±.020	.250±.015	.032 Dia.
MF-1	RN-75	1.093±.020	.375±.015	.032 Dia.
MF-2	RN-80	2.188±.020	.375±.015	.032 Dia.



DALE TYPE	MIL. TYPE	A	B	C
MFH-1/10	RN-55	.250±.031	.109±.010	.025
MFH-1/8	–	.281±.031	.155±.010	.025
MFH-1/4	RN-60	.437±.031	.155±.010	.025
MFH-1/2	–	.640±.031	.243±.010	.032
MFH-1	RN-75	1.093±.031	.400±.015	.032
MFH-2	RN-80	2.250±.031	.400±.015	.032

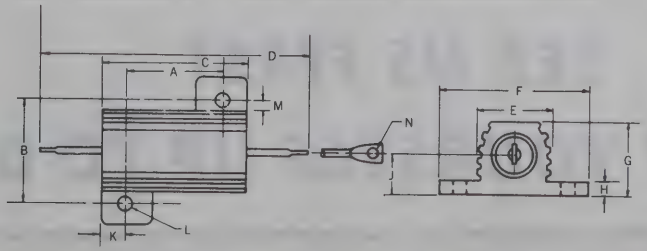


TYPE D5

A precision power film resistor molded into an aluminum housing for complete environmental protection and high stability. Wide resistance range. Low reactance at high frequencies.

STANDARD ELECTRICAL SPECIFICATIONS

DALE TYPE	POWER RATING	RESISTANCE RANGE	TEMPERATURE COEFFICIENT	MAX. WORKING VOLTAGE
D5	4W	50Ω – 1 Meg.	±25 PPM/°C ±50 PPM/°C	500



Tolerance: ±0.1%, 0.25%, 0.5%, 1% and 2% are standard.

Power Rating: 4 watts when mounted on a 4"x6"x.040" aluminum chassis.

Operating Temperature Range: –55° C to +175° C.

Temperature Coefficient: ±25 and ±50 PPM/° C (–55° C+175° C) higher T.C.'s on request.

Terminals: Tinned copperweld

Dielectric Strength: 1000 VAC

A	B	C	D	E	F	G	H	J	K	L	M	N
.444 ±.005	.490 ±.005	.600 ±.031	1.125 ± 0.62	.334 ±.015	.646 ±.015	.320 ±.015	.065 ±.010	.133 ±.010	.078 ±.010	.093 ±.005	.078 ±.015	.050 ±.005

DALE® *Total Capability in Precision Resistance*

DEPOSITED CARBON RESISTORS *(Available with Weldable Leads)*

Designed for inherent stability, long load life and excellent protection against environmental factors in a wide range of applications. Made of pure crystalline carbon film bonded to selected ceramic cores. Excellent high frequency characteristics. Types DC, DCH and MC meet functional requirements of MIL-R-10509D.



TYPE DC
Specially coated for complete insulation against moisture, salt spray and other severe environmental factors. Miniature size. Temperature coefficient 500 P.P.M.



TYPE DCH
Hermetically sealed in non-hygroscopic envelope. Completely impervious to moisture and salt spray. Can endure severe mechanical shock. Can be clip mounted. Temperature coefficient 500 P.P.M.



TYPE MC
Molded housing. Completely insulated and protected against environmental or mechanical damage. Temperature coefficient 500 P.P.M. Specially formulated molding compound gives best humidity protection available.

STANDARD ELECTRICAL SPECIFICATIONS

TYPES	RATING IN WATTS	STANDARD RESISTANCE RANGE	LEAD DIA. GA.	MAX. WORKING VOLTAGE
DC-1/10 DCH-1/10, MC-1/10*	1/10, 1/8*	2 ohms to 400K ohms	.016 .025*	200
DC-1/8, DCH-1/8, MC-1/8*	1/8, 1/4*	1 ohm to 5 Megohms	.025	300
DC-1/4, DCH-1/4, MC-1/4*	1/4, 1/2*	1 ohm to 5 Megohms	.025	350*
DCLH-1/4	1/4	1 ohm to 5 Megohms	.025	350
DCS-1/2, DCSH-1/2, MCS-1/2*	1/2, 3/4*	1 ohm to 10 Megohms	.032	500
DCMH-1/2	1/2	4 ohms to 10 Megohms	.032	500
DCH-1/2	1/2	4 ohms to 10 Megohms	.032	500
DC-1, DCH-1, MC-1	1	1 ohm to 20 Megohms	.032	500
DC-2, DCH-2, MC-2	2	2 ohms to 150 Megohms	.032	750
DC-5, DCH-5	5	5 ohms to 200 Megohms	.040	14,000

We aim to be

FIRST

WITH THE LATEST

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TO KEEP YOURSELF UP TO DATE

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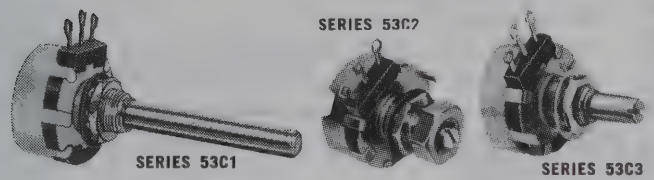
PRODUCTS OF
THE HOUSE OF RESISTORS®

CLAROSTAT®

RESISTORS · CONTROLS
RESISTANCE DEVICES

SERIES 53 — 2 WATT

MOLDED COMPOSITION ELEMENT POTENTIOMETERS



A 2-watt molded composition element potentiometer totally enclosed and sealed against moisture and other environmentals. Meets the need for a high quality resistance device incorporating high-stability under extreme climatic and operational conditions. For use in critical applications, such as, test equipment, military requirements, computers, servo systems and industrial metering devices.

1 1/16" diameter and 9/16" deep, wiper assembly of one piece construction; carbon to carbon contact insures exceptionally low noise level; brass nickel plated, gold plated terminals. Electrical tolerances are plus/minus 10% for all values up to 1 meg. 1 meg. and above plus/minus 20%.

Fabricated in accordance with MIL-R-94 Style RV4.

Items not listed are special, prices and information supplied upon request.

The C1 designation indicates a 1 5/8" round shaft beyond bushing; 3/8" long bushing with 3/8-32-NEF-2 thread. The C2 designation is a 1/8" screwdriver slotted shaft with a 1/2" split locking bushing. The C3 designation is a 7/8" round shaft FMS, 3/8" long bushing with 3/8-32-NEF-2 thread.

TAPERED POTENTIOMETERS		DUAL POTENTIOMETERS	
"Z" TAPER	REVERSED "Z" TAPER	Cat. No.	Cat. No.
53C1-100K-Z	53C1-10K-RZ	D53C1-10K-S	D53C1-100K-S
53C1-250K-Z	53C1-25K-RZ	D53C1-25K-S	D53C1-250K-S
53C1-500K-Z	53C1-50K-RZ	D53C1-50K-S	D53C1-500K-S
53C1-1 Meg-Z			D53C1-1 Meg-S
53C1-2.5 Meg-Z			

Cat. No.	Cat. No.	Cat. No.	Res. Ohms	Taper
53C1-50-S	53C2-50-S	53C3-50-S	50	S
53C1-100-S	53C2-100-S	53C3-100-S	100	S
53C1-150-S	53C2-150-S	53C3-150-S	150	S
53C1-250-S	53C2-250-S	53C3-250-S	250	S
53C1-350-S	53C2-350-S	53C3-350-S	350	S
53C1-500-S	53C2-500-S	53C3-500-S	500	S
53C1-750-S	53C2-750-S	53C3-750-S	750	S
53C1-1000-S	53C2-1000-S	53C3-1000-S	1000	S
53C1-1500-S	53C2-1500-S	53C3-1500-S	1500	S
53C1-2000-S	53C2-2000-S	53C3-2000-S	2000	S
53C1-2500-S	53C2-2500-S	53C3-2500-S	2500	S
53C1-3500-S	53C2-3500-S	53C3-3500-S	3500	S
53C1-5000-S	53C2-5000-S	53C3-5000-S	5000	S
53C1-7500-S	53C2-7500-S	53C3-7500-S	7500	S
53C1-10K-S	53C2-10K-S	53C3-10K-S	10K	S
53C1-15K-S	53C2-15K-S	53C3-15K-S	15K	S
53C1-20K-S	53C2-20K-S	53C3-20K-S	20K	S
53C1-25K-S	52C2-25K-S	53C3-25K-S	25K	S
53C1-35K-S	53C2-35K-S	53C3-35K-S	35K	S
53C1-50K-S	53C2-50K-S	53C3-50K-S	50K	S
53C1-7SK-S	53C2-75K-S	53C3-75K-S	75K	S
53C1-100K-S	53C2-100K-S	53C3-100K-S	100K	S
53C1-150K-S	53C2-150K-S	53C3-150K-S	150K	S
53C1-200K-S	53C2-200K-S	53C3-200K-S	200K	S
53C1-250K-S	53C2-250K-S	53C3-250K-S	250K	S
53C1-350K-S	53C2-350K-S	53C3-350K-S	350K	S
53C1-500K-S	53C2-500K-S	53C3-500K-S	500K	S
53C1-750K-S	53C2-750K-S	53C3-750K-S	750K	S
53C1-1 Meg-S	53C2-1 Meg-S	53C3-1 Meg-S	1 Meg	S
53C1-1.5 Meg-S	53C2-1.5 Meg-S	53C3-1.5 Meg-S	1.5 Meg	S
53C1-2 Meg-S	53C2-2 Meg-S	53C3-2 Meg-S	2 Meg	S
53C1-2.5 Meg-S	53C2-2.5 Meg-S	53C3-2.5 Meg-S	2.5 Meg	S
53C1-3 Meg-S	53C2-3 Meg-S	53C3-3 Meg-S	3 Meg	S
53C1-3.5 Meg-S	53C2-3.5 Meg-S	53C3-3.5 Meg-S	3.5 Meg	S
53C1-4 Meg-S	53C2-4 Meg-S	53C3-4 Meg-S	4 Meg	S
53C1-5 Meg-S	53C2-5 Meg-S	53C3-5 Meg-S	5 Meg	S
53C1-7.5 Meg-S	53C2-7.5 Meg-S	53C3-7.5 Meg-S	7.5 Meg	S
53C1-10 Meg-S	53C2-10 Meg-S	53C3-10 Meg-S	10 Meg	S

Standard Packing — Individual Carton.

Field-attached switches are available for the Series 53. The switch is easily and quickly installed on the control, taking less than a minute to install.

Cat. No.	Description
53-12	SPST — 5A-125V. A.C.
53-20	DPST — 3A-125V. A.C.
53-21	(Mod.) DPST — 3A-125V. A.C./D.C.

SERIES "43C1" and "43C2" 2-WATT CONTROLS

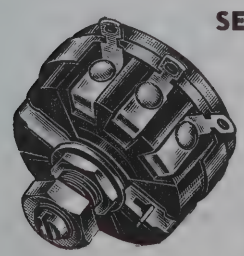
Electrical tolerance is plus/minus 5% for all ohmages. Independent linearity is to plus/minus 2%. All controls rated 2 watts.

43C1 Cat. No.	43C2 Cat. No.	Res. Ohms	43C1 Cat. No.	43C2 Cat. No.	Res. Ohms	43C1 Cat. No.	43C2 Cat. No.	Res. Ohms			
43C1-5	43C2-5	5	43C1-100	43C2-100	100	43C1-1500	43C2-1500	1500	43C1-15K	43C2-15K	15K
43C1-10	43C2-10	10	43C1-150	43C2-150	150	43C1-2000	43C2-2000	2000	43C1-20K	43C2-20K	20K
43C1-20	43C2-20	20	43C1-200	43C2-200	200	43C1-2500	43C2-2500	2500	43C1-25K	43C2-25K	25K
43C1-25	43C2-25	25	43C1-300	43C2-300	300	43C1-3000	43C2-3000	3000	43C1-30K	43C2-30K	30K
43C1-30	43C2-30	30	43C1-400	43C2-400	400	43C1-4000	43C2-4000	4000	43C1-40K	43C2-40K	40K
43C1-40	43C2-40	40	43C1-500	43C2-500	500	43C1-5000	43C2-5000	5000	43C1-50K	43C2-50K	50K
43C1-50	43C2-50	50	43C1-750	43C2-750	750	43C1-7500	43C2-7500	7500			
43C1-75	43C2-75	75	43C1-1000	43C2-1000	1000	43C1-10K	43C2-10K	10K			

NET PRICES

43C1-5 to 43C1-10K	$1.35	43C1-30K to 43C1-50K	$2.01	43C2-15K to 43C2-25K	$2.55
43C1-15K to 43C1-25K	1.80	43C2-5 to 43C2-10K	2.25	43C2-30K to 43C2-50K	3.00

SERIES 58C1 AND 58C2 3-WATT CONTROLS



Electrical tolerance is plus/minus 5% for all ohmages. Independent linearity is to plus/minus 1% All controls rated 3 watts.

58C1 Cat. No.	58C2 Cat. No.	Res. Ohms	58C1 Cat. No.	58C2 Cat. No.	Res. Ohms
58C1-1	58C2-1	1	58C1-500	58C2-500	500
58C1-2	58C2-2	2	58C1-750	58C2-750	750
58C1-4	58C2-4	4	58C1-1000	58C2-1000	1000
58C1-6	58C2-6	6	58C1-1500	58C2-1500	1500
58C1-10	58C2-10	10	58C1-2000	58C2-2000	2000
58C1-15	58C2-15	15	58C1-2500	58C2-2500	2500
58C1-20	58C2-20	20	58C1-3000	58C2-3000	3000
58C1-25	58C2-25	25	58C1-5000	58C2-5000	5000
58C1-30	58C2-30	30	58C1-7500	58C2-7500	7500
58C1-40	58C2-40	40	58C1-10K	58C2-10K	10K
58C1-50	58C2-50	50	58C1-15K	58C2-15K	15K
58C1-60	58C2-60	60	58C1-20K	58C2-20K	20K
58C1-75	58C2-75	75	58C1-25K	58C2-25K	25K
58C1-100	58C2-100	100	58C1-30K	58C2-30K	30K
58C1-200	58C2-200	200	58C1-40K	58C2-40K	40K
58C1-300	58C2-300	300	58C1-50K	58C2-50K	50K
58C1-400	58C2-400	400			

NET PRICES

58C1-1 to 58C1-10K	$1.35	58C2-1 to 58C2-10K	$2.25
58C1-15K to 58C1-25K	1.80	58C2-15K to 58C2-25K	2.55
58C1-30K to 58C1-50K	2.01	58C2-30K to 58C2-50K	3.00

SERIES "10C1" and "10C2" 4-WATT CONTROLS

Electrical tolerance is plus/minus 5% for all ohmages. Independent linearity to plus/minus 1%. All controls rated 4 watts.

1 to 50K ohms available on special order. Prices and information on request.

10C1 Cat. No.	10C2 Cat. No.	Res. Ohms
10C1-75K	10C2-75K	75K
10C1-100K	10C2-100K	100K

Net Prices

10C1 ..... 2.75 10C2 ..... 3.60

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PRODUCTS OF
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RESISTORS · CONTROLS
RESISTANCE DEVICES

"GREENOHM V"™ VITREOUS-ENAMEL RESISTORS

Based on years of research and engineering development, these vitreous-enamel wire-wound power resistors offer superlative performance and life as proved by countless tests. "Greenohm V" resistors provide all the outstanding quality which made Clarostat "Greenohm" cement-coated units famous, *plus* a glass-smooth vitreous-enamel coating in a handsome bluish-green for maximum eye appeal. Made to MIL-R-26C specifications.

- Fixed and adjustable
- 5-watt to 200 watt sizes
- ± 5% tolerance, 50 ohms and over. ± 10% tolerance, 49.9 ohms and under. ± 10% for adjustable.

"GREENOHM V"™ FIXED RESISTORS (VITREOUS ENAMEL)

5-WATT SERIES VPR-5-F

Core: 1" x 5/16"
Terminals, wire lead and lug

Resistance Ohms

1	30	350	1250	7000
1.5	35	400	1500	7500
2	40	450	1750	8000
3	50	500	2000	9000
4	75	600	2250	10K
5	100	700	2500	12.5K
7.5	125	750	3000	15K
10	150	800	3500	17.5K
12	200	900	4000	20K
15	225	1000	4500	22.5K
20	250	1100	5000	25K
25	300	1200	6000	

NET PRICES:

1 to 1K	$0.51
1100 to 5K	.54
6K to 10K	.57
12.5K to 15K	.60
17.5K to 20K	.63
22.5K to 25K	.66

10-WATT SERIES VPR-10-F

Core: 1¾" x 5/16"
Terminals, wire lead and lug

Resistance Ohms

0.4	30	500	3000	13.5K
1	35	600	3500	14.3K
1.2	40	700	4000	15K
1.3	50	750	4500	16K
1.5	75	800	5000	17.5K
2	100	900	6000	18K
3	125	1000	7000	20K
4	150	1100	7500	22.5K
5	200	1200	8000	25K
7.5	225	1250	8500	30K
10	250	1500	9000	35K
12	300	1750	10K	40K
15	350	2000	11K	45K
20	400	2250	12K	50K
25	450	2500	12.5K	

Standard Packaging — 10 per Carton

NET PRICES:

0.4 to 1K	$0.57
1100 to 5K	.60
6K to 10K	.69
11K to 20K	.78
22.5K to 25K	.81
30K to 50K	.90

100-WATT SERIES VK-100-N

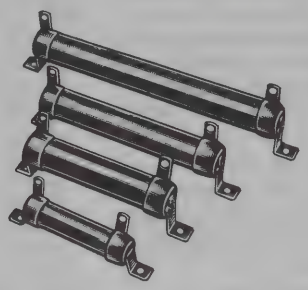
Core: 6½" x ¾"
Lug terminals — Mtg. bracket furnished

Resistance Ohms

1	50	750	7500	50K
2	75	1000	10K	60K
3	100	1500	15K	75K
4	125	2000	20K	100K
5	150	2500	25K	
10	250	3000	30K	
25	500	5000	40K	

NET PRICES:

1 to 3	$2.22
4 to 1K	1.59
1500 to 5K	1.68
7500 to 10K	1.80
15K to 20K	1.98
25K to 40K	2.13
50K to 60K	2.22
75K	2.43
100K	2.73



20-WATT SERIES VPR-20-H

Core: 2" x 7/16"
Terminals, wire lead and lug

Resistance Ohms

0.4	350	1850	7500	55K
0.6	400	2000	8000	60K
0.8	500	2250	9000	65K
5	650	2400	10K	70K
10	700	2500	12.5K	75K
25	750	2750	15K	80K
50	800	3000	20K	85K
75	850	3500	25K	90K
100	1000	4000	30K	95K
150	1200	4500	35K	100K
200	1250	5000	40K	
250	1500	6000	45K	
300	1750	7000	50K	

Standard Packing — 5 per Carton

NET PRICES:

0.4 to 1K	$0.66
1200 to 5K	.69
6K to 10K	.81
12.5K to 20K	.84
25K to 40K	.99
45K to 60K	1.14
65K to 80K	1.35
85K to 100K	1.56

160-WATT SERIES VK-160-W

Core: 8½" x 1⅛"
Lug terminals — Mtg. bracket furnished

Resistance Ohms

1	50	750	7500	50K
2	75	1000	10K	60K
3	100	1500	15K	75K
4	125	2000	20K	100K
5	150	2500	25K	
10	250	3000	30K	
25	500	5000	40K	

NET PRICES:

1 to 5	$3.18
10 to 1K	2.28
1500 to 5K	2.31
7500 to 10K	2.52
15K to 20K	2.70
25K to 40K	2.79
50K to 60K	2.88
75K	3.06
100K	3.24

25-WATT SERIES VP-25-K

Core: 2" x 9/16"
Lug terminals — Mtg. bracket furnished

Resistance Ohms

1	50	800	5000	30K
2	75	1000	6000	35K
3	100	1500	7500	40K
4	150	2000	10K	50K
5	200	2500	12K	60K
10	250	3000	15K	70K
15	500	3500	20K	80K
25	750	4000	25K	100K

Standard Packing — Individually Boxed

NET PRICES:

1 to 1K	$0.72
1500 to 10K	.75
6K to 10K	.84
12K to 20K	.90
25K to 40K	1.02
50K to 60K	1.20
70K to 80K	1.41
100K	1.62

50-WATT SERIES VP-50-K

Core: 4" x 9/16"
Lug terminals — Mtg. bracket furnished

Resistance Ohms

1	75	1000	8000	75K
2	100	1500	10K	100K
3	150	2000	12K	125K
4	200	2500	15K	150K
5	250	3000	20K	175K
10	500	4000	25K	200K
25	750	5000	35K	225K
50	800	7500	50K	250K

Standard Packing — Individually Boxed

NET PRICES:

1	$1.53
2 to 1K	1.11
1500 to 5K	1.14
7500 to 10K	1.26
12K to 20K	1.38
25K to 35K	1.53
50K	1.71
75K	1.95
100K	2.13
125K	2.55
150K	2.70
175K	2.79
200K	2.88
225K	3.24
250K	3.24

200-WATT SERIES VK-200-W

Core: 10½" x 1⅛"
Lug terminals — Mtg. bracket furnished

Resistance Ohms

1	50	1000	10K	60K
2	75	1500	15K	75K
3	100	2000	20K	100K
4	150	2500	25K	
5	250	3000	30K	
10	500	5000	40K	
25	750	7500	50K	

NET PRICES:

1 to 5	$3.42
10 to 1K	2.46
1500 to 5K	2.52
7500 to 10K	2.70
15K to 20K	2.88
25K to 40K	2.97
50K to 60K	3.06
75K	3.24
100K	3.45

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RESISTORS · CONTROLS
RESISTANCE DEVICES

"GREENOHM V"™ ADJUSTABLE RESISTORS (VITREOUS ENAMEL)

10-WATT SERIES VP-10-FA

Core: 1¾" x 5/16"

Lug terminals — Mtg. brackets furnished

Resistance Ohms

1	25	350	1500	5000
2	50	400	2000	6000
3	75	500	2250	7000
5	100	600	2500	7500
7.5	150	750	3000	8000
10	200	800	3500	8500
15	250	1000	4000	9000
20	300	1250	4500	10K

NET PRICES:

1 to 1K	$1.14
1250 to 5K	1.17
6000 to 10K	1.26

Standard Packing — 10 per Carton

25-WATT SERIES VP-25-KA

Core: 2" x 9/16"

Lug terminals — Mtg. brackets furnished

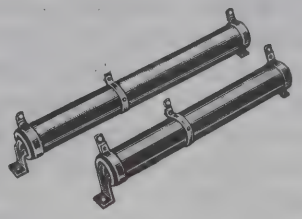
Resistance Ohms

1	50	750	3500	9000
2	75	800	4000	10K
3	100	1000	4500	12K
5	150	1250	5000	15K
7.5	200	1500	6000	20K
10	250	2000	7000	25K
15	300	2250	7200	
20	400	2500	7500	
25	500	3000	8000	

NET PRICES:

1 to 1K	$1.29
1250 to 5K	1.32
6K to 10K	1.41
12K to 20K	1.47
25K	1.59

Standard Packing — Individually Boxed



50-WATT SERIES VP-50-KA

Core: 4" x 9/16"

Lug terminals — Mtg. brackets furnished

Resistance Ohms

1	150	1500	7000	30K
2	200	2000	7200	40K
3	250	2250	7500	50K
4	300	2500	8000	60K
5	400	3000	9000	80K
10	500	3500	10K	100K
25	750	4000	12K	
50	800	4500	15K	
75	1000	5000	20K	
100	1250	6000	25K	

NET PRICES:

1 ohm	$2.10
2 to 1K	1.68
1250 to 5K	1.71
6K to 10K	1.80
12K to 20K	1.92
25K to 40K	2.10
50K to 60K	2.28
80K	2.52
100K	2.70

Standard Packing — Individually Boxed

75-WATT SERIES VP-75-KA

Core: 6" x 9/16"

Lug terminals — Mtg. brackets furnished

Resistance Ohms

1	200	2000	7200	35K
2	250	2250	7500	40K
3	300	2500	8000	45K
4	400	3000	9000	50K
5	500	3500	10K	60K
10	750	4000	12K	80K
15	800	4500	15K	100K
25	1000	5000	20K	
50	1250	6000	25K	
100	1500	7000	30K	

NET PRICES

1 to 2	$2.37
3 to 1K	1.86
1250 to 5K	1.92
6000 to 10K	2.01
12K to 20K	2.13
25K to 40K	2.31
45K to 60K	2.52
80K	2.76
100K	2.91

Standard Packaging — Individually Boxed

100-WATT SERIES VK-100-NA

Core: 6½" x ¾"

Lug terminals — Mtg. brackets furnished

Resistance Ohms

1	10	500	10K	40K
2	25	1000	15K	50K
3	50	1500	20K	75K
4	100	2500	25K	100K
5	250	5000	30K	

NET PRICES:

1 to 3	$3.00
4 to 1K	2.37
1500 to 5K	2.43
10K	2.55
15K to 20K	2.70
25K to 40K	2.88
50K	3.00
75K	3.12
100K	3.27

Standard Packing — Individually Boxed

160-WATT SERIES VK-160-WA

Core: 8½" x 1⅛"

Lug terminals — Mtg. brackets furnished

Resistance Ohms

1	10	500	10K	40K
2	25	1000	15K	50K
3	50	1500	20K	75K
4	100	2500	25K	100K
5	250	5000	30K	

NET PRICES:

1 to 5	$4.05
10 to 1K	3.15
1500 to 5K	3.18
10K	3.39
15K to 20K	3.57
25K to 40K	3.66
60K	3.75
75K	3.93
100K	4.14

Standard Packing — Individually Boxed

200-WATT SERIES VK-200-WA

Core: 10½" x 1⅛"

Lug terminals — Mtg. brackets furnished

Resistance Ohms

1	10	500	10K	40K
2	25	1000	15K	50K
3	50	1500	20K	75K
4	100	2500	25K	100K
5	250	5000	30K	

NET PRICES:

1 to 5	$4.32
10 to 1K	3.33
1500 to 5K	3.42
10K	3.57
15K to 20K	3.75
25K to 40K	3.84
50K	3.96
75K	4.14
100K	4.32

Standard Packing — Individually Boxed

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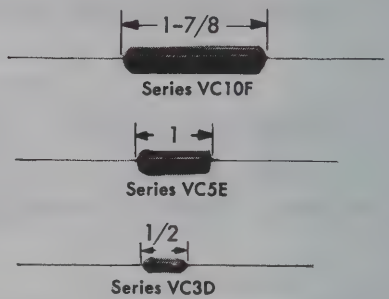
PRODUCTS OF
THE HOUSE OF RESISTORS®

CLAROSTAT®

RESISTORS · CONTROLS
RESISTANCE DEVICES

AXIAL LEAD VITREOUS RESISTORS

Available in three sizes 3, 5 and 10 watts, Series VC3D, VC5E and VC10F. Axial lead resistors are particularly adapted to printed circuit, terminal board, and point-to-point wiring applications. These resistors save considerable space because of the elimination of mounting brackets and terminal lugs. Standard resistance tolerance is ± 5% for 1 ohm and higher and tolerance below 1 ohm is ± 10%. Attractively packaged in a newly designed carton particularly adapted to this new axial lead resistor, beautifully finished with Clarostat's new vitreous shade of teal green.



Lead Length: 1½" Lead Diameter: .032

SERIES VC3D

RESISTANCE OHMS

1	20	200	750	2.25K	8K
1.5	25	225	800	2.5K	9K
2	30	250	900	3K	10K
3	35	300	1K	3.5K	K
4	40	350	1.1K	4K	K
5	50	400	1.2K	4.5K	K
7.5	75	450	1.25K	5K	K
10	100	500	1.5K	6K	K
12	125	600	1.75K	7K	K
15	150	700	2K	7.5K	K

Net Prices

1	to 1K	$ .51
1.1K	to 5K	.54
6K	to 10K	.95

Standard Packing—10 per Carton.

SERIES VC5E

RESISTANCE OHMS

1	20	200	750	2.25K	8K
1.5	25	225	800	2.5K	9K
2	30	250	900	3K	10K
3	35	300	1K	3.5K	12.5K
4	40	350	1.1K	4K	15K
5	50	400	1.2K	4.5K	17.5K
7.5	75	450	1.25K	5K	18K
10	100	500	1.5K	6K	20K
12	125	600	1.75K	7K	22.5K
15	150	700	2K	7.5K	25K

Net Prices

1	to 1K	$ .54
1.1K	to 5K	.57
6K	to 10K	.60
12.5K	to 20K	.72
22.5K	to 25K	.75

Standard Packing—10 per Carton.

SERIES VC10F

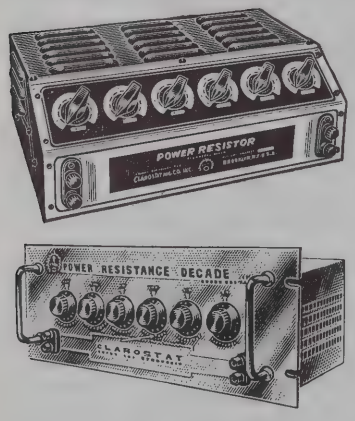
RESISTANCE OHMS

1	20	200	750	2.25K	8K	17.5K
1.5	25	225	800	2.5K	8.5K	18K
2	30	250	900	3K	9K	20K
3	35	300	1K	3.5K	10K	22.5K
4	40	350	1.1K	4K	11K	25K
5	50	400	1.2K	4.5K	12K	30K
7.5	75	450	1.25K	5K	12.5K	35K
10	100	500	1.3K	6K	13.5K	40K
12	125	600	1.75K	7K	15K	45K
15	150	700	2K	7.5K	16K	50K

Net Prices

1	to 1K	$ .60
1.1K	to 5K	.63
6K	to 10K	.72
11K	to 20K	.81
22.5K	to 40K	.84
45K	to 50K	.96

Standard Packing—10 per Carton.



POWER RESISTOR DECADE BOX

The Resistance Decade Box, Model 240-C for bench use — Model 250 for rack mounting, provides any resistance from 1 to 999,999 ohms for working circuits at the flip of a switch. Six front-panel dials enable selection in 1 ohm increments, the total value being read directly from the dial. Each decade has a power rating of 225 watts maximum, 1,000 VDC or 660 VAC maximum.

Resistance changing switches are of the type that prevent a resistance breakdown between steps, thus protecting delicate meters and measuring instruments in the circuit. Knobs indicate the resistance value being used at a glance.

Clarostat GREENOHM Power Resistors are used throughout. These components are wire-wound power resistors on ceramic tubes and coated with an exclusive Clarostat inorganic cold-setting cement, providing the most rugged, long-lasting, trouble-free power resistor available. The resistors are mounted in rigid metal supports.

Overall length: 240C: 13" long x 8½" deep x 5¾" high, weight 11½ lbs. 250: 19" long x 13¾" deep x 7" high (fits in standard 19" relay rack), weight 18½ lbs.

SUGGESTED USES: Resistance determination, Load Resistance, Meter Multiplier, Calibrating Meters, Providing any desired ohmage as a universal power resistor.

Decade No.	1	2	3	4	5	6
Max. Current Rating (amps)	5	1.5	.5	.15	0.5	.005
Resistance Tolerance	5%	2%	2%	2%	2%	2%

NET PRICE: Model 240C $110.00, Model 250 $150.00

SERIES U39

UNIVERSAL "HUMDINGER" CONTROL
2W. WIRE WOUND

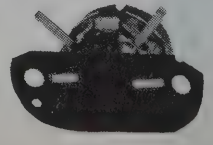
Series U39 is a shaftless potentiometer with the contact arm grounded to the housing. The design of terminals and mounting tabs, meets the following requirements: Above chassis mounting, as a potentiometer or rheostat; printed circuit mounting, as a potentiometer or rheostat. The terminal layout meets the popular industry standards. A fiber adapter plate is furnished with each control. Series U39 is ideally suited for radio and television requirements, as well as many industrial applications. Resistance tolerance ±20%. Linear only.

Cat. No.	Total Res. Ohms	Min. Res. Ohms	Cat. No.	Total Res. Ohms	Min. Res. Ohms
U39-1.5	1.5	——	U39-700	700	——
U39-5	5	——	U39-700-200	700	200
U39-8	8	——	U39-800	800	——
U39-15	15	——	U39-800-50	800	50
U39-50	50	——	U39-1000	1000	——
U39-75	75	——	U39-1000-100	1000	100
U39-100	100	——	U39-1500	1500	——
U39-125	125	——	U39-2000	2000	——
U39-150	150	——	U39-2000-100	2000	100
U39-175	175	——	U39-3000	3000	——
U39-200	200	——	U39-3000-700	3000	700
U39-300	300	——	U39-4000	4000	——
U39-500	500	——	U39-4000-350	4000	350
U39-500-100	500	100	U39-4000-1000	4000	1000
U39-600	600	——	U39-5000	5000	——
U39-650	650	——			

NET PRICE $.36 Standard Packing — 10 per carton.



SERIES U39



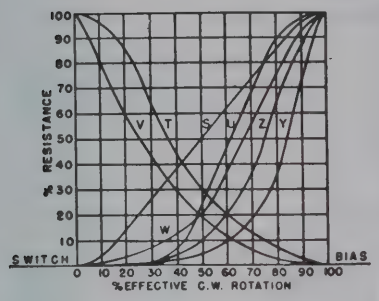
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RESISTANCE DEVICES

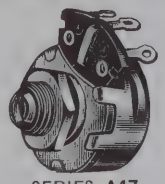
COMPOSITION-ELEMENT CONTROLS



Graph Explanation:
Taper S—Straight or uniform resistance change with rotation.
Taper T — Right-hand 30% resistance at 50% of C.C.W. rotation.
Taper U — Left-hand 1% resistance at 33⅓% of C.W. rotation.
Taper V — Right-hand 20% resistance at 50% of C.C.W. rotation.
Taper W—Left-hand 20% resistance at 50% of C.W. rotation.
Taper Z—Left-hand (Log. audio) 10% resistance at 50% of C.W. rotation.
Taper Y — Left-hand 5% resistance at 50% of C.W. rotation.

SERIES "A47" ½-WATT CONTROLS

Composition-element controls in the popular 15/16" dia. size. Series "A47" controls are field-assembled with the selected "Pick-A-Shaft"* and "Ad-A-Switch"*. These controls are also available with factory-assembled shafts at no extra charge, by omitting prefix "A" from catalog number and designating the type shaft desired when ordering. Example: 47-100K-S with FKS-¼ shaft.



SERIES A47
(INDUSTRIAL)
SERIES 47

CAT No.	OHMS	TAPER	CAT No.	OHMS	TAPER
A47-500-S	500	S	A47-75K-V	75K	V
A47-750-S	750	S	A47-100K-S	100K	S
A47-1000-S	1000	S	A47-100K-Z	100K	Z
A47-1500-S	1500	S	A47-150K-S	150K	S
A47-2000-S	2000	S	A47-200K-S	200K	S
A47-2500-S	2500	S	A47-250K-S	250K	S
A47-3000-S	3000	S	A47-250K-Z	250K	Z
A47-4000-S	4000	S	A47-300K-S	300K	S
A47-5000-S	5000	S	A47-500K-S	500K	S
A47-7500-S	7500	S	A47-500K-Z	500K	Z
A47-10K-S	10K	S	A47-750K-S	750K	S
A47-10K-V	10K	V	A47-750K-Z	750K	Z
A47-10K-W	10K	W	A47-1 Meg-S	1 Meg.	S
A47-10K-Z	10K	Z	A47-1 Meg-Z	1 Meg.	Z
A47-15K-S	15K	S	A47-1.5 Meg-S	1.5 Meg.	S
A47-15K-V	15K	V	A47-2 Meg-Z	2 Meg.	Z
A47-15K-W	15K	W	A47-2 Meg-S	2 Meg.	S
A47-20K-S	20K	S	A47-2.5 Meg-S	2.5 Meg.	S
A47-25K-S	25K	S	A47-3 Meg-S	3 Meg.	S
A47-25K-W	25K	W	A47-3-Meg.-Z	3 Meg.	Z
A47-25K-V	25K	V	A47-4 Meg-S	4 Meg.	S
A47-30K-S	30K	S	A47-4 Meg-Z	4 Meg.	Z
A47-40K-S	40K	S	A47-5 Meg-Z	5 Meg.	Z
A47-50K-S	50K	S	A47-5 Meg-S	5 Meg.	S
A47-50K-W	50K	W	A47-7.5 Meg-S	7.5 Meg.	S
A47-50K-Z	50K	Z	A47-10 Meg-S	10 Meg.	S
A47-75K-S	75K	S			

NET PRICE $.93 Standard Packing—10 per Carton.

SERIES "AD47" ½-WATT DUAL CONTROLS

These are the same as "A47" except that they are dual controls.

Cat. No.	Panel	Taper	Rear	Taper
AD47-50-S	50K	S	50K	S
AD47-100K-S	100K	S	100K	S
AD47-250K-S	250K	S	250K	S
AD47-250K-Z	250K	Z	250K	Z
AD47-500K-Z	500K	Z	500K	Z
AD47-1 Meg.-S	1 Meg.	S	1 Meg.	S
AD47-1 Meg.-Z	1 Meg.	Z	1 Meg.	Z
AD47-2 Meg.-S	2 Meg.	S	2 Meg.	S
AD47-2 Meg.-V	2 Meg.	V	2 Meg.	V
AD47-5 Meg.-S	5 Meg.	S	5 Meg.	S

NET PRICE $2.25 Standard Packing — Individual Carton.

SERIES "C47S" ½-WATT CONTROLS WITH PUSH-PULL SWITCH

Cat. No.	Cat. No.
C47S-1000-V	C47S-750K-Z
C47S-2500-V	C47S-1MEG-S
C47S-250K-S	C47S-1MEG-Z
C47S-250K-Z	C47S-2MEG-S
C47S-500K-S	C47S-2MEG-Z
C47S-500K-Z	C47S-3MEG-Z
C47S-750K-S	

Net Price $1.53 Standard Packing—10 per Carton.

SERIES "C47SF" (TAPPED)

Cat. No.	
C47SF-500K	Tap 250K
C47SF1-500K	Tap 150K
C47SF-1MEG	Tap 500K
C47SF1-1MEG	Tap 250K
C47SF-2MEG	Tap 1MEG
C47SF-3MEG	Tap 1.5MEG

Net Price $1.95 Standard Packing—10 per Carton.

SERIES "A47F"



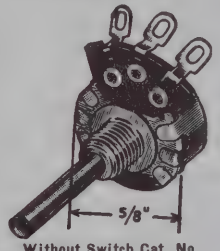
SERIES A47F
(INDUSTRIAL)
SERIES 47F

Series "A47F" controls are field-assembled with the selected "Pick-A-Shaft"* and "Ad-A-Switch"*. "A47F" controls have taps 1, 2, 3 located at 40%, 50% and 60% of rotation, double taps at 35 and 65% of electrical position. These controls are also available with factory-assembled shafts at no extra charge, by omitting prefix "A" from catalog number and designating the type of shaft desired when ordering. Example: 47F-200K with FS-3 shaft.

Cat. No.	Res. Ohms.	Tap No. 1 30%	Tap No. 2 50%	Tap No. 3 70%
A47F-15K	15K	5K		10K
A47F-50K	50K		25K	
A47F-200K	200K			100K
A47F-250K	250K			50K
A47F1-250K	250K		125K	
A47F2-250K	250K	60K		125K
A47F-350K	350K	75K		
A47F1-350K	350K		75K	
A47F-500K	500K			100K
A47F1-500K	500K	25K		
A47F2-500K	500K			200K
A47F3-500K	500K		100K	
A47F4-500K	500K		50K	
A47F5-500K	500K		250K	
A47F6-500K	500K	100K		300K
A47F-1 Meg.	1 Meg.	250K		
A47F1-1 Meg.	1 Meg.			200K
A47F2-1 Meg.	1 Meg.		50K	
A47F3-1 Meg.	1 Meg.		100K	
A47F4-1 Meg.	1 Meg.		225K	
A47F5-1 Meg.	1 Meg.		500K	
A47F-1.5 Meg.	1.5 Meg.	250K		500K
A47F-2 Meg.	2 Meg.	20K		
A47F1-2 Meg.	2 Meg.	5000		
A47F2-2 Meg.	2 Meg.	15K		
A47F3-2 Meg.	2 Meg.		1 Meg.	
A47F4-2 Meg.	2 Meg.		200K	
A47F5-2 Meg.	2 Meg.		400K	
A47F6-2 Meg.	2 Meg.		500K	
A47F7-2 Meg.	2 Meg.	250K		1 Meg.
A47F-2.5 Meg.	2.5 Meg.	250K		500K
A47F-3 Meg.	3 Meg.		250K	

NET PRICE $1.35. Standard Packing—10 per Carton. *Reg. U.S. Pat. Off.

SERIES 44 — 0.02 WATT CONTROLS



Composition Element Controls rated at 0.2 watt, designed specifically for miniaturized applications such as transistorized circuits, pocket radios, hearing aids, etc. Stocked controls have Clarostat "W" taper (20% log audio). Other tapers available on special order. Series 44 is without switch, while Series 44S has factory-attached 0.5 am. 25 v.d.c. DPST switch. Other ohmages available on special order. 200 ohms to 5 meg. linear; 1500 to 2.5 meg. tapered. Also available on special order, controls with 0.5 a. 25 v.d.c. SPST switch. Items not listed are special. Prices and information on request.

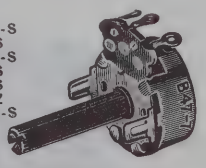
Without Switch Cat. No.		With SPST Switch Cat. No.	
44-500-W	44-50K-W	44S-500-W	44S-50K-W
44-1K-W	44-100K-W	44S-1K-W	44S-100K-W
44-5K-W	44-250K-W	44S-5K-W	44S-250K-W
44-10K-W	44-500K-W	44S-10K-W	44S-500K-W
44-15K-W	44-1 Meg-W	44S-15K-W	44S-1 Meg-W
44-25K-W		44S-25K-W	

LIST PRICE $1.55 **LIST PRICE $2.55**
Standard Packing — 10 Per Carton

SERIES B47 ½-WATT TAB-MOUNT

Composition element controls designed for radio and TV applications, where bushingless controls are required. Phenolic shaft insures insulation if control is used on a "hot" chassis. Items not listed are special, for which information and prices will be supplied on request.

Cat. No.	Cat. No.	Cat. No.	Cat. No.
B47-500-S	B47-10K-S	B47-250K-S	B47-1.5 Meg-S
B47-750-S	B47-25K-S	B47-330K-Z	B47-2 Meg-S
B47-1500-S	B47-50K-S	B47-500K-S	B47-2.5 Meg-S
B47-2500-S	B47-100K-S	B47-500K-Z	B47-3 Meg-S
B47-3000-S	B47-150K-S	B47-1 Meg-S	B47-5 Meg-S
B47-5000-S	B47-200K-S	B47-1 Meg-Z	B47-5 Meg-Z
			B47-7.5 Meg-S



NET PRICE $.60
Standard Packing—10 per Carton.

SERIES B47S ½-WATT TAB MOUNT WITH SWITCH

Cat. No.	Cat. No.
B47S-250K-Z	B47S-1 Meg-S
B47S-250K-S	B47S-1 Meg-Z
B47S-250K-Z	B47S-2 Meg-S
B47S-500K-S	B47S-2 Meg-Z
B47S-500K-Z	

Net Price $1.20 Standard Packing—10 per Carton.

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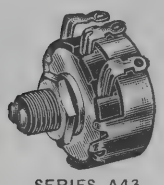
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RESISTORS · CONTROLS
RESISTANCE DEVICES

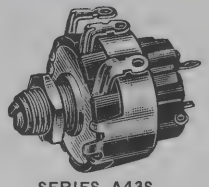
WIRE-WOUND CONTROLS

These are "Pick-A-Shaft"* controls which take any one of 12 shafts listed on page R-24 including High Voltage Coupler and insulated shaft. Your choice of any one of the 12 shafts listed (this does not include insulated shaft) with each control. Tolerances of these controls are in accordance with EIA standards. Overall resistance tolerance of plus/minus 10% for all values. All controls are linear. Available with factory-assembled shafts at no extra charge, by omitting the prefix "A" from the catalog number and designating the type of shaft desired when ordering. Example: 43-500 with FKS-¼ shaft, or 43S-10K with FS-3 shaft and SPST switch.

SERIES "A43" and "A43S" 2-WATT CONTROLS



SERIES A43
(INDUSTRIAL)
SERIES 43



SERIES A43S
(INDUSTRIAL)
SERIES 43S

"A43" is without switch, while "A43S" has factory-attached SPST switch. When ordering "A43S" controls, specify type of switch. Controls with other than SPST switch are special. Prices and information on request.

Without Switch Cat. No.	With SPST Switch Cat. No.	Res. Ohms
A43-5	A43S-5	5
A43-10	A43S-10	10
A43-20	A43S-20	20
A43-25	A43S-25	25
A43-30	A43S-30	30
A43-40	A43S-40	40
A43-50	A43S-50	50
A43-75	A43S-75	75
A43-100	A43S-100	100
A43-150	A43S-150	150
A43-200	A43S-200	200
A43-300	A43S-300	300
A43-400	A43S-400	400
A43-500	A43S-500	500
A43-750	A43S-750	750

Standard Packing: 10 per Carton.

Without Switch Cat No	With SPST Switch Cat. No.	Res. Ohms
A43-1,000	A43S-1,000	1,000
A43-1,500	A43S-1,500	1,500
A43-2,000	A43S-2,000	2,000
A43-2,500	A43S-2,500	2,500
A43-3,000	A43S-3,000	3,000
A43-4,000	A43S-4,000	4,000
A43-5,000	A43S-5,000	5,000
A43-7,500	A43S-7,500	7,500
A43-10K	A43S-10K	10K
A43-15K		
A43-20K		
A43-25K		
A43-30K		
A43-40K		
A43-50K		

NET PRICES: (Without Switch)

5 to 10KΩ ..... $ .93
15K to 25KΩ 1.20
30K to 50KΩ 1.62

(With Switch)

5 to 10KΩ $1.47

SERIES "A58" and "A58S" 3- WATT CONTROLS

"A58" is without switch, while "A58S" has factory-attached SPST switch. Available with factory-assembled shafts, at no extra charge, by omitting prefix "A" from catalog number, and designating type of shaft desired when ordering. Example: 58-50K with KSS-3 shaft, or 58S-25K with RS-3 shaft and SPST switch. Controls with other than SPST switch are special. Prices and information on request.

Without Switch Cat. No.	Res. Ohms
A58-1	1
A58-2	2
A58-4	4
A58-6	6
A58-10	10
A58-15	15
A58-20	20
A58-25	25
A58-30	30
A58-40	40
A58-50	50
A58-60	60
A58-75	75
A58-100	100
A58-200	200
A58-300	300
A58-400	400
A58-500	500
A58-750	750
A58-1,000	1,000
A58-1,500	1,500
A58-2,000	2,000
A58-2,500	2,500
A58-3,000	3,000
A58-4000	4,000
A58-5,000	5,000

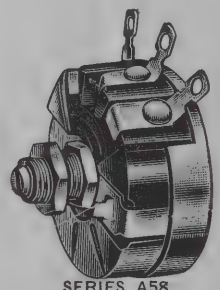
Without Switch Cat. No.	Res. Ohms
A58-7,500	7,500
A58-10K	10K
A58-15K	15K
A58-20K	20K
A58-25K	25K
A58-30K	30K
A58-40K	40K
A58-50K	50K

NET PRICES:

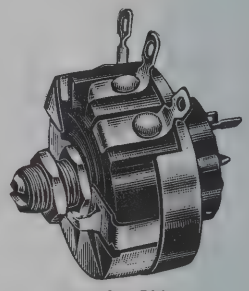
1 to 10KΩ ..... $ .93
15K to 25KΩ 1.20
30K to 50KΩ 1.62

With SPST Switch Cat. No.	Res. Ohms
A58S-1	1
A58S-2	2
A58S-4	4
A58S-6	6
A58S-10	10
A58S-15	15
A58S-20	20
A58S-25	25
A58S-30	30
A58S-40	40

Standard Packing: 10 per Carton.



SERIES A58
(INDUSTRIAL)
SERIES 58



SERIES A58S
(INDUSTRIAL)
SERIES 58S

With SPST Switch Cat. No.	Res. Ohms
A58S-50	50
A58S-60	60
A58S-75	75
A58S-100	100
A58S-200	200
A58S-300	300
A58S-400	400
A58S-500	500
A58S-750	750
A58S-1,000	1,000
A58S-1,500	1,500
A58S-30K	30K
A58S-40K	40K
A58S-50K	50K

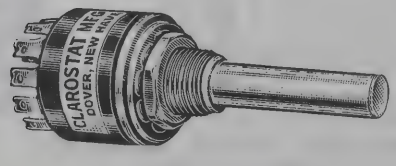
A58S-2,000	2,000
A58S-2,500	2,500
A58S-3,000	3,000
A58S-4,000	4,000
A58S-5,000	5,000
A58S-7,500	7,500
A58S-10K	10K
A58S-15K	15K
A58S-20K	20K
A58S-25K	25K

NET PRICES:

1 to 10KΩ $1.47
15K to 25KΩ 1.71
30K to 50KΩ 2.16

Standard Packing: 10 per Carton.

SERIES BHM ROTARY SWITCHES



Series BHM switches are rated at 50 ma. at 300 V. a.c. or d.c., and 500 ma. at 30 V. a.c. or d.c. All moving parts and contact mechanism are totally enclosed, and the switch assembly is sealed for protection from dust and atmospheric conditions. They are particularly adapted to portable radios, receivers and transmitters, X-ray and medical instruments, calculating machines and computers.

Current: 50 Milliamps. at 300 volts a.c. or d.c.
Rating: 500 Milliamps. at 30 volts a.c. or d.c.
Protection: All moving parts and contact mechanisms are totally enclosed and switch is sealed, which protects it from dust and atmospheric conditions.
Shaft: ¼" diameter round 1" beyond bushing.
Finish: Nickel Plating.
Bushing: ⅜" x 32 NEF-2 Thread. ⅜" Long.
Torque: 30 to 50 oz. in.

BHM-SP12P-S	Single Pole 12 Positions — Shorting
BHM-SP12P-NS	Single Pole 12 Positions — Non Shorting
BHM-2P6P-S	2 Pole 6 Positions — Shorting
BHM-2P6P-NS	2 Pole 6 Positions — Non-Shorting
BHM-3P4P-S	3 Pole 4 Positions — Shorting
BHM-3P4P-NS	3 Pole 4 Positions — Non-Shorting
BHM-4P3P-S	4 Pole 3 Positions — Shorting
BHM-4P3P-NS	4 Pole 3 Positions — Non-Shorting

Meets or exceeds test paragraph 4.5.3 thru 4.5.13 of MIL-S-3786.

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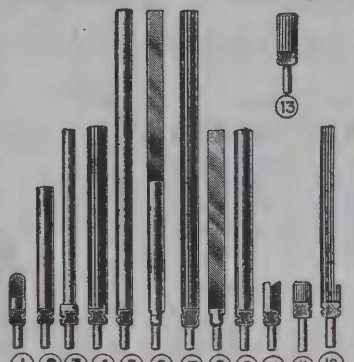
CLAROSTAT®

RESISTORS · CONTROLS
RESISTANCE DEVICES

SHAFTS FOR "PICK-A-SHAFT"* CONTROLS

For use with all Clarostat "Pick-A-Shaft"* controls, either carbon or wire-wound. Your choice of shaft furnish with each control.

(1) SS-⅜" length—(Male) to take female fitting.
(2) RS-2 — Round shaft, 2" long.
(3) RS-3/16 — Round shaft 3/16" dia., 3" long.
(4) KSS-3—Knurled, split shaft, 3" long.
(5) RS-5—Round shaft, 5" long.
(6) FS-5—Flatted, 5" long.
(7) KSS-5—Knurled, split shaft, 5" long.
(8) FS-3 — Flatted shaft, 3" long.
(9) RS-3 — Round shaft, 3" long.
(10) DFS-½—Double flatted Philco Type, ½" long.
(11) FKS-¼—Fine knurled slotted shaft, ¼" long.
(12) KFS-3—Knurled flatted shaft, 3" long.
(13) FKS-½—Fine knurled slotted shaft, ½" long



Net Price, Each Shaft $0.33



U.S. PAT. 2,642,506

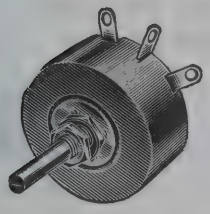
SERIES "SWE" SWITCHES FOR "AD-A-SWITCH"* CONTROLS

For use with "A47" and "A47F" controls. Underwriters' Laboratories Inc. approved.

Cat. No.	Wiring	Net Price
SWE-12	S.P.S.T. — Single Pole Single Throw, 5A.-125V. A.C.	$0.45
SWE-13	S.P.S.T. — Single Pole Single Throw, 15A.-10V. D.C.	.66
SWE-20	D.P.S.T. — Double Pole Single Throw, 3A.-125V. A.C.	.51
SWE-21	Mod. D.P.S.T. one pole on, one off or with Jumper S.P.D.T., 3A.-125V. A.C.-D.C.	.51
SWE-23	D.P.S.T., 15A.-10V. D.C.	.66

(Mod. DPST has one pole "on', one pole "off" or with Jumper it is SPDT.)

Standard Packing: 10 per Carton.



POWER RHEOSTATS

Clarostat Power Rheostats maintain their full power rating at settings as low as one-third rotation without excessive temperature rise. Standard overall resistance tolerance plus/minus 10%. Closer tolerances are available upon special order.

AN Types (aircraft type) are basically the same units mechanically and electrically except that they are encased in a metal housing (versus ceramic). Terminals are screw type lugs to prevent corrosion. Approved under MIL-R-6749.

Units mount through a single hole, a locking pin is provided for rear panel moun ing.

SERIES 25 — 25-WATT

Cat. No.	Total Res. Ohms	Net Price
25-1	1	$3.87
25-2	2	3.42
25-3	3	3.42
25-6	6	3.42
25-8	8	3.42
25-10	10	3.42
25-15	15	3.42
25-25	25	3.42
25-35	35	3.42
25-50	50	3.42
25-75	75	3.42
25-100	100	3.42
25-125	125	3.42
25-175	175	3.42
25-250	250	3.42
25-350	350	3.42
25-500	500	3.42
25-750	750	3.42
25-1,000	1,000	3.87
25-1,500	1,500	3.87
25-2,500	2,500	3.87
25-3,500	3,500	4.08
25-5,000	5,000	4.29

SERIES 50 — 50-WATT

Cat. No.	Total Res. Ohms	Net Price
50-0.5	0.5	$4.25
50-1	1	4.25
50-2	2	4.25
50-4	4	3.87
50-6	6	3.87
50-8	8	3.87
50-12	12	3.87
50-16	16	3.87
50-22	22	3.87
50-35	35	3.87
50-50	50	3.87
50-80	80	3.87
50-125	125	3.87
50-150	150	3.87
50-225	225	3.87
50-300	300	3.87
50-500	500	3.87
50-800	800	4.08
50-1,000	1,000	4.08
50-1,600	1,600	4.08
50-2,500	2,500	4.08
50-3,500	3,500	4.29
50-5,000	5,000	4.29
50-8,000	8,000	5.16
50-10K	10K	5.16

AN-3155-25** 25 WATTS

Cat. No.	Total Res. Ohms	Net Price
AN-3155-25-10	10	$4.80
AN-3155-25-11	11	4.80
AN-3155-25-15	15	4.80
AN-3155-25-25	25	4.80
AN-3155-25-50	50	4.80
AN-3155-25-75	75	4.80
AN-3155-25-100	100	4.80
AN-3155-25-200	200	5.61

AN-3155-50** — 50 WATTS

AN-3155-50-5	5	5.61
AN-3155-50-8	8	5.61
AN-3155-50-10	10	5.61
AN-3155-50-25	25	5.46
AN-3155-50-30	30	5.46
AN-3155-50-50	50	5.46
AN-3155-50-75	75	5.46
AN-3155-50-100	100	5.46
AN-3155-50-150	150	6.12
AN-3155-50-200	200	6.12

Prices include AN-3220 — 2 knob

Standard Packing: Individual Carton.

**25 and 50 watt Power Rheostats when encased in metal housing are derated 50%.

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CLAROSTAT®

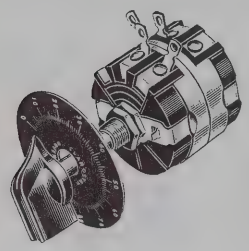
RESISTORS • CONTROLS
RESISTANCE DEVICES

®

SOUND-SYSTEM CONTROLS

For proper control of volume and tone alike, Clarostat offers a choice of several controls, such as L- and T-pads, output attenuators, and individual-speaker volume controls as used for drive-in theatre installations. These are not ordinary radio controls but rather sound-system controls designed and built for critical requirements.

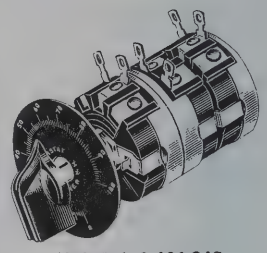
CONSTANT-IMPEDANCE CONTROLS



Self-compensating volume controls known as L-pads and T-pads for use in sound systems. Rated at 2½ watts DC, but will handle up to 10 watts audio. Continuous range from 0.5 to 30 decibels attenuation in 90% rotation. Last 10% affords infinite attenuation. With Clarostat constant-impedance L-pads and T-pads the input and output impedances of associated circuits can be kept within the limits of a constant required value. Knob and dial plate furnished with each control.

CIT Cat. No.	CIL Cat. No.	Res. Ohms
CIT-4	CIL-4	4
CIT-6	CIL-6	6
CIT-8	CIL-8	8
CIT-15	CIL-15	15
CIT-50	CIL-50	50
CIT-100	CIL-100	100
CIT 200	CIL-200	200
CIT-250	CIL-250	250

CIT Cat. No.	CIL Cat. No.	Res. Ohms
CIT-500	CIL-500	500
CIT-600	CIL-600	600
CIT-1,000	CIL-1,000	1,000
CIT-2,000	CIL-2,000	2,000
CIT-3,000	CIL-3,000	3,000
	CIL-4,000	4,000
	CIL-5,000	5,000



U. S. Pat. 2,434,248

CIT—NET PRICE $3.13 **CIL—NET PRICE $2.79** Standard Packing: Individual Carton.

CONSTANT IMPEDANCE OUTPUT ATTENUATORS



Series "CIB" rated at 10 watts, but will handle up to 30 watts in audio circuit. Linear attenuation provided in 3 decibel steps up to 24db, then 30db followed by infinity. Equipped with dial plate and bar knob. One-hole mounting, ⅜" bushing diameter. 1" shaft. This control has been developed to meet the need for a constant-impedance attenuator capable of handling considerable power without measurable insertion loss. Recommended as an output level control for power amplifiers, or as an input attenuator for individual or for a group of speakers in a public address system.

Cat. No.	Res. Ohms	Cat. No.	Res. Ohms
CIB-6	6	CIB-200	200
CIB-8	8	CIB-250	250
CIB-15	15	CIB-500	500
CIB-50	50	CIB-600	600

NET PRICE $7.70 Standard Packing: Individual Carton.

SPECIAL DRIVE-IN THEATRE L-PAD

To meet the needs of theater sound systems, more especially those of drive-in theaters, a special 8 ohm L-Pad is now available, containing two separate windings of 5 ohms and 40 ohms. Also 50 ohm linear rheostat and 35 ohm tapered rheostat, as listed. Units have ⅜-32 bushing ⅜" long, and 1½" round shaft.

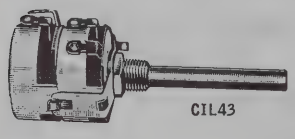


Cat. No. CM8727-1 8 ohm L-Pad
Net Price $1.80

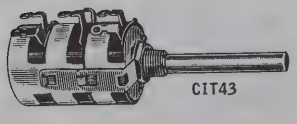
SPACE-SAVER CONSTANT-IMPEDANCE ATTENUATORS

Characterized by reduced depth and diameter, these attenuators are ideal for use in remote control of speakers since they are small enough to be installed in standard electrical boxes in the home, office, stockroom, etc.

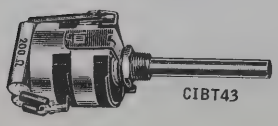
These controls are rated 2 watts D.C., but will handle up to 4 watts of audio, depending upon the type signal being handled. (As the frequency becomes constant, wattage reduces to 2 watts or the same as the D.C. rating).



CIL43



CIT43



CIBT43

Cat. No. CIL43 (L-Pad)	Cat. No. CIT43 (T-Pad)	Cat. No. CIBT43 (Bridged T-Pad)	Impedance
CIL43-4	CIT43-4	CIBT43-4	4 ohms
CIL43-6	CIT43-6	CIBT43-6	6 ohms
CIL43-8	CIT43-8	CIBT43-8	8 ohms
CIL43-15	CIT43-15	CIBT43-15	15 ohms
CIL43-50	CIT43-50	CIBT43-50	50 ohms
CIL43-100	CIT43-100	CIBT43-100	100 ohms
CIL43-200	CIT43-200	CIBT43-200	200 ohms
CIL43-250	CIT43-250	CIBT43-250	250 ohms
CIL43-500	CIT43-500	CIBT43-500	500 ohms
		CIBT43-600	600 ohms

NET PRICE CIL43 $2.79 **NET PRICE CIT43 $3.13**

NET PRICE CIBT43 $3.63
Standard Packing — Individual Carton

- Attenuation range of 0 to 30 db over 90% of rotation, 60 db in remaining 10% of rotation. Attenuation will increase approximately linearly to 30 db with counter-clockwise rotation.
- Insertion loss less than 0.5 db.
- Input impedance within plus/ minus 20%.
- The CIT43 and CIBT43 (Bridged T Pad) have constant input and output impedances, while the CIL43 has constant impedance in the input only.
- Shafts and bushings are insulated from the circuit elements.
- Pads have ⅜-32 x ⅜" long bushing.
- ¼" dia. round shafts 1½" long beyond bushing.
- All pads supplied with bar knob and dial plates, as shown above.
- Dia. 1⅛". Depth of body from mounting surface: CIL43 — 1$\frac{5}{32}$"; CIT43 — 1¾"; CIBT43 — 1½".

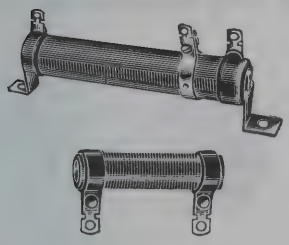
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PRODUCTS OF
THE HOUSE OF RESISTORS®

CLAROSTAT®

RESISTORS · CONTROLS
RESISTANCE DEVICES

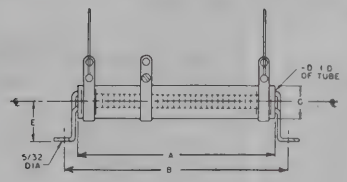
"GREENOHM"* WIRE-WOUND RESISTORS



FIXED TYPES Wire-wound resistors for most rugged applications. Will withstand tremendous overloads and temperature changes without alterating resistance values or appearance. Wire windings on high grade ceramic tubing and coated with special inorganic cement. In accordance with EIA standards, overall tolerances are ± 5% for resistors of 50 ohms and higher. For resistors of 49.9 ohms and lower, overall tolerances are ± 10%.

ADJUSTABLE TYPES Same electrically and mechanically as Fixed types, but incorporating sliding band or bands for tapping any desired resistance values. Slider band tightened by means of screw. In accordance with EIA standards, overall tolerances are ± 10%.

DIMENSIONS BY TYPES



SERIES	WATTS	A	B	C	D	E
PR-5-F	5	1	1 7/16	5/16	3/16	7/16
PR-10-F	10	1 3/4	2 3/16	5/16	3/16	7/16
PR-10-FA	10	1 3/4	2 3/16	5/16	3/16	7/16
PR-20-K	20	2	2 1/2	9/16	3/8	9/16
P-25-K	25	2 1/2	3	9/16	3/8	9/16
P-25-KA	25	2 1/2	3	9/16	3/8	9/16

FIXED RESISTORS

5-WATT SERIES PR-5-F

These resistors conform to E1A specification for type RRW-125 and 128.

Ohms	Ohms	Ohms	Ohms
1	75	800	5,000
2	100	900	6,000
3	125	1,000	7,000
4	150	1,100	7,500
5	200	1,200	8,000
7.5	225	1,250	8,500
10	250	1,500	9,000
12	300	1,750	10K
15	350	2,000	
20	400	2,250	
25	450	2,500	
30	500	3,000	
35	600	3,500	
40	700	4,000	
50	750	4,500	

NET PRICE $0.33
Standard Packing — 10 per Carton.
Mounting brackets supplied at extra cost.

25-WATT SERIES P-25-K

Ohms	Ohms	Ohms	Ohms
1	750	10K	
2	800	12K	
3	1,000	15K	
5	1,250	20K	
7.5	1,500	25K	
10	2,000	30K	
15	2,250	35K	
20	2,500	40K	
25	3,000	45K	
50	3,500	50K	
75	4,000	60K	
100	4,500	70K	
150	5,000	75K	
200	6,000	80K	
250	7,000	85K	
300	7,500	90K	
400	8,000	100K	
500	9,000		

NET PRICES:

1 ohm to 5,000	$0.51
6,000 to 15K ohms	.57
20K to 50K ohms	.66
60K ohms	.75
70K ohms	.84
75K ohms	.87
80K ohms	.90
85K ohms	.99
90K ohms	1.05
100K ohms	1.17

Mounting brackets at no extra cost.
Standard Packing — Individually Boxed.

10-WATT SERIES PR-10-F

These resistors conform to military specifications for type RW29, and E1A type RRW-126 and 129.

Ohms	Ohms	Ohms	Ohms
1	200	2,000	14.5K
2	225	2,250	15K
3	250	2,500	16K
4	300	3,000	17.5K
5	350	3,500	18K
7.5	400	4,000	20K
10	450	4,500	22.5K
12	500	5,000	25K
15	600	6,000	30K
20	700	7,000	35K
25	750	7,500	40K
30	800	8,000	50K
35	900	8,500	
40	1,000	9,000	
50	1,100	10K	
75	1,200	11K	
100	1,250	12K	
125	1,500	12.5K	
150	1,750	13.5K	

NET PRICE $0.36

Mounting brackets supplied at extra cost.
Standard Packing — 10 per Carton.

20-WATT SERIES PR-20-K

These resistors conform to E1A specifications for type RRW-127.

Ohms	Ohms	Ohms	Ohms
5	850	7,000	70K
10	1,000	7,500	75K
25	1,200	8,000	80K
50	1,250	9,000	85K
75	1,500	10K	90K
100	1,750	12.5K	95K
150	1,850	15K	100K
200	2,000	20K	
250	2,250	25K	
300	2,500	30K	
350	2,750	35K	
400	3,000	40K	
500	3,500	45K	
650	4,000	50K	
700	4,500	55K	
750	5,000	60K	
800	6,000	65K	

NET PRICES:

5 ohms to 15K ohms	$0.42
20K to 50K ohms	.57
55K to 100K ohms	.72

Mounting brackets supplied at extra cost.
Standard Packing — 5 per Carton.

ADJUSTABLE RESISTORS

These resistors conform to military specification for type RW-29 and E1A specification for type RRW-226.

10-WATT SERIES PR-10-FA

Res.	Res.	Res.	Res.
1	75	750	4,000
2	100	800	4,500
3	150	1,000	5,000
5	200	1,250	6,000
7.5	250	1,500	7,000
10	300	2,000	7,500
15	350	2,250	8,000
20	400	2,500	8,500
25	500	3,000	9,000
50	600	3,500	10K

NET PRICE $0.57

25-WATT SERIES P-25-KA

Res.	Res.	Res.	Res.
1	75	1,000	5,000
2	100	1,250	6,000
3	150	1,500	7,000
5	200	2,000	7,500
7.5	250	2,250	8,000
10	300	2,500	9,000
15	400	3,000	10K
20	500	3,500	12K
25	750	4,000	15K
50	800	4,500	20K
			25K
			50K

NET PRICES:

1 ohm to 5,000 ohms	$0.63
6,000 to 15K ohms	.72
20K to 25K ohms	.84
50K ohms	.99

Above adjustable resistors supplied with mounting brackets at no extra cost. Extra slider bands — 30¢ each. Standard Packing — individually boxed.

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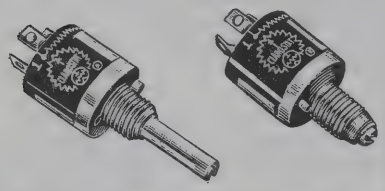
PRODUCTS OF
THE HOUSE OF RESISTORS®

CLAROSTAT®

RESISTORS · CONTROLS
RESISTANCE DEVICES

SERIES 57M & 57EJ

½" Single Turn Potentiometers

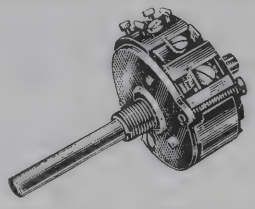


High performance potentiometer packaged in a ½" diameter housing. Quality construction throughout. Available in two models; Series 57M rated at 1.5 watts at 40°C and Series 57EJ rated at 2 watts at 70°C. The high-temperature Series 57EJ features glass-sealed terminals. Both units are corrosion resistant.

SERIES 57M & 57M9 Stock Values	SERIES 57EJA & 57EJB Stock Values	Resistance Ohms	Resolution 100/Total Turns
50 Ω	50 Ω	50,000	0.16%
100 Ω	100 Ω	20,000	0.19%
200 Ω	200 Ω	10,000	0.26%
500 Ω	500 Ω	5,000	0.30%
1000 Ω	1000 Ω	1,000	0.35%
5000 Ω	5000 Ω	500	0.45%
10,000 Ω	10,000 Ω	200	0.58%
20,000 Ω	20,000 Ω	100	0.70%
50,000 Ω	50,000 Ω	50	0.91%

SERIES 42-900

High Versatility Single-Turn Potentiometer



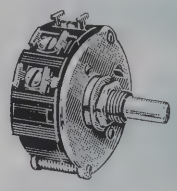
Used and approved by the millions in all types of applications ranging from ultra-critical military systems to ultra-dependable hard-working industrial equipment. Extra tap affords greater electrical versatility. Shaft extension through rear of unit permits addition of switching or other functions actuated by single shaft.

Stock Values	***Terminal Linearity	Resolution 100/Total Turns	Temp. Coefficient of Wire
100,000	±0.25%	.053%	±.00002 Ω/Ω/°C
50,000	±0.25%	.056%	±.00002 Ω/Ω/°C
20,000	±0.25%	.105%	±.00002 Ω/Ω/°C
10,000	±0.25%	.125%	±.00002 Ω/Ω/°C
5,000	±0.25%	.167%	±.00002 Ω/Ω/°C
2,500	±0.25%	.148%	±.00002 Ω/Ω/°C
1,000	±0.25%	.191%	±.00002 Ω/Ω/°C
500	±0.50%	.174%	.00017 Ω/Ω/°C
100	±0.50%	.351%	.00017 Ω/Ω/°C
50	±0.50%	.435%	.00017 Ω/Ω/°C

***Terminal Linearity: The maximum deviation of the actual output characteristic from a straight reference line extending between zero and the total applied voltage over the actual effective rotation.

SERIES 42JA

Single Turn Potentiometer



All the same fine qualities and performance tolerances of the Series 42-900, with the exception of the additional tap, and shaft extension. The ideal unit for extra-dependable potentiometer requirements.

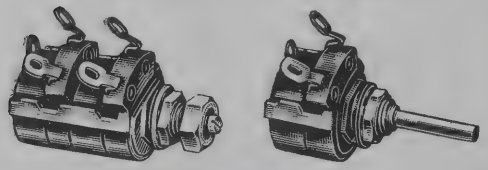
Stock Values	***Absolute Linearity	Resolution 100/Total Turns	Temp. Coefficient of Wire
100,000	±0.5%	.051%	±.00002 Ω/Ω/°C
50,000	±0.5%	.074%	±.00002 Ω/Ω/°C
20,000	±0.5%	.10%	±.00002 Ω/Ω/°C
10,000	±0.5%	.12%	±.00002 Ω/Ω/°C
5,000	±0.5%	.17%	±.00002 Ω/Ω/°C
2,500	±0.5%	.14%	±.00002 Ω/Ω/°C
1,000	±0.5%	.19%	±.00002 Ω/Ω/°C
500	±0.5%	.18%	.00017 Ω/Ω/°C
100	±1.0%	.28%	.00017 Ω/Ω/°C
50	±1.0%	.35%	.00017 Ω/Ω/°C

***Absolute Linearity: The maximum deviation of the actual output characteristic from a straight reference line extending between zero and the total applied voltage over the theoretical effective rotation.

MINIATURIZED POTENTIOMETERS

Consistent with miniaturization in Military and Commercial equipment, such as; Guided Missiles, Aircraft Electronics, Mobile Radio and Radar, Computers, Range Finders, Pocket Radios and Hearing Aids; Clarostat offers miniaturized composition element Series 48M and wire-wound Series 49M Potentiometers, and a Rotary Selector Switch designated as Series BHM to meet the switching requirements of the above mentioned and other applications.

SERIES 48M — 0.2 WATT COMPOSITION ELEMENT



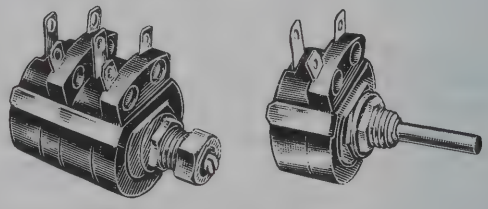
Available in single or dual, standard or shaft locking bushing. Standard bushing potentiometers have ¼" x 32 NEF-2A x ¼" long bushing and ⅛" dia. x ½" long shaft beyond bushing.

Shaft locking bushing potentiometers have ¼" x 32 NEF-2A x ⅜" long bushing and ⅛" dia. x 1/16" long screwdriver slotted shaft.

All potentiometers furnished with mounting nut 1/16" thick x 5/16" across flats, and one internal tooth lockwasher. Potentiometers with split locking bushings furnished with jam nut also.

Insulation:	Breakdown test between terminals and ground for 1 minute 1000v.a.c.; 350v.a.c. @ 3.4" Hg.
Resistance Range (Ohms):	Linear 200 to 5 Meg. Tapered 1500 to 2.5 Meg.
Resistance Tolerance:	Linear ±10%. Above 100,000 ohms ±20%. Tapered ±20% all values.
Tapers:	Linear Left hand — 10% resistance at 50% rotation. "Z"
Mechanical and Electrical Rotation:	300° ±3°
Effective Rotation:	300° ±3°
Torque (oz.-in.):	0.5 to 6
Dual Construction:	Available

SERIES 49M — 1.5 WATT WIRE-WOUND



Available in single or dual, standard or shaft locking bushing. Standard bushing potentiometers have ¼" x 32 NEF-2A x ¼" long bushing and ⅛" dia. x ½" long shaft beyond bushing.

Shaft locking bushing potentiometers have ¼" x 32 NEF-2A x ⅜" long bushing and ⅛" dia. x 1/16" long screwdriver slotted shaft. All potentiometers furnished with mounting nut 1/16" thick x 5/16" across flats, and one internal tooth lock-washer. Potentiometers with shaft locking bushings furnished with jam nut also.

Fabricated in accordance with MIL-R-19

Insulation:	Breakdown test between terminals and ground for 1 minute. 1000v.a.c.; 500v.a.c. @ 3.4" Hg.
Resistance Range (Ohms):	Linear 1 to 20,000
Resistance Tolerance:	Linear ±5% Tapered Linear only
Mechanical and Electrical Rotation:	300° ±3°
Effective Rotation:	300° ±3°
Torque (oz.-in.):	0.3 to 6
Dual Construction:	Available

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PRODUCTS OF
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RESISTORS · CONTROLS
RESISTANCE DEVICES

MILITARY POTENTIOMETERS

ITEMS IN STOCK FOR IMMEDIATE DELIVERY

RA10 per MIL-R-19 1 WATT WIRE-WOUND POTENTIOMETERS — Commercial Equivalent — Series 49M

RA10NASD150A
RA10NASD250A
RA10NASD500A
RA10NASD750A
RA10NASD101A
RA10NASD151A
RA10NASD201A
RA10NASD251A
RA10NASD351A
RA10NASD501A
RA10NASD751A
RA10NASD102A

RA10NASD152A
RA10NASD202A
RA10NASD252A
RA10NASL150A
RA10NASL250A
RA10NASL500A
RA10NASL750A
RA10NASL101A
RA10NASL151A
RA10NASL201A
RA10NASL251A
RA10NASL351A

RA10NASL501A
RA10NASL751A
RA10NASL102A
RA10NASL152A
RA10NASL202A
RA10NASL252A
RA10LASD150A
RA10LASD250A
RA10LASD500A
RA10LASD750A
RA10LASD101A
RA10LASD151A

RA10LASD201A
RA10LASD251A
RA10LASD351A
RA10LASD501A
RA10LASD751A
RA10LASD102A
RA10LASD152A
RA10LASD202A
RA10LASD252A
RA10LASM150A
RA10LASM250A
RA10LASM500A

RA10LASM750A
RA10LASM101A
RA10LASM151A
RA10LASM201A
RA10LASM251A
RA10LASM351A
RA10LASM501A
RA10LASM751A
RA10LASM102A
RA10LASM152A
RA10LASM202A
RA10LASM252A

RA20 per MIL-R-19 2 WATT WIRE-WOUND POTENTIOMETERS — Commercial Equivalent — Series 43M

RA20NASA3R0A
RA20NASA6R0A
RA20NASA8R0A
RA20NASA100A
RA20NASA150A
RA20NASA200A
RA20NASA250A
RA20NASA350A
RA20NASA500A
RA20NASA750A
RA20NASA101A
RA20NASA151A
RA20NASA201A
RA20NASA251A
RA20NASA351A
RA20NASA501A
RA20NASA751A
RA20NASA102A
RA20NASA152A
RA20NASA202A
RA20NASA252A

RA20NASA352A
RA20NASA502A
RA20NASA752A
RA20NASA103A
RA20NASA153A
RA20NASD3R0A
RA20NASD6R0A
RA20NASD8R0A
RA20NASD100A
RA20NASD150A
RA20NASD200A
RA20NASD250A
RA20NASD350A
RA20NASD500A
RA20NASD750A
RA20NASD101A
RA20NASD151A
RA20NASD201A
RA20NASD251A
RA20NASD351A
RA20NASD501A

RA20NASD751A
RA20NASD102A
RA20NASD152A
RA20NASD202A
RA20NASD252A
RA20NASD352A
RA20NASD502A
RA20NASD752A
RA20NASD103A
RA20NASD153A
RA20LASB3R0A
RA20LASB6R0A
RA20LASB8R0A
RA20LASB100A
RA20LASB150A
RA20LASB200A
RA20LASB250A
RA20LASB350A
RA20LASB500A
RA20LASB750A
RA20LASB101A

RA20LASB151A
RA20LASB201A
RA20LASB251A
RA20LASB351A
RA20LASB501A
RA20LASB751A
RA20LASB102A
RA20LASB152A
RA20LASB202A
RA20LASB252A
RA20LASB352A
RA20LASB502A
RA20LASB752A
RA20LASB103A
RA20LASB153A
RA20LASD3R0A
RA20LASD6R0A
RA20LASD8R0A
RA20LASD100A
RA20LASD150A
RA20LASD200A

RA20LASD250A
RA20LASD350A
RA20LASD500A
RA20LASD750A
RA20LASD101A
RA20LASD151A
RA20LASD201A
RA20LASD251A
RA20LASD351A
RA20LASD501A
RA20LASD751A
RA20LASD102A
RA20LASD152A
RA20LASD202A
RA20LASD352A
RA20LASD502A
RA20LASD752A
RA20LASD103A
RA20LASD153A

RA30 per MIL-R-19 4 WATT WIRE-WOUND POTENTIOMETERS — Commercial Equivalent — Series 58M

RA30NASA3R0A
RA30NASA6R0A
RA30NASA8R0A
RA30NASA100A
RA30NASA150A
RA30NASA200A
RA30NASA250A
RA30NASA350A
RA30NASA500A
RA30NASA750A
RA30NASA101A
RA30NASA151A
RA30NASA201A
RA30NASA251A
RA30NASA351A
RA30NASA501A
RA30NASA751A

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RA30NASA152A
RA30NASA202A
RA30NASA252A
RA30NASA352A
RA30NASA502A
RA30NASA752A
RA30NASA103A
RA30NASA153A
RA30NASA203A
RA30NASA253A
RA30NASD3R0A
RA30NASD6R0A
RA30NASD8R0A
RA30NASD100A
RA30NASD150A
RA30NASD200A

RA30NASD250A
RA30NASD350A
RA30NASD500A
RA30NASD750A
RA30NASD101A
RA30NASD151A
RA30NASD201A
RA30NASD251A
RA30NASD351A
RA30NASD501A
RA30NASD751A
RA30NASD102A
RA30NASD152A
RA30NASD202A
RA30NASD252A
RA30NASD352A
RA30NASD502A

RA30NASD752A
RA30NASD103A
RA30NASD153A
RA30NASD203A
RA30NASD253A
RA30LASB3R0A
RA30LASB6R0A
RA30LASB8R0A
RA30LASB100A
RA30LASB150A
RA30LASB200A
RA30LASB250A
RA30LASB350A
RA30LASB500A
RA30LASB750A
RA30LASB101A
RA30LASB151A

RA30LASB201A
RA30LASB251A
RA30LASB351A
RA30LASB501A
RA30LASB751A
RA30LASB102A
RA30LASB152A
RA30LASB202A
RA30LASB252A
RA30LASB352A
RA30LASB502A
RA30LASB752A
RA30LASB103A
RA30LASB153A
RA30LASB203A
RA30LASB253A

RV4 per MIL-R-94 2 WATT CARBON POTENTIOMETERS — Commercial Equivalent — Series 53M

RV4NAYSB101A
RV4NAYSB251A
RV4NAYSB501A
RV4NAYSB102A
RV4NAYSB252A
RV4NAYSB502A
RV4NAYSB103A
RV4NAYSB253A
RV4NAYSB503A
RV4NAYSB104A
RV4NAYSB254A
RV4NAYSB504A
RV4NAYSB105A
RV4NAYSB255B
RV4NAYSB505B
RV4NAYSD500A
RV4NAYSD101A
RVNAYSD151A
RV4NAYSD251A
RV4NAYSD351A
RV4NAYSD501A
RV4NAYSD751A

RV4NAYSD102A
RV4NAYSD152A
RV4NAYSD252A
RV4NAYSD352A
RV4NAYSD502A
RV4NAYSD752A
RV4NAYSD103A
RV4NAYSD153A
RV4NAYSD253A
RV4NAYSD353A
RV4NAYSD503A
RV4NAYSD753A
RV4NAYSD104A
RV4NAYSD154A
RV4NAYSD254A
RV4NAYSD354A
RV4NAYSD504A
RV4NAYSD754A
RV4NAYSD105A
RV4NAYSD155B
RV4NAYSD205B
RV4NAYSD255B

RV4NAYSD355B
RV4NAYSD505B
RV4NAYSK101A
RV4NAYSK251A
RV4NAYSK501A
RV4NAYSK102A
RV4NAYSK252A
RV4NAYSK502A
RV4NAYSK103A
RV4NAYSK253A
RV4NAYSK503A
RV4NAYSK104A
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RV4LAYSA503A
RV4LAYSA753A
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RV4LAYSA155B

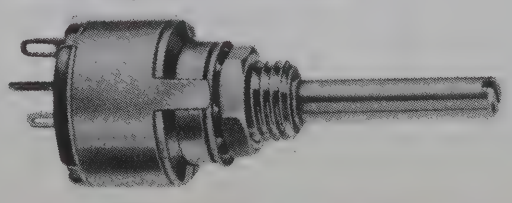
RV4LAYSA205B
RV4LAYSA255B
RV4LAYSA355B
RV4LAYSA505B
RV4LAYSD101A
RV4LAYSD501A
RV4LAYSD251A
RV4LAYSD102A
RV4LAYSD252A
RV4LAYSD502A
RV4LAYSD103A
RV4LAYSD253A
RV4LAYSD503A
RV4LAYSD104A
RV4LAYSD254A
RV4LAYSR504A
RV4LAYSD105A
RV4LAYSD255B
RV4LAYSD505B

RV6 per MIL-R-94 0.5 WATT CARBON POTENTIOMETERS — Commercial Equivalent — Series 63M

RV6NAYSD101A
RV6NAYSD251A
RV6NAYSD501A
RV6NAYSD102A
RV6NAYSD252A
RV6NAYSD502A
RV6NAYSD103A
RV6NAYSD153A
RV6NAYSD253A
RV6NAYSD503A
RV6NAYSD104A

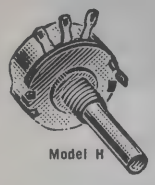
RV6NAYSD154A
RV6NAYSD254A
RV6NAYSD504A
RV6NAYSD105A
RV6LAYSA101A
RV6LAYSA251A
RV6LAYSA501A
RV6LAYSA102A
RV6LAYSA252A
RV6LAYSA502A
RV6LAYSA103A

RV6LAYSA153A
RV6LAYSA253A
RV6LAYSA503A
RV6LAYSA104A
RV6LAYSA154A
RV6LAYSA254A
RV6LAYSA504A
RV6LAYSA105A



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Centralab. Controls, Attenuators


Model H


Model N


Model P


Model T


JMP · JWP


JML, JWL

HOT-MOLDED CARBON POTENTIOMETERS

Offer greatly increased high voltage stability due to wide clearance between bushing and collector track. Free from contamination of dirt due to elevated resistance track. Exceptionally long noise-free operation.

MODEL 12 (2-WATT) HOT MOLDED POTENTIOMETERS

Centralab RV4 Style Hot Molded Composition Potentiometers are manufactured to meet the requirements of MIL-R-94B. These "HOT MOLDED" Potentiometers offer greatly increased high voltage stability due to wide clearance between bushing and collector track; greater freedom from contamination from dirt due to elevated resistance track and exceptionally long noise-free operation. Completely enclosed construction permits encapsulation or potting without affecting operation. **CERTIFIED TEST DATA AND LOT IDENTIFICATION AVAILABLE UPON REQUEST.**

MODEL—HMP, HMS, HML (RV4 STYLE)

Molded composition resistance element; Rated 2.25 watts @ 70°C, 500 volts. Tolerance ±10% (except (*) which are ±20%) 1 3/32" diameter, 3/64" deep; mechanical rotation 312°±3°.

HML SERIES

Shaft ¼" diameter, full round, stainless steel, screwdriver slot for locking bushing, 5/8" long from mtg. surface. Bushing 3/8"-32 NEF-2A thd., nickel plated brass, ½" long locking type. Shipping wt. 4 oz. Linear taper on all units.

Ohms	Catalog No.	MIL Desig.	Ohms	Catalog No.	MIL Desig.
		RV4LAYSA	35K	HML—35K	353A
50	HML—50	500A	50K	HML—50K	503A
100	HML—100	101A	75K	HML—75K	753A
150	HML—150	151A	100K	HML—100K	104A
250	HML—250	251A	150K	HML—150K	
350	HML—350	351A	250K	HML—250K	
500	HML—500	501A	350K	HML—350K	
750	HML—750	751A	500K	HML—500K	
1000	HML—1000	102A	750K	HML—750K *	
1500	HML—1500	152A	1 MEG	HML—1 MEG *	
2500	HML—2500	252A	1.5 MEG	HML—1.5 MEG *	
3500	HML—3500	352A	2 Meg	HML—2 MEG *	
5000	HML—5000	502A	2.5 MEG	HML—2.5 MEG *	
7500	HML—7500	752A	3.5 MEG	HML—3.5 MEG *	
10K	HML—10K	103A	5 MEG	HML—5 MEG *	
15K	HML—15K	153A			
25K	HML—25K	253A			

HML SERIES—INDUSTRIAL NET PRICES

Net Each, Lots of				
1-9	10-24	25-49	50-99	100-249
$2.55	$2.30	$2.13	$1.92	$1.35

HMP SERIES

Shaft ¼" diameter, full round, stainless steel with screwdriver slot, 7/8" long from mounting surface. Bushing 3/4"-32 NEF-2A thd. nickel plated brass, 3/8" long. Linear taper on all units.

Ohms	Catalog No.	MIL Desig.	Ohms	Catalog No.	MIL Desig.
		RV4NAYSE	25K	HMP—25K	253A
50	HMP—50	500A	35K	HMP—35K	353A
100	HMP—100	101A	50K	HMP—50K	503A
150	HMP—150	151A	75K	HMP—75K	753A
250	HMP—250	251A	100K	HMP—100K	104A
350	HMP—350	351A	150K	HMP—150K	
500	HMP—500	501A	250K	HMP—250K	
750	HMP—750	751A	350K	HMP—350K	
1000	HMP—1000	102A	500K	HMP—500K	
1500	HMP—1500	152A	750K	HMP—750K *	
2500	HMP—2500	252A	1 MEG	HMP—1 MEG *	
3500	HMP—3500	352A	1.5 MEG	HMP—1.5 MEG *	
5000	HMP—5000	502A	2 MEG	HMP—2 MEG *	
7500	HMP—7500	752A	2.5 MEG	HMP—2.5 MEG *	
10K	HMP—10K	103A	3.5 MEG	HMP—3.5 MEG *	
15K	HMP—15K	153A	5 MEG	HMP—5 MEG *	

HMS SERIES

Shaft ¼" diameter, full round, slotted stainless steel, 2½" long from mtg. surface. Bushing 3/8"-32 NEF-2A thd. nickel plated brass, 3/8" long, includes mtg. nut and lockwasher. Linear taper on all units.

Ohms	Catalog No.	MIL Designation	Ohms	Catalog No.	MIL Designation
50	HMS—50	RV4NAYSK500A	35K	HMS—35K	353A
100	HMS—100	101A	50K	HMS—50K	503A
150	HMS—150	151A	75K	HMS—75K	753A
250	HMS—250	251A	100K	HMS—100K	104A
350	HMS—350	351A	150K	HMS—150K	
500	HMS—500	501A	250K	HMS—250K	
750	HMS—750	751A	350K	HMS—350K	
1000	HMS—1000	102A	500K	HMS—500K	
1500	HMS—1500	152A	750K	HMS—750K *	
2500	HMS—2500	252A	1 MEG	HMS—1 MEG *	
3500	HMS—3500	352A	1.5 MEG	HMS—1.5 MEG *	
5000	HMS—5000	502A	2 MEG	HMS—2 MEG *	
7500	HMS—7500	752A	2.5 MEG	HMS—2.5 MEG *	
10K	HMS—10K	103A	3.5 MEG	HMS—3.5 MEG *	
15K	HMS—15K	153A	5 MEG	HMS—5 MEG *	
25K	HMS—25K	253A			

HMP & HMS SERIES—INDUSTRIAL NET PRICES

Net Each, Lots of				
1-9	10-24	25-49	50-99	100-249
$1.95	$1.76	$1.63	$1.47	$1.20

¾-WATT COMPOSITION MODEL N

Composition potentiometer rated ¾ watt. Plain round shaft 2½" long FMS. Tolerance ±10%. Only 23/32" dia. x ½" d. behind panel. Bushing 3/8"-32 NEF-2A thread x 3/8" long.

CRL Number	Resis., Ohms	Taper	CRL Number	Resis., Ohms	Taper
NCP9-501-U	500	C-1	NCP9-104-U	100K	C-1
NCP9-102-U	1000	C-1	NCP9-104-A	100K	C-2
NCP9-252-U	2500	C-1	NCP9-254-U	250K	C-1
NCP9-502-U	5000	C-1	NCP9-254-A	250K	C-2
NCP9-103-U	10K	C-1	NCP9-504-U	500K	C-1
NCP9-103-B	10K	C-3	NCP9-504-A	500K	C-2
NCP9-253-U	25K	C-1	NCP9-105-M*	1 meg.	C-1
NCP9-253-B	25K	C-3	NCP9-105-R*	1 meg.	C-2
NCP9-503-U	50K	C-1	NCP9-255-M*	2.5 meg.	C-1
NCP9-503-B	50K	C-3			

*Tolerance, ±20%

MIL-R-94B STYLE RV6

½-WATT COMPOSITION MODEL P

Composition ½-watt potentiometer meets MIL-R-94B specifications, Style RV6. Complete sealed shaft and case. Slotted shaft 7/8" long FMS. Tolerance, ±10%. Only ½" dia. x 1 3/32" d. behind panel. Bushing ¼"-32 NEF-2A thread x ¼" long.

CRL Number	Resis., Ohms	Taper	CRL Number	Resis., Ohms	Taper
PNS7-501-U	500	C-1	PNS7-503-U	50K	C-1
PNS7-102-U	1000	C-1	PNS7-104-U	100K	C-1
PNS7-252-U	2500	C-1	PNS7-254-U	250K	C-1
PNS7-502-U	5000	C-1	PNS7-504-U	500K	C-1
PNS7-103-U	10K	C-1	PNS7-105-M*	1 meg.	C-1
PNS7-253-U	25K	C-1	PNS7-255-M*	2.5 meg.	C-1

*Tolerance, ±20%.

COMPOSITION TRIMMER MODEL T

Composition trimmer potentiometer rated 1/3 watt with special U-shaped shaft. Extremely resistant to shock, vibration and acceleration. Tolerance, ±20%. Mounts by threaded stud through center of unit. Only 13/32" dia. x 11/32" d.

CRL Number	Resis., Ohms	Taper	CRL Number	Resis., Ohms	Taper
TMX0-501-M	500	C-1	TMX0-503-M	50K	C-1
TMX0-102-M	1000	C-1	TMX0-104-M	100K	C-1
TMX0-252-M	2500	C-1	TMX0-254-M	250K	C-1
TMX0-502-M	5000	C-1	TMX0-504-M	500K	C-1
TMX0-103-M	10K	C-1	TMX0-105-M	1 meg.	C-1
TMX0-253-M	25K	C-1	TMX0-255-M	2.5 meg.	C-1

INDUSTRIAL NET PRICES

All Values CRL Type	Net Each, Lots of				
	1-9	10-24	25-49	50-99	100-249
NCP Potentiometers	$2.97	$2.67	$2.48	$2.35	$2.23
PNS Potentiometers	4.50	4.05	3.75	3.56	3.38
TMX Trimmer Pots	2.40	2.16	2.00	1.90	1.80

MIL-R-94B STYLE RV1
1/5 -WATT COMPOSITION CONTROLS

Meet MIL-R-94B requirements. Element completely enclosed, permitting further sealing or encapsulation. Linear taper. Rated 1/5 watt at 70°C; derate to 0 watt at 120°C. Resistance tolerance, ±10%. Breakdown, 900 volts AC rms to ground at atmospheric pressure. Only 43/64" dia. **Model JMP:** Stainless steel, screwdriver-slotted shaft 1/8" dia. x 7/8" lg. from mounting surface. Left side locating lug. Mechanical rotation. 260° ±3°. Bushing, ¼"-32 NEF-2A threaded x ¼" lg. from mounting surface; with mounting nut and lockwasher. **Model JML:** Same as above, except shaft is ½" long from mounting surface and bushing is 3/8" lg. from mounting surface with shaft-locking nut supplied.

Ohms	Stock Values Model JMP CRL No.	Stock Values Model JMP MIL-R-94B Number	Stock Values Model JML CRL No.	Stock Values Model JML MIL-R-94B Number
500	JMP-501	RV1NAXSD501A	JML-501	RV1LAXSB501A
1000	JMP-102	RV1NAXSD102A	JML-102	RV1LAXSB102A
1500	JMP-152		JML-152	
2500	JMP-252	RV1NAXSD252A	JML-252	RV1LAXSB252A
5000	JMP-502	RV1NAXSD502A	JML-502	RV1LAXSB502A
7500	JMP-752		JML-752	
10K	JMP-103	RV1NAXSD103A	JML-103	RV1LAXSB103A
10K	JMP2-103*	RV1NAXSD103C		
25K	JMP-253	RV1NAXSD253A	JML-253	RV1LAXSB253A
50K	JMP-503	RV1NAXSD503A	JML-503	RV1LAXSB503A
100K	JMP-104	RV1NAXSD104A	JML-104	RV1LAXSB104A
250K	JMP-254	RV1NAXSD254A	JML-254	RV1LAXSB254A
500K	JMP-504	RV1NAXSD504A	JML-504	RV1LAXSB504A
500K	JMP2-504*	RV1NAXSD504C		
1 meg.	JMP-105	RV1NAXSD105A	JML-105	RV1LAXSB105A
2500K	JMP-255		JML-255	

*Audio taper C2.

MODELS JMP AND JML INDUSTRIAL NET PRICES

All Values CRL Type	Net Each, Lots of				
	1-9	10-24	25-49	50-99	100-249
JML	$3.90	$3.51	$3.25	$3.09	$2.93
JMP	3.60	3.24	3.00	2.85	2.70

NOTE: Items requiring certified test data and government source inspection are special; prices and information supplied upon request.

MINIATURE WIRE-WOUND 1½-WATT CONTROLS

Rugged quality for military and industrial uses. Meet MIL-R-19A specifications. Conservatively rated 1½ watts at 40° C; derate to 0 watt at 125° C. Breakdown, 900 volts AC rms at atmospheric pressure. Enclosed resistance element permits further sealing or encapsulation. Resistance tolerance, ±5%. Linear taper. Left side locating lug. Mechanical rotation, 250° ±3°. Only 43/64" dia. With mounting nut and lockwasher. **Model JWP:** Plain type with stainless steel, screwdriver slotted shaft 1/8" dia. x 7/8" lg. from mounting surface. Bushing, ¼"-32 NEF-2A threaded x ¼" long. **Model JWL:** Same, but shaft is 3/16" lg. from mounting surface and bushing is 3/8" lg. with shaft locking nut supplied.

Ohms	Model JWP CRL No.	Model JWL CRL No.	Net Each, Lots of 1-9	10-24	25-49	50-99	100-249
50	JWP-500	JWL-500	$6.60	$5.94	$5.50	$5.23	$4.95
100	JWP-101	JWL-101	6.60	5.94	5.50	5.23	4.95
200	JWP-201	JWL-201	6.60	5.94	5.50	5.23	4.95
300	JWP-301	JWL-301	6.60	5.94	5.50	5.23	4.95
500	JWP-501	JWL-501	6.60	5.94	5.50	5.23	4.95
750	JWP-751	JWL-751	6.60	5.94	5.50	5.23	4.95
1000	JWP-102	JWL-102	7.80	7.02	6.50	6.18	5.85
1500	JWP-152	JWL-152	7.80	7.02	6.50	6.18	5.85
2000	JWP-202	JWL-202	7.80	7.02	6.50	6.18	5.85
2500	JWP-252	JWL-252	7.80	7.02	6.50	6.18	5.85
3000	JWP-302	JWL-302	7.80	7.02	6.50	6.18	5.85
4000	JWP-402	JWL-402	7.80	7.02	6.50	6.18	5.85
5000	JWP-502	JWL-502	7.80	7.02	6.50	6.18	5.85
7500	JWP-752	JWL-752	7.80	7.02	6.50	6.18	5.85
10K	JWP-103	JWL-103	9.00	8.10	7.50	7.13	6.75
15K	JWP-153	JWL-153	9.00	8.10	7.50	7.13	6.75
20K	JWP-203	JWL-203	9.00	8.10	7.50	7.13	6.75
25K	JWP-253	JWL-253	9.00	8.10	7.50	7.13	6.75
30K	JWP-303	JWL-303	9.60	8.64	8.00	7.60	7.20

KNOBS FOR SERIES JM and JW

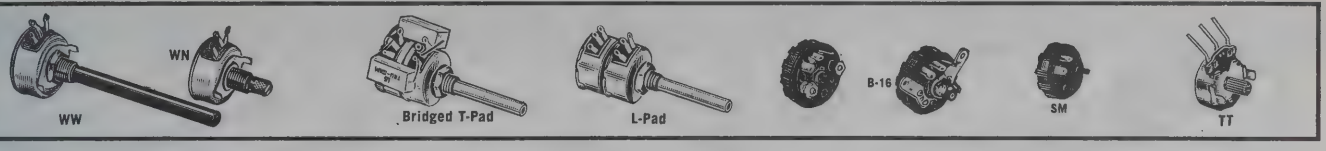
Knobs have pointer, are 11/16" dia. Specify color desired: KC-3, black; KC-4, white; KC-5, red.

	Net Each, Lots of 1-9	10-24	25-49	50-99	100-249
KC Knob	.30	.27	.25	.24	.23

*Net each. †Per package of 12.

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Centralab. Quality Controls



WIRE-WOUND CONTROLS

5-WATT WIRE-WOUND CONTROLS

Packs 5-watt capacity into a 2-watt size unit; linear taper, 1 3/32" diam. x 5/16" deep. Model WW has full round aluminum shaft 1/4" dia. x 3" long. Model WN has fingertip knurled, slotted shaft 1/4" diam. x 3/4" long. Breakdown, 900 v. AC rms to ground. Specify by using WN or WW as prefix. Shipping Weight, 4 oz.

Ohms	CRL No. WW- or WN-	Ohms	CRL No. WW- or WN-	Ohms	CRL No. WW- or WN-	Ohms	CRL No. WW- or WN-
1	010	25	250	400	401	7500	752
2	020	30	300	500	501	10K	103
3	030	40	400	750	751	15K	153
4	040	50	500	1000	102	20K	203
5	050	60	600	1500	152	25K	253
6	060	75	750	2000	202	30K	303
8	080	100	101	2500	252	40K	403
10	100	200	201	3000	302	50K	503
15	150	250	251	4000	402	75K	753
20	200	300	301	5000	502	100K	104

INDUSTRIAL NET PRICES

Values	Net Each, Lots of 1-9	10-24	25-49	50-99	100-249
1 - 7500 ohms	$1.32	$1.19	$1.10	$1.05	$ .99
10K thru 30K	1.59	1.43	1.33	1.26	1.19
40K & 50K	2.01	1.81	1.68	1.59	1.51
75K & 100K	2.46	2.22	2.05	1.95	1.85

L-PAD, T-PAD, AND STEREO ATTENUATORS

Constant impedance L-pads and bridged T-pads provide optimum sound reproduction quality without altering frequency response. Rated 20 watts, audio: 5 watts DC and sine-wave. Breakdown, 900 volts AC rms to ground. Anti-backlash design with force-fit shaft interlock to prevent relative motion between contact springs of front and rear units: assures smooth attenuation in either direction without deterioration. Full round brass shaft, 1/4" dia. x 1 7/8" lg. from mounting surface. Bushing 3/4" lg. x 3/8"-32 thread with nut and lockwasher; can be extended up to 1" adding AK-31 or AK-37 adapter bushing. Size: 1 3/32" dia. x.1 13/64" behind panel. Complete with AK-36 brushed gold-anodized dial plate and KC-10 black pointer knob with set screw.

L-PAD ATTENUATORS

Controls audio level of speakers in PA, intercom and hi-fi sound systems. Shipping Weight, 5 oz.

CRL No.	Imped. Ohms	CRL No.	Imped. Ohms	CRL No.	Imped. Ohms
WL-4	4	WL-500	500	WL-1250	1250
WL-8	8	WL-600	600	WL-2000	2000
WL-16	16	WL-1000	1000	WL-2500	2500

Any Model—Net Each, Lots of 1-9, **$3.57**; 10-24, **$3.21**; 25-49, **$2.98**; 50-99, **$2.85**; 100-249, **$2.68**

BRIDGED T-PAD ATTENUATORS

Speaker audio level control and sound mixer control for mikes and other circuits requiring constant impedance between input and output circuits. Shipping Weight, 7 oz.

CRL No.	Imped. Ohms	CRL No.	Imped. Ohms	CRL No.	Imped. Ohms
WDT-4	4	WDT-16	16	WDT-600	600
WDT-8	8	WDT-500	500		

Any Model—Net Each, Lots of 1-9, **$3.57**; 10-24, **$3.21**; 25-49, **$2.98**; 50-99, **$2.83**; 100-249, **$2.68**.

STEREO ATTENUATORS

Designed for installation in standard junction or switch boxes where a conventional four-section L-Pad will not fit. Rated at 10 watts, audio; 5 watts, DC. Same basic construction and appearance as L-Pads. Shipping Weight, 5 oz.

CRL No.	Used with*	Net Each, Lots of 1-9	10-24	25-49	50-99	100-249
WST-200	4-ohm speaker	$3.57	$3.21	$2.98	$2.83	$2.68
WST-400	8-ohm speaker	3.57	3.21	2.98	2.83	2.68
WST-800	16-ohm speaker	3.57	3.21	2.98	2.83	2.68

*Can also be used as conventional twin wire-wound controls, linear taper—10% tolerance, 20, 40, and 80 ohms respectively.



AK-36


KC-10

ACCESSORIES

CRL No.	Description	Net Each
KC-10	Pkge 5 black set-screw pointer knobs	$0.30
AK-34	4 1/2" x 2 3/4" brushed gold wall-plate	.90
AK-35	4 1/2" x 2 3/4" brushed aluminum wall-plate	.90
AK-36	2" x 2" brushed gold dial-plate; pkge. of 5	.30

1/10 WATT CONTROLS

Designed for transistorized hearing aids, miniature radios and similar applications. **Model B16 Miniature:** Can be reduced to 5/8" dia. by removing knob; with knob is 25/32". Plain type is stud mounted, using two 1-72NF-2thd. x .140" studs on .427" centers. Switch type is bracket mounted. **Model SM Subminiature:** Measures 1 1/32" with knob, reduced to .502" without knob. Mount is standard 0-80NF-2A thd. x .134" long brass studs on .285" centers. Switch type only. **Tolerance:** ±20% except Types B16-124, B16-127, B16-128, B16-224, and B16-228, ±30%.

MINIATURE TYPE B16 SERIES

CRL No. Plain	CRL No. Switch	Max. Ohms	Taper	CRL No. Plain	CRL No. Switch	Max. Ohms	Taper
B16-107		500	C1	B16-119		50K	C1
B16-109		1000	C1	B16-121		100K	C1
B16-111		2500	C1	B16-123		250K	C1
B16-112	B16-212	2500	C2	B16-118	B16-218	1/2 meg.	C2
B16-113		5000	C1	B16-120	B16-220	1 meg.	C2
B16-114	B16-214	5000	C2	B16-122	B16-222	2 meg.	C2
B16-115		10000	C1	B16-124	B16-224	3 meg.	C2
B16-116	B16-216	10000	C2	B16-127		5 meg.	C1
B16-117	B16-217	25000	C2	B16-128	B16-228	5 meg.	C2
B16-125		25000	C1				

SUBMINIATURE TYPE SM SERIES

CRL No.	Max. Ohms	Taper	CRL No.	Max. Ohms	Taper
SM2-252-S	2500	C2	SM2-103-S	10000	C2
SM2-502-S	5000	C2	SM2-253-S	25000	C2

INDUSTRIAL NET PRICES

All Models Type	Net Each, Lots of 1-9	10-24	25-49	50-99	100-249
B16-107 thru -128	$1.50	$1.35	$1.25	$1.19	$1.13
B16-212 thru -228	2.40	2.16	2.00	1.90	1.80
SM	3.60	3.24	3.00	2.85	2.70

TYPE "TT" TWIST TAB CONTROLS

For rear service adjust TV controls and other shock hazard uses. U/L Approved. Phenolic shaft 3/8" lg. from mounting surface, knurled full length; screwdriver slot on either end. Composition element rated 1/2 watt; 15/16" dia. x 3/16" d. Breakdown, 900 v. AC rms to ground. Includes 2" polyethylene shaft extension. Shipping Weight, 2 oz.

CRL No.	Ohms	CRL No.	Ohms	CRL No.	Ohms	CRL No.	Ohms
TT-2	200	TT-26	25K	TT-60*	500K	TT-84	3 meg.
TT-4	500	TT-31	50K	TT-66	750K	TT-86	4 meg.
TT-411	750	TT-35	75K	TT-69	1 meg.	TT-87	5 meg.
TT-511	1500	TT-40	100K	TT-70*	1 meg.	TT-90	7 1/2 meg.
TT-8	3000	TT-46	200K	TT-742	1 1/2 meg.		
TT-10	5000	TT-50	250K	TT-75	2 meg.		
TT-14	10K	TT-59	500K	TT-83	2 1/2 meg.		

*C2 taper; all others, C1.

INDUSTRIAL NET PRICES

All Values CRL Type	Net Each, Lots of 1-9	10-24	25-49	50-99	100-249
TT Controls	60c	54c	50c	48c	45c


"B" Control

MODEL "B" CONTROLS

Model B controls are rated at 1/2 watt. **Size:** 15/16" diameter, 7/16" deep. **Breakdown:** 900 v. AC rms to ground. Mounting: 3/8" long 3/8"-32 thread bushing; equipped with mounting nut. Any model converts easily to switch type by merely snapping on "KR" switch. **Model B Shaft:** 1/4" dia. x 3 3/4" long from mtg. surface. Universal fluted knurled type; fits split knurl, shallow flat, deep flat, slotted, or round applications. Shpg. Wt., 3 oz.

	1-9	10-24	25-49	50-99	100-249	250-499
B plain	$1.02	$0.92	$0.85	$0.81	$0.76	$0.68
B W/SW	1.50	1.35	1.25	1.19	1.13	1.00
B PL	1.50	1.35	1.25	1.19	1.13	1.00

Ohms	Taper	Specify No. B-	Ohms	Taper	Specify No. B-
200	C-1	2	200,000	C-1	46
500	C-1	4	250,000	C-1	50
1,000	C-1	5	250,000	C-2	51
2,000	C-1	6	500,000	C-1	59
2,500	C-1	7	500,000	C-2	60
5,000	C-1	10	1 meg.	C-1	69
5,000	C-2	11	1 meg.	C-2	70
10,000	C-1	14	1.5 meg.	C-1	742
10,000	C-2	15	2 meg.	C-1	75
20,000	C-1	22	2 meg.	C-2	76
25,000	C-1	26	2.5 meg.	C-1	83
50,000	C-1	31	3 meg.	C-1	84
50,000	C-2	32	5 meg.	C-1	87
75,000	C-1	35	7.5 meg.	C-1	90
100,000	C-1	40	10 meg.	C-1	98
100,000	C-2	41			

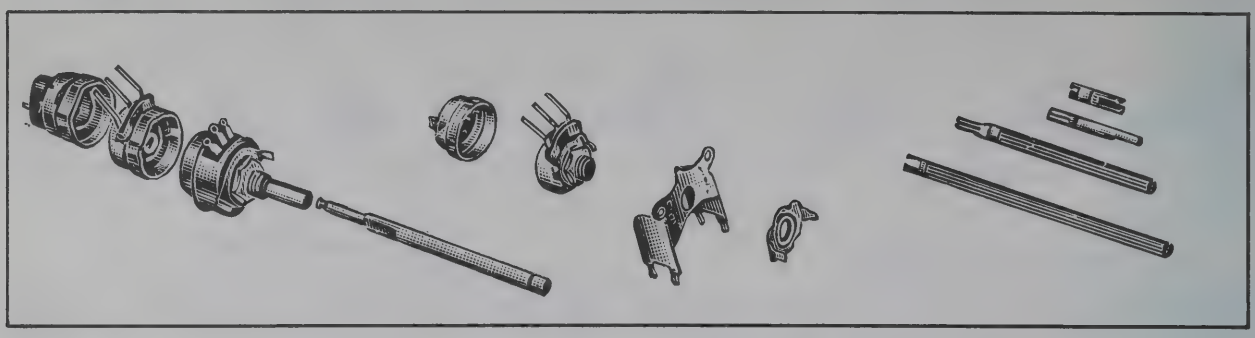
MODEL "B" SWITCH-TYPE CONTROLS

Universal DPST switch type units. Switch rating: 3A., 125V. AC.

CRL No.	Max. Ohms	Taper	Use For
B-60-S	1/2 meg.	C2	SPST, DPST or 3-wire
B-70-S	1 meg.	C2	SPST, DPST or 3-wire

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Centralab. Controls and Accessories



FASTATCH® II COMPOSITION CONTROLS

Complete exact replacement control coverage for dual concentric single or tandem twins. Snap together assembly, with snap in, permanent locking shafts. Controls are carbon, ½ watt, 1⅝" dia. Rear control ⅞" deep. Front control ⅞" deep, bushing mtd. ¼" I. x .32 thd. Supplied with mtg. nut and universal terminals replacing printed circuit, wire-wrap and hole type terminals. Shafts and switches not included. Anti-backlash construction on duals and twins.

Number preceding dash (-) indicates taper (see below for descrpition of tapers). Number after dash (-) indicates number of ohms in resistance.

CRL Fastatch II Plain Controls—Net Each **90c**

CRL No.		CRL No.		CRL No.	
Front Unit	Rear Unit	Front Unit	Rear Unit	Front Unit	Rear Unit
F1-100	R1-100	F1-25K	R1-25K	F1-1.5MEG	R1-1.5MEG
F1-200		F2-25K	R2-25K	F1-2MEG	R1-2MEG
F1-300		F1-50K	R1-50K	F2-2MEG	R2-2MEG
F1-500	R1-500	F2-50K	R2-50K	F3-2MEG	R3-2MEG
F4-500		F3-50K	R3-50K	F7-2MEG	R7-2MEG
F5-500		F1-75K	R1-75K	F1-2.5MEG	R1-2.5MEG
F1-750		F1-100K	R1-100K	F1-3MEG	R1-3MEG
F5-750	R5-750	F2-100K	R2-100K	F2-3MEG	R2-3MEG
F1-1000	R1-1000	F3-100K	R3-100K	F3-3MEG	R3-3MEG
F5-1000	R5-1000	F1-150K	R1-150K	F1-4MEG	
F1-1500	R1-1500	F1-200K	R1-200K	F1-5MEG	R1-5MEG
F5-1500	R5-1500	F1-250K	R1-250K	F2-5MEG	R2-5MEG
F1-2500	R1-2500	F2-250K	R2-250K	F3-5MEG	R3-5MEG
F2-2500		F3-250K	R3-250K	F7-5MEG	R7-5MEG
F5-2500	R5-2500	F1-500K	R1-500K	F63-5MEG	
F1-5000	R1-5000	F2-500K	R2-500K	F1-7.5MEG	R1-7.5MEG
F2-5000	R2-5000	F3-500K	R3-500K	F64-7.5MEG	
F5-5000		F7-500K	R7-500K	F1-10MEG	R1-10MEG
F1-7500	R1-7500	F1-750K	R1-750K	F2-10MEG	
F1-10K	R1-10K	F1-1MEG	R1-1MEG	F61-10MEG	
F2-10K	R2-10K	F2-1MEG	R2-1MEG		
F5-10K	R5-10K	F3-1MEG	R3-1MEG		
F1-15K		F7-1MEG	R7-1MEG		

CRL Fastatch II Single Tap Controls—Net Each **$1.26**

CRL No.			CRL No.		
Front Unit	Rear Unit	Tap	Front Unit	Rear Unit	Tap
F51-750		500	F16-500K	R16-500K	250K
F51-2000		1500	F17-500K	R17-500K	50K
F52-2500		625	F11-1MEG	R11-1MEG	500K
	R14-7500	2500	F12-1MEG	R12-1MEG	200K
	R16-10K	5000	F14-1MEG	R14-1MEG	300K
	R14-25K	7500	F16-1MEG	R16-1MEG	500K
F51-30K		20K	F17-1MEG	R17-1MEG	100K
F53-30K		10K	F11-2MEG	R11-2MEG	1 meg
	R14-50K	15K	F12-2MEG	R12-2MEG	400K
F11-250K	R11-250K	125K	F14-2MEG	R14-2MEG	600K
F14-250K	R14-250K	75K	F16-2MEG	R16-2MEG	1 meg
F16-250K	R16-250K	125K	F17-2MEG	R17-2MEG	200K
F11-500K	R11-500K	250K	F16-3MEG	R16-3MEG	1.5 meg
F12-500K	R12-500K	100K	F54-3MEG	R54-3MEG	900K
F14-500K	R14-500K	150K		R14-5MEG	1.5 meg

CRL Fastatch II Dual Tap Controls—Net Each **$1.26**

Front Unit	Rear Unit	Taps, Ohms
F60-2000		250 and 500
F55-15K		5K and 10K
F56-500K	R56-500K	100K and 250K
F55-1MEG	R55-1MEG	350K and 620K
F56-1MEG	R56-1MEG	200K and 500K
F57-1.5MEG	R57-1.5MEG	250K and 500K
F56-2MEG	R56-2MEG	400K and 1 meg
F58-2MEG	R58-2MEG	250K and 500K
F59-3.3MEG	R59-3.3MEG	330K and 165K

5-WATT WIRE-WOUND FRONT SECTION CONTROLS

5-Watt WW Fastatch Front Units—Taper, C-1, 1⅜" diameter. Net Each **$1.65**

CRL No.	Max. Ohms	CRL No.	Max. Ohms	CRL No.	Max. Ohms
FW-250	250	FW-1000	1000	FW-2500	2500
FW-300	300	FW-1500	1500	FW-3000	3000
FW-500	500	FW-2000	2000	FW-5000	5000
FW-750	750	FW-2250	2250	FW-10K	10000

DESCRIPTION OF TAPERS

C-1—Linear; uniform resistance change from either end. **C-2**—Semi-log, (audio) 10% center. **C-3**—Right hand semi-log. Reversed C-2. **C-4**—Modified log, 20% center. **C-5**—Right hand mod. log, 20% center. **C-6**—Mod. log., 40% center. **C-7**—Symet. straight line; slow change. **C-11**—Tapped 50% rotation, 50% resis. **C-12**—Tapped 37½% rotation, 20% resis. **C-13**—Tapped 50% rotation, 30% resistance. **C-14**—Tapped 62% rotation, 30% resistance. **C-15**—Tapped 50% rotation, 10% resistance. **C-16**—Tapped 62% rotation, 50% resistance. **C-17**—Tapped 37½% rotation, 10% resis. **C-51**—Left hand linear, tapped at 62%, CW, 66⅔% resis. **C-52**—Rt. hand semi-linear, tapped at 62%, CCW, 25% resis. **C-53**—Rt. hand linear, tapped at 37%, CCW, 33⅓% resis. **C-54**—Left hand semi-linear, tapped at 37%, CW, 30% resis. **C-55**—Left-hand linear, tapped at 37% and 62% CW, 35% and 62% resis. **C-56**—Left hand semi-log, tapped at 37% and 62%, CW, 20% and 50% resis. **C-57**—Left-hand semi-log, tapped at 37% and 62%, CW, 16½% and 33% resis. **C-58**—Left-hand semi-log, tapped at 37% and 62%, CW, 12½% and 25% resis. **C-59**—Left-hand semi-log, tapped at 37% and 62%, CW, 10% and 50% resis.

CRL No. C-60 Right Hand Semi-Log Taper—Taps at 37% and 62% counter-clockwise rotation from right tap with 12½% and 25% of total resistance measured between right tap and taps. Used as TV contrast control.

CRL No. C-61 Left Hand Log Taper—Special log taper for volume, tone or stereo balance. With 1% resistance between left and center tap at 50% rotation.

CRL No. C-62 Right Hand Log Taper—Reverse of taper Model C-61, but used as tone or stereo balance only.

CRL No. C-63 Left Hand Taper—Used as tone control. Open circuit at 45-55% rotation. Left tap to 45% rotation, approximately .005% (.5 of 1%) of total resistance.

CRL No. C-64 Left Hand Taper—For tone control. Open circuit, 45-55% rotation; left tap to 45% rotation, approximately 13% of total resistance.

FASTATCH® II SHAFTS

Front (sleeve): FFS—Flatted and slotted; **FS**—Double slot; **FK**—Knurled; **FU**—Universal, flatted and slotted; **FSP**—RCA color TV.

Any Model—Net Each **27c**

CRL No.	Lgth. In.	CRL No.	Lgth. In.	CRL No.	Lgth. In.			CRL No.	Lgth. In.
FFS008	.5	FFS106	1.375	FFS204	2.250	FFS304	3.250	FS101	1.062
FFS009	.562	FFS107	1.437	FFS205	2.312	FFS306	3.375	FS107	1.437
FFS010	.625	FFS108	1.5	FFS206	2.375	FFS308	3.500	FS109	1.562
FFS011	.687	FFS109	1.562	FFS207	2.437	FFS310	3.625	FS113	1.812
FFS012	.750	FFS110	1.625	FFS208	2.500	FFS312	3.750	FS200	2.000
FFS013	.812	FFS111	1.687	FFS209	2.562	FFS314	3.875	FS204	2.250
FFS014	.875	FFS112	1.75	FFS210	2.625	FFS400	4.000	FS212	2.750
FFS015	.937	FFS113	1.812	FFS211	2.687	FFS402	4.125	FK008	.500
FFS100	1.000	FFS114	1.875	FFS212	2.750	FFS404	4.250	FK010	.625
FFS101	1.062	FFS115	1.937	FFS213	2.812	FSP014	.875	FK013	.812
FFS102	1.125	FFS200	2.000	FFS214	2.875	FSP111	1.687	FK101	1.062
FFS103	1.187	FFS201	2.062	FFS215	2.937	FS006	.375	FK105	1.312
FFS104	1.250	FFS202	2.125	FFS300	3.000	FS010	.625	FK112	1.750
FFS105	1.312	FFS203	2.187	FFS302	3.125	FS015	.937	FU404	4.250

Rear (inner shaft): RFS—Flatted and slotted; **RK**—Knurled; **RU**—Universal; **RP**—Push-Pull, .187" dia., brass; **RPU**—Universal; **RS**—Slotted only. **Single Controls (solid shaft): SS**—Slotted, .25" dia., steel; **SN**—Same as SS, nylon; **SK**—Slotted and knurled, .25" dia., steel; **SFS**—Flatted and slotted, .187" dia., steel; **SU**—Universal, steel. Exact Single Controls (.25" dia., steel): **SF**—Flatted; **SSK**—Split and knurled; **SSP**—G.E. Bullet End); **SRS**—Round, screwdriver slot. Single Push-Pull Controls (brass): **SP**—.187" dia.; **SPU**—.25" dia. Exact single controls (.250" dia., nylon) SN-156" flat; **SNK**—Same as SK, nylon; **SNF**—Same as SFS, Nylon. Tandem Twin (solid shaft, .187" dia.); **TU**—Universal, steel; **TFS**—Flatted and slotted.

Any Model—Net Each **27c**

CRL No.	Lgth. In.	CRL No.	Lgth. In.	CRL No.	Lgth. In.	CRL No.	Lgth. In.
RFS014	.875	RFS301	3.062	RP213	2.812	SNK108	1.500
RFS015	.937	RFS302	3.125	RP215	2.937	SNK200	2.000
RFS100	1.000	RFS303	3.187	RPU408	4.500	SP212	2.750
RFS101	1.062	RFS304	3.250	RS008	.500	SPU304	3.250
RFS102	1.125	RFS306	3.375	RU413	4.812	SRS004	.240
RFS103	1.187	RFS307	3.437	SF008	.500	SRSC06	.375
RFS104	1.250	RFS309	3.562	SF010	.625	SRS008	.500
RFS105	1.312	RFS311	3.687	SF012	.750	SRS010	.625
RFS106	1.375	RFS314	3.875	SF014	.875	SRS012	.750
RFS107	1.437	RFS400	4.000	SF100	1.000	SRS014	.875
RFS108	1.500	RFS404	4.250	SF102	1.125	SRS100	1.000
RFS109	1.562	RFS407	4.437	SF104	1.250	SRS200	2.000
RFS110	1.625	RFS413	4.812	SF106	1.375	SRS300	3.000
RFS111	1.687	RK012	.750	SF108	1.500	SS006	.375
RFS112	1.750	RK014	.875	SF110	1.625	SS008	.500
RFS113	1.812	RK100	1.000	SF112	1.750	SSK008	.500
RFS114	1.875	RK104	1.250	SF114	1.875	SSK010	.625
RFS115	1.937	RK106	1.375	SF200	2.000	SSK012	.750
RFS200	2.000	RK109	1.562	SF202	2.125	SSK014	.875
RFS201	2.062	RK110	1.625	SF204	2.250	SSK100	1.000
RFS202	2.125	RK114	1.875	SF206	2.375	SSK102	1.125
RFS203	2.187	RK203	2.187	SF208	2.500	SSK104	1.250
RFS204	2.250	RK205	2.312	SFS212	2.750	SSK106	1.375
RFS205	2.312	RK206	2.375	SK010	.625	SSK108	1.500
RFS206	2.375	RK207	2.437	SN010	.625	SSK110	1.625
RFS207	2.437	RP111	1.687	SN100	1.000	SSK112	1.750
RFS208	2.500	RP113	1.812	SN104	1.250	SSK114	1.875
RFS209	2.562	RP114	1.875	SN200	2.000	SSK200	2.000
RFS210	2.625	RP200	2.000	SNF100	1.000	SSP010	.625
RFS211	2.687	RP202	2.125	SNF108	1.500	SSP013	.812
RFS212	2.750	RP204	2.250	SNK010	.625	SU204	2.250
RFS213	2.812	RP205	2.312	SNK012	.750	SU308	3.500
RFS214	2.875	RP207	2.437	SNK014	.875	SU500	5.000
RFS215	2.937	RP209	2.562	SNK100	1.000	TFS212	2.750
RFS300	3.000	RP211	2.687	SNK104	1.250	TU304	3.250

ADASHAFT® SHAFTS, COUPLERS, EXTENSIONS

CRL No.	Description	Net Each				
		1-9	10-24	25-49	50-99	100-249
AK-16	Cpir: two ¼" or ¼" to a ¾" shft.	$0.27	$0.24	$0.23	$0.21	$0.20
AK-26	Auto adptr. bshg. ⅜"-32 to ¼"-28, 1⅝" lg.; nuts & lockwasher	.45	.41	.38	.36	.34
AK-28	Auto adptr. bshg. ⅜"-32 to ½"-28, 2¼" lg.; nuts & lockwasher	.45	.41	.38	.36	.34
AK-30	Ground lug	.45†	.41†	.38†	.36†	.34†
AK-31	Adptr. bshg. ⅜"-32 thrd.; extends to 1"	.45	.41	.38	.36	.34
AK-37	Phenolic ⅜"-32 adptr. bush adjusts to 1"	.45	.41	.38	.36	.34
AK-38	Twist-Tab Mtg. Plate	.18	.16	.15	.14	.13
AK-39	PC Mtg. Brkt.	.45	.41	.38	.36	.34
AK-40	Twist tab adptr. for reverse mtg.	.45	.41	.38	.36	.34
CPL-2	Coupler, tandem twin	.27	.24	.23	.21	.20
CPL-3	Coupler, tandem triple	.27	.24	.23	.21	.20
CPL-4	Coupler, tandem quad	.27	.24	.23	.21	.20

†Per package of 12.

TYPE "KR" FASTATCH® SWITCHES

For Model B and FASTATCH II controls.

CRL	No. Use	Amps	Net Each, Lots of				
			1-9	10-24	25-49	50-99	100-249
KR-1	SPST	5	$0.60	$0.54	$0.50	$0.49	$0.45
KR-2	DPST	3	.60	.54	.50	.49	.45
KR-3	DP*	3	.60	.54	.50	.49	.45
KR-4	SPST	15#	.60	.54	.50	.49	.45
KR-6	SPST†	15#	.60	.54	.50	.49	.45
KR-7	DPST	15#	.60	.54	.50	.49	.45
KR-8	SPST**	5	.60	.54	.50	.49	.45

*One pole "off," one "on;" can be used for SPDT. †With dummy lug. #10 v. DC switches; all others 125 v. AC. **Push-pull.

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CARBON COMPOSITION RESISTORS

TYPE GBT CARBON COMPOSITION RESISTORS

PERFORMANCE CHARACTERISTICS

These are shown in relation to MIL-R-11 specification limits on the following two pages. A performance span or range is given for each important characteristic. You know in advance the typical limits within which IRC carbon composition resistors can be expected to perform.

The performance data are based on many thousands of individual tests made on random samples taken from production. The resistors are tested to MIL-R-11, and to other tests of greater severity.

APPEARANCE

IRC carbon composition resistors have a glossy brown, smooth body. The molded jacket has close dimensional tolerances for trouble-free use in high speed lead forming and inserting machines. There is no wax coating to clog equipment.

IDENTIFICATION

Resistance values are clearly indicated by standard EIA/MIL Color Code bands. Solvent-resistant paints are baked on to provide distinct, permanent color bands.

STANDARD RESISTANCE VALUES

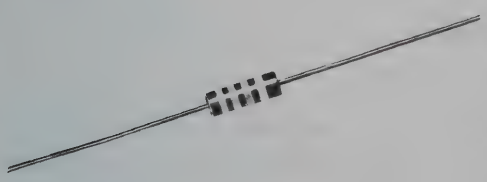
Type GBT resistors are supplied in all EIA/MIL standard values, subject to the minimum and maximum values for each type. (See table.) Other values are available on special order.

EIA/MIL COLOR CODE



Band A—1st significant figure
Band B—2nd significant figure
Band C—Number of zeros or decimal multiplier
Band D—Tolerance

Color	Significant Figure	Multiplying Value
Black	0	1
Brown	1	10
Red	2	100
Orange	3	1,000
Yellow	4	10,000
Green	5	100,000
Blue	6	1,000,000
Violet	7	10,000,000
Gray	8	100,000,000
White	9	1,000,000,000
Gold	±5% tolerance	0.1
Silver	±10% tolerance	0.01
No color	±20% tolerance	



FIXED COMPOSITION RESISTORS.

IRC's unique design of ½- and 1-watt resistors means better performance and reliability. 50% more molding around the resistance element assures greater moisture protection. The working element is a layer of carbon thermally bonded to an inert glass filament for better resistance and temperature characteristics. Ribbed, shoulder leads are deeply imbedded in the molding to prevent twist or pull-out and act as heat sinks ti conduct heat away for cooler operation and longer field life.

IRC TYPE	SR¼	GBT½	GBT 1	SR 2
MIL Style	RC07	RC20	RC32	RC42
MIL Characteristic	GF	GF	GF	GF
Rating	¼w @ 70° amb.	½w @ 70° amb.	1w @ 70° amb.	2w @ 70° amb.
Minimum Resistance	10 ohms	2.7 ohms	2.7 ohms	10 ohms
Maximum Resistance	1 meg	22 meg	22 meg	22 meg
Rated Voltage	250V	350V	500V	500V
Dimensions—Body size	.250" x .090" dia.	.390" x .140" dia.	.562" x .225" dia.	1 1/16" x .312" dia.
Lead size	1½" x .025" dia.	1½" x .031" dia.	1½" x .040" dia.	1½" x .045" dia.

STANDARD STOCK VALUES

10% and 5% tolerance. 10% in bold type. All values available in 5%. Values are indicated on each resistor by EIA color code.

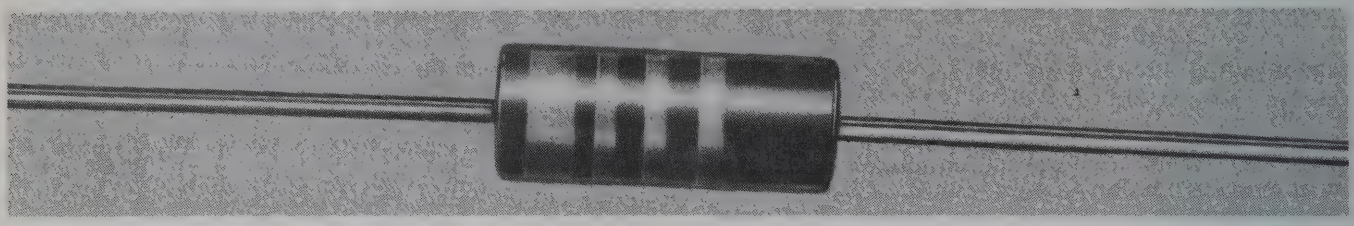
2.7	**10**	**39**	**150**	**560**	**2,200**	**8,200**	**33K**	**120K**	**470K**	**1.8 meg.**	**6.8 meg.**
3.0	11	43	160	620	2,400	9,100	36K	130K	510K	2.0 meg.	7.5 meg.
3.3	**12**	**47**	**180**	**680**	**2,700**	**10K**	**39K**	**150K**	**560K**	**2.2 meg.**	**8.2 meg.**
3.6	13	51	200	750	3,000	11K	43K	160K	620K	2.4 meg.	9.1 meg.
3.9	**15**	**56**	**220**	**820**	**3,300**	**12K**	**47K**	**180K**	**680K**	**2.7 meg.**	**10.0 meg.**
4.3	16	62	240	910	3,600	13K	51K	200K	750K	3.0 meg.	11.0 meg.
4.7	**18**	**68**	**270**	**1,000**	**3,900**	**15K**	**56K**	**220K**	**820K**	**3.3 meg.**	**12.0 meg.**
5.1	20	75	300	1,100	4,300	16K	62K	240K	910K	3.6 meg.	13.0 meg.
5.6	**22**	**82**	**330**	**1,200**	**4,700**	**18K**	**68K**	**270K**	**1.0 meg.**	**3.9 meg.**	**15.0 meg.**
6.2	24	91	360	1,300	5,100	20K	75K	300K	1.1 meg.	4.3 meg.	16.0 meg.
6.8	**27**	**100**	**390**	**1,500**	**5,600**	**22K**	**82K**	**330K**	**1.2 meg.**	**4.7 meg.**	**18.0 meg.**
7.5	30	110	430	1,600	6,200	24K	91K	360K	1.3 meg.	5.1 meg.	20.0 meg.
8.2	**33**	**120**	**470**	**1,800**	**6,800**	**27K**	**100K**	**390K**	**1.5 meg.**	**5.6 meg.**	**22.0 meg.**
9.1	36	130	510	2,000	7,500	30K	110K	430K	1.6 meg.	6.2 meg.	

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MOLDED WIREWOUND RESISTORS

INTERNATIONAL RESISTANCE COMPANY



OUTPERFORMS FIXED COMPOSITION RESISTORS

IRC's new BWH molded wire wound resistor can be used in most applications normally filled by the lower values of composition resistors. The BWH exhibits the inherent stability, reliability, and long-term life characteristics of a wire wound unit. It also provides low resistances unattainable in composition resistors.

Exceptionally stable, small and completely insulated the BWH meets or exceeds all MIL-R-11 performance requirements. Because it is the RC-32 size it will fit any 1 watt composition resistor processing equipment.

BWH resistors are packaged on the exclusive IRC GRIP STRIP, and are available in multiples of 10 and 50.

The rating of this resistor is:

½ watt at 137°C. ambient
1 watt at 115°C. ambient
2 watts at 70°C. ambient.

TOLERANCES & RESISTANCE VALUES. Available in ± 5% and ± 10% tolerances in accordance with standard EIA resistance values. Minimum standard resistance: 0.24 ohm. Maximum standard resistance: 1500 ohms.

COLOR CODING. Resistance values are indicated by standard EIA Color Code bands, and are distinguished from composition resistors by a wide band for the first significant figure.

INSULATION. A plastic housing molded with IRC manufactured thermosetting materials at high pressure and temperature results in a high insulation resistance. This protects the element from effects of extreme climatic conditions. Type BWH resistors are brown in color.

NOISE. Negligible.

SHELF DRIFT. Negligible.

PERFORMANCE SPECIFICATIONS

Temperature Coefficient. (— 55°C to 150°C)

± 0.065%/°C	± 0.030%/°C
0.24 ohm to 1.0 ohm	1.1 ohms to 1500 ohms

In order to cover a wide range of resistance values, it is necessary to use different wire alloys, which have different temperature coefficients of resistance. The above table gives the maximum temperature coefficient within a particular resistance group.

Inductance. From 0.04μh (0.24 ohm resistor) to 5.0μh (1000 ohm resistor).

Dielectric Withstanding Voltage. 1000 volts rms minimum at atmospheric pressure. 625 volts rms minimum at barometric pressure of 3.4 inches of mercury.

STANDARD STOCK VALUES (±5% and ±10% tolerance)
(±10% tolerance in bold type. All values available in ±5%)

OHMS	OHMS	OHMS	OHMS	OHMS
—	**1.0**	**10**	**100**	**1,000**
—	1.1	11	110	1,100
—	**1.2**	**12**	**120**	**1,200**
—	1.3	13	130	1,300
—	**1.5**	**15**	**150**	**1,500**
—	1.6	16	160	—
—	**1.8**	**18**	**180**	—
—	2.0	20	200	—
—	**2.2**	**22**	**220**	—
0.24	2.4	24	240	—
0.27	**2.7**	**27**	**270**	—
0.30	3.0	30	300	—
0.33	**3.3**	**33**	**330**	—
0.36	3.6	36	360	—
0.39	**3.9**	**39**	**390**	—
0.43	4.3	43	430	—
0.47	**4.7**	**47**	**470**	—
0.51	5.1	51	510	—
0.56	**5.6**	**56**	**560**	—
0.62	6.2	62	620	—
0.68	**6.8**	**68**	**680**	—
0.75	7.5	75	750	—
0.82	**8.2**	**82**	**820**	—
0.91	9.1	91	910	—

Low Temperature Operation. ± 3% maximum.

Temperature Cycling. ± 3% maximum.

Moisture Resistance. ± 6.5% maximum (load or no load).

Short Time Overload. (8 watts for 5 seconds) ± 3.0% maximum.

Load Life. (After 1000 hrs. at temperature and loading shown on derating curve.) ± 5% maximum group average. ± 10% maximum individual.

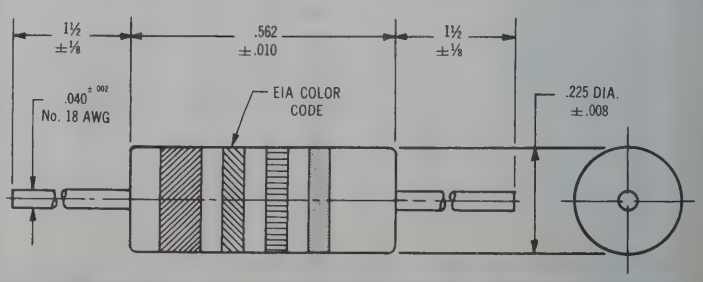
Terminal Strength. ± 1% maximum.

Solder. ± 3% maximum.

Acceleration, Shock, High Frequency Vibration. ± 2% maximum.

All tests performed as required in MIL-R-11 specification unless noted otherwise.

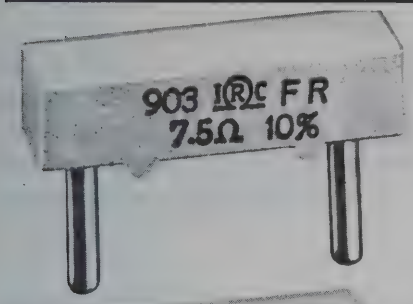
NOTE: Because of test inaccuracies common in measuring low resistance values, an allowance of 0.01 ohm should be added to the resistance change limits listed above.



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POWER & FUSE RESISTORS

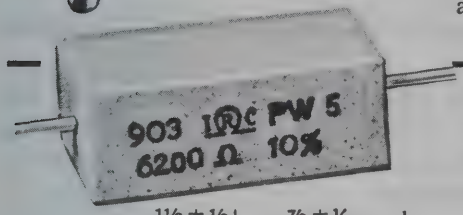


FUSE RESISTORS

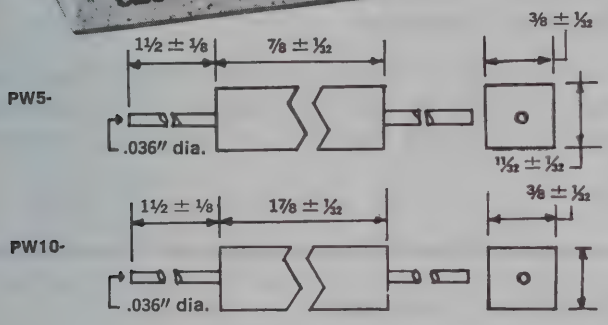
This special resistor functions as a resistor under normal conditions, and as a fuse under overload conditions. It is used extensively as a surge-limiting resistor in voltage doubler circuits of TV receivers. Installation of an IRC Type FR fuse resistor in a TV set will prevent overloading of more valuable components and possible fire due to a short circuit. The compact, modern design of IRC fuse resistor measures only 1 25/64" x 11/32" x 3/8". This unit is completely insulated in a rectangular ceramic case, and equipped with plug-in terminals.

FR5.0*—5 ohms
FR5.6—5.6 ohms
FR7.5—7.5 ohms

*suitable for 4.7Ω fuse for resistor applications



AXIAL LEAD POWER WIRE WOUND RESISTORS TYPES PW5 PW10



STANDARD STOCK VALUES

PW5

Ohms:			
.15	7.5	300	2000
.22	10	350	2250
.27	15	400	2500
.33	20	500	3000
.47	25	600	3300
.51	30	700	3500
.56	40	750	3900
.68	50	800	4000
.82	75	820	4500
1	100	900	5000
2	120	1000	6000
3	125	1200	
4	150	1250	
5	200	1500	
5.6	250	1750	

PW10

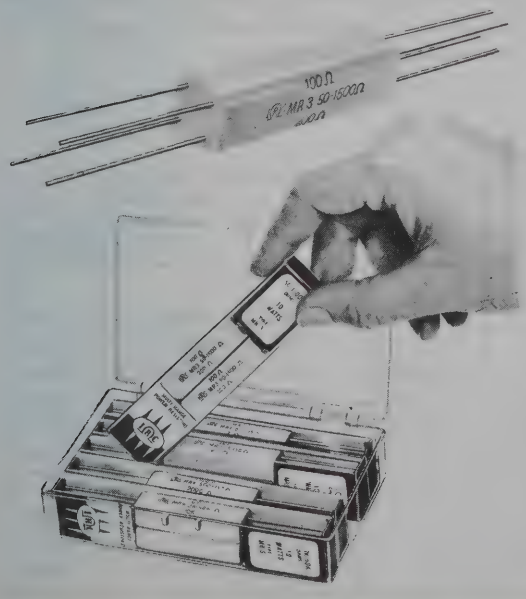
Ohms:			
1	120	1000	6000
2	125	1200	7000
3	150	1250	7500
4	200	1500	8000
5	250	1750	8200
7.5	300	2000	8500
10	350	2250	9000
15	400	2500	10,000
20	500	3000	12,000
25	600	3300	12,500
30	700	3500	15,000
40	750	3900	20,000
50	800	4000	25,000
75	820	4500	
100	900	5000	

These popular axial lead power resistors are the industry favorites for 5 and 10 watt applications. The compact shape fits among other components more easily. The axial lead design speeds installation. And, the superior solderability of the terminals assures sound connections every time.

A precisely wound element is sealed in a ceramic case—fully protected and insulated. Conservative rating permits continuous operation at full power. Resistance, wattage and tolerance are permanently marked on resistor body. Standard tolerance is 10%.

Popular Assortments of PW5 and PW10 resistors are available for handy bench stocks. Values are selected on the basis of usage. Resistors are mounted on plastic covered cards with hole for hanging.

Assortment #PW5x10	10 best selling PW5 resistors
Assortment #PW5x20	20 best selling PW5 resistors
Assortment 20A	20 best selling PW10 resistors



MULTI-RANGE POWER RESISTORS

Up to 47 values from a single resistor. 5 multi-range resistors give complete 10 watt coverage . . . 200 values from ½ to 50,000 ohms. No delays for a particular value, and you don't tie up inventory with odd values. Ideal for in-home servicing and weekend shop work.

Four-wire wound elements are sealed in a steatite housing. It's simple to solder a basic interconnection for the required value, and cutt off unused terminals. Connection diagrams included.

5 TYPES COVER 200 VALUES

TYPE MR1. 0.5 through 15 ohms. 1, 2, 4, 8 ohm elements. 10 watts. 47 values.

TYPE MR2. 5 through 150 ohms. 10, 20, 40, 80 ohm elements. 10 watts. 47 values.

TYPE MR3. 50 through 1,500 ohms. 100, 200, 400, 800 ohm elements. 10 watts. 47 values.

TYPE MR4. 500 through 15K ohms. 1K, 2K, 4K, 8K ohm elements. 10 watts. 47 values.

TYPE MR5. 3K through 50K ohms. 10K, 10K, 15K, 15K ohm elements. 10 watts. 12 values.

MULTI-RANGE KIT #55

Complete 10 watt power resistor coverage that fits in the palm of your hand. Rigid clear plastic case holds 5 Handy-Paks, 2 of each type MR resistor. With these 10 versatile resistors you have finger-tip coverage of 200 values from ½ to 50,000 ohms. Fits easily in tool case or tube caddy.

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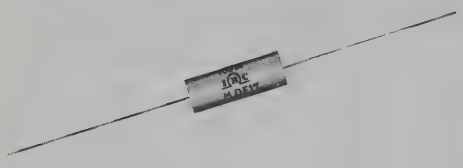
481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351

PRECISION DEPOSITED CARBON RESISTORS

INTERNATIONAL RESISTANCE COMPANY



DEPOSITED CARBON PRECISIONS are available in ½, 1 and 2 watt sizes. The wide range of values, 1% tolerance, economy, low voltage coefficient, excellent frequency characteristics, predictable temperature, high voltage rating, low noise level, and small size make IRC deposited carbon resistors ideal for application in advanced electronic equipment and critical TV circuits.



MOLDED DEPOSITED CARBON RESISTORS are designed for high reliability, stable performance, low voltage coefficient, low capacitive and inductive impedance in high frequency applications. In miniature ⅛, ¼, and ½ watt sizes, plus 1 and 2 watt types.

Standard tolerance is 1%. (2% tolerance on high range units.) The housing gives complete protection, and offers better heat dissipating qualities. This results in improved load life and maximum moisture protection.

MIL VALUES—TYPES DCC, DCF, DCH and MDC

One decade of stock values is as follows:

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
10.0	12.1	14.7	17.8	21.5	26.1	31.6	38.3	46.4	56.2	68.1	82.5
10.2	12.4	15.0	18.2	22.1	26.7	32.4	39.2	47.5	57.6	69.8	84.5
10.5	12.7	15.4	18.7	22.6	27.4	33.2	40.2	48.7	59.0	71.5	86.6
10.7	13.0	15.8	19.1	23.2	28.0	34.0	41.2	49.9	60.4	73.2	88.7
11.0	13.3	16.2	19.6	23.7	28.7	34.8	42.2	51.1	61.9	75.0	90.9
11.3	13.7	16.5	20.0	24.3	29.4	35.7	43.2	52.3	63.4	76.8	93.1
11.5	14.0	16.9	20.5	24.9	30.1	36.5	44.2	53.6	64.9	78.7	95.3
11.8	14.3	17.4	21.0	25.5	30.9	37.4	45.3	54.9	66.5	80.6	97.6

Higher stock values may be determined by multiplying by 10, 100, 1000, etc., up to maximum stated for type.

SELECTION GUIDE

IRC Type	MIL Type	MIL Char.	Power Watts		Resistance Min. Ohms	Resistance Max. Ohms	Tolerance	Body Size	Temperature Coefficient PPM/°C	Lead Dia.
	MIL-R-10509		@ 70°C	@ 125°C	10	301K				
DM	RN55	D	⅛		10	5 meg.		—500	.250x.093	.025
MDA	RN60	B, D	⅛, ¼	⅛	10	5 meg.		—500	.406x.130	.025
MDB	RN65	B, D	¼, ½	¼	10	25 meg.	0.5%	—500	.594x.203	.025
MDC	RN70	B, D	½, 1	½	10	50 meg.	1.0%	—500	.719x.216	.032
MDF	RN70	B	1		15	100 meg.	2.0%	—500	1.105x.395	.032
MDH	RN80	B	2					—500	2.234x.395	.032
			@ 40°C	@ 70°C						
DCC	RN20	X		½	10	25 meg.		—500	.594x.156	.032
DCF	RN25	X	1		10	50 meg.		—500	.938x.297	.032
DCH	RN30	X	2		15	100 meg.		—500	2.062x.297	.032

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PRECISION WIREWOUND RESISTORS

INTERNATIONAL RESISTANCE COMPANY



WIREWOUND PRECISION RESISTORS.

For accuracy in critical applications, IRC Precision Wire Wound resistors are produced to exacting standards of reliability. IRC's winding technique prevents shorted turns or strains in the winding, and special insulation gives excellent protection from humidity. Positive electrical connections and easy soldering.

RADIAL LUG TYPES

IRC TYPE NO	WW2J	WW3J	WW4J	WW5J	WW8J	WW11J
MIL-R-93A Style	RB19	RB16	RB17	RB18	RB15	RB16
Rating in Watts 65°C. Ambient	2	.50	1	1	.50	.50
Maximum Volts	2000	400	700	1000	250	500
No. of Sections	8	2	4	4	1	2
Maximum Resistance .0015 Diameter Wire	4.0 Meg.	0.3 Meg.	0.75 Meg.	1.7 Meg.	0.29 Meg.	0.4 Meg.
Maximum Reistance .0009 Diameter Wire	20.0 Meg.	1.6 Meg.	4.0 Meg.	7.5 Meg.	1.5 Meg.	2.0 Meg.
Minimum Resistance (ohms)						
±0.05% Tolerance	25	25	25	25	25	25
±0.1 % Tolerance	10	10	10	10	10	10
±0.25% Tolerance	5	5	5	5	5	5
±0.50% Tolerance	1	1	1	1	1	1
±1.0 % Tolerance	0.1	0.1	0.1	0.1	0.5	0.1

RADIAL LEAD TYPES

IRC TYPE NO.	WW3J	WW4J	WW8J	WW10J	WW11J	WW20J	WW21J	WW22J (Center Tapped)	WW23J	WW24J (Center Tapped)
Rating in Watts 65°C. Ambient	.50	1	.50	.25	.50	.25	.25	.25†	.50	.50†
Maximum Volts	400	700	250	150	500	150	300	150†	300	400†
No. of Sections	2	4	1	1	2	1	2	2	2	4
Maximum Resistance .0015 Diameter Wire	0.3 Meg.	0.75 Meg.	0.29 Meg.	40K	0.4 Meg.	35K	70K	35K†	225K	350K†
Maximum Resistance .0009 Diameter Wire	1.6 Meg.	4.0 Meg.	1.5 Meg.	0.215 Meg.	2.0 Meg.	150K	500K	250K	1.5 Meg.	1.5 Meg.†
Minimum Resistance (ohms)										
±0.05% Tolerance	25	25	25	200	25	250	200	200†	25	25 †
±0.10% Tolerance	10	10	10	150	10	200	150	150†	10	10 †
±0.25% Tolerance	5	5	5	75	5	100	75	75†	5	5 †
±0.5 % Tolerance	1	1	1	50	1	75	50	50†	1	1 †
±1.0 % Tolerance	0.1	0.1	0.5	10	0.1	10	10	10†	0.5	0.1†

†signifies per tap section

STANDARD STOCK TYPES AND VALUES

TYPE WW2J with lugs—1% Tolerance

600K Ohms	1.0 Megohm
750K Ohms	1.5 Megohms
900K Ohms	2.0 Megohms
	2.5 Megohms

TYPE WW3J with lugs—1% Tolerance

0.1 Ohm	1,500 Ohms	30K Ohms
0.2 Ohm	2,000 Ohms	35K Ohms
0.5 Ohm	2,500 Ohms	40K Ohms
1.0 Ohm	3,000 Ohms	50K Ohms
5 Ohms	3,500 Ohms	60K Ohms
10 Ohms	4,000 Ohms	75K Ohms
25 Ohms	5,000 Ohms	100K Ohms
50 Ohms	7,500 Ohms	125K Ohms
100 Ohms	10K Ohms	150K Ohms
200 Ohms	12.5K Ohms	175K Ohms
250 Ohms	15K Ohms	200K Ohms
300 Ohms	20K Ohms	225K Ohms
500 Ohms	22.5K Ohms	
1,000 Ohms	25K Ohms	

TYPE WW4J with lugs—1% Tolerance

0.1 Ohm	2,000 Ohms	40K Ohms
0.2 Ohm	2,500 Ohms	50K Ohms
0.5 Ohm	3,000 Ohms	60K Ohms
1.0 Ohm	3,500 Ohms	75K Ohms
5 Ohms	4,000 Ohms	100K Ohms
10 Ohms	5,000 Ohms	125K Ohms
25 Ohms	7,500 Ohms	150K Ohms
50 Ohms	10K Ohms	175K Ohms
100 Ohms	12.5K Ohms	200K Ohms
200 Ohms	15K Ohms	225K Ohms
250 Ohms	20K Ohms	250K Ohms
300 Ohms	22.5K Ohms	300K Ohms
500 Ohms	25K Ohms	400K Ohms
1,000 Ohms	30K Ohms	500K Ohms
1,500 Ohms	35K Ohms	

TYPE WW5J with lugs—1% Tolerance

600K Ohms	900K Ohms
750K Ohms	1.0 Megohm

TYPE WW10J with leads—1% Tolerance

10 Ohms	2,000 Ohms	20K Ohms
25 Ohms	2,500 Ohms	25K Ohms
50 Ohms	3,000 Ohms	30K Ohms
100 Ohms	3,500 Ohms	40K Ohms
200 Ohms	4,000 Ohms	50K Ohms
250 Ohms	5,000 Ohms	60K Ohms
300 Ohms	7,500 Ohms	75K Ohms
500 Ohms	10K Ohms	100K Ohms
1,000 Ohms	12.5K Ohms	
1,500 Ohms	15K Ohms	

Special Resistance Tolerances

Standard tolerances ±1%. Other tolerances, subject to minimum values shown on specification charts, are available on special order for all WWJ types, as follows:

0.5% 0.25% 0.2% 0.1% 0.05%

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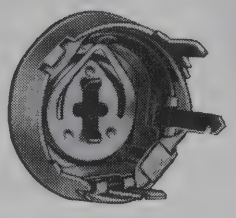
1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625

SPECIAL PURPOSE CONTROLS

2 WATT, ¾″ DIAMETER WIREWOUND CONTROLS

IRC buzz-bias controls are 2 watt preset type wirewound resistors. They are designed for hum-balancing, sensitivity, bias-adjust. AGC, holding, locking, and other radio and TV applications. All units are ± 20% tolerance, linear taper, and have contact arm grounded to housing. Manufactured by CTS Corporation.

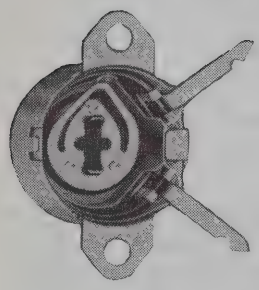
TYPE 110—TAB-MOUNT UNIT



TYPES 110 & 110D

IRC STOCK NO.	RESISTANCE
110-1.5	1.5 Ω
110-5	5 Ω
110-15	15 Ω
110-60	60 Ω
110-100	100 Ω
110-300	300 Ω
110-600	600 Ω
110-1000	1000 Ω
110-3000	3000 Ω
110-3000-350	3000 Stops at 350 Ω

TYPE 112—FLANGE MOUNT UNITS



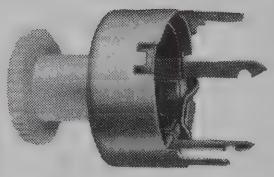
TYPE 112

IRC STOCK NO.	RESISTANCE
112-50	50Ω
112-100	100Ω
112-150	150Ω
112-200	200Ω
112-300	300Ω
112-500	500Ω
112-500-100	500Ω Stops at 100Ω
112-600	600Ω
112-650	650Ω
112-800	800Ω
112-800-50	850Ω Stops at 50Ω
112-1000	1000Ω
112-1000-100	1000Ω Stops at 100Ω
112-1500	1500Ω
112-2000	2000Ω
112-2000-100	2000Ω Stops at 100Ω
112-2500-700	2500Ω Stops at 700Ω
112-3000	3000Ω
112-4000	4000Ω
112-4000-350	4000Ω Stops at 350Ω
112-4000-1000	4000Ω Stops at 1000Ω
112-5000	5000Ω
112-10K	10KΩ

TYPE 110D—TAB-MOUNT SPECIAL TEMPERATURE COMPENSATED UNITS

IRC STOCK NO.	RESISTANCE
110D175-60	175 Ω Stops at 60 Ω Replaces Delco #7275554
110D260-90	260 Ω Stops at 90 Ω Replaces Delco #7275474

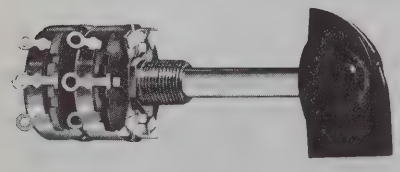
TYPE 110C—TAB-MOUNT TV COLOR CONVERGENCE CONTROLS WITH INTEGRAL NYLON KNOBS



TYPE 110C

IRC STOCK NO.	RESISTANCE
110C-10	10 Ω
110C-30	30 Ω
110C-60	60 Ω
110C-120	120 Ω
110C-150	150 Ω

L&T ATTENUATOR PADS



IRC-CTS L and T pads provide constant impedance for use in sound systems and for speaker controls. Both types handle up to 15 watts audio power (5 watts DC). L pads provide a constant input impedance and T pads provide constant input and output impedances.

ELECTRICAL SPECIFICATIONS:

Continuous D.C. Rating:		5 watts
Peak Audio Rating	:	15 watts
Dielectric Strength	:	1000 V.A.C. RMS to Ground
Attenuation Range	:	4, 8 and 16Ω IMPEDANCES: 0 to 30 db
	:	500Ω IMPEDANCE: 0 to 40 db
Insertion Loss	:	Negligible (less than .5 db)
Input Impedance	:	Constant within +30% —20%

MECHANICAL SPECIFICATIONS:

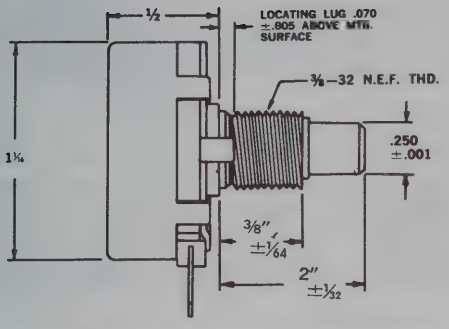
Size	:	1⅜″ diameter
Shaft Dimensions Diameter	:	.250″
Length	:	2″ from mounting surface
Bushing	:	⅜″-32 x ⅜″ long bushing
Angle of Rotation	:	300° ± 5°

IRC Stock No.	IMPEDANCE
L PADS	
LP4A	4Ω
LP8A	8Ω
LP15A	15Ω
LP500A	500Ω
T PADS	
TP4A	4Ω
TP8A	8Ω
TP15A	15Ω
TP500A	500Ω

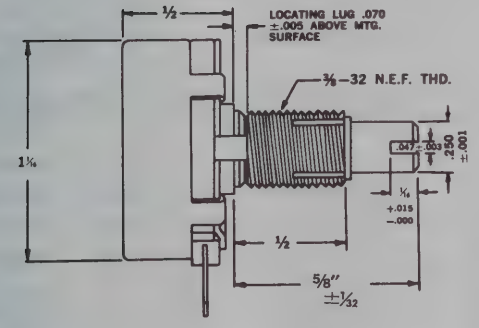
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INDUSTRIAL VARIABLE RESISTORS

IRC-CTS TYPE 321/RV4 THREE-WATT INDUSTRIAL CONTROL (MILITARY GRADE)



SIDE VIEW OF TYPE 321S CONTROL



SIDE VIEW OF TYPE 321LT CONTROL WITH LOCKING BUSHING

FEATURES

- COMPLETELY ENCLOSED CONSTRUCTION
- CARBON-CERAMIC ELEMENT
- EXCELLENT HEAT SINK QUALITIES
- MEETS MIL-R-94B, STYLE RV4
- HIGH INSULATION RESISTANCE OF CERAMIC
- LONG LIFE, LOW NOISE
- LARGE SAFETY FACTOR

ELECTRICAL AND MECHANICAL SPECIFICATIONS

- **RESISTANCE RANGE**
  250 ohms through 2.5 megohms (linear taper).
- **TOLERANCE**
  ± 10% standard, ± 20% standard for values 1 megohm and above.
- **TAPERS** . . . Linear.
- **WATTAGE AND TEMPERATURE RATING**
  3 watts at 70°C or 2 watts at 95°C derated to no load at 150°C. 500 volts DC maximum safe operating voltage across resistance element.
- **MOUNTING BUSHING DIMENSIONS**
  Diameter: ⅜" — 32 N.E.F. thread
  Length: Non-Lock — ⅜" standard
  Locking — ½" standard
- **ANGLE OF ROTATION** . . . 315° ± 5°
- **SHAFT DIAMETER** . . . .250" ± .001"
- **SHAFT LENGTH**
  As shown under Ordering Information below.
- **SHAFT TRIM**
  Screwdriver slot (Type LT) standard.
- **LOCATING LUGS**
  Standard position is left side (terminals down) as illustrated.
- **TAPS** . . . None.

RANGES

TYPE 321S/RV4 2" plain shaft ⅜" long bushing	TOTAL RESISTANCE	TYPE 321LT/RV4NAYSD ⅝" slotted shaft ½" long locking bushing
PART NUMBER	(Ohms ±10%)	PART NUMBER
321S251A/RV4NAY-251A	250	321LT251A/RV4NAYSD251A
321S501A/RV4NAY-501A	500	321LT501A/RV4NAYSD501A
321S102A/RV4NAY-102A	1,000	321LT102A/RV4NAYSD102A
321S252A/RV4NAY-252A	2,500	321LT252A/RV4NAYSD252A
321S502A/RV4NAY-502A	5,000	321LT502A/RV4NAYSD502A
321S103A/RV4NAY-103A	10,000	321LT103A/RV4NAYSD103A
321S253A/RV4NAY-253A	25,000	321LT253A/RV4NAYSD253A
321S503A/RV4NAY-503A	50,000	321LT503A/RV4NAYSD503A
321S104A/RV4NAY-104A	100,000	321LT104A/RV4NAYSD104A
321S254A/RV4NAY-254A	250,000	321LT254A/RV4NAYSD254A
321S504A/RV4NAY-504A	500,000	321LT504A/RV4NAYSD504A
	(Ohms ±20%)	
321S105B/RV4NAY-105B	1 Megohm	321LT105B/RV4NAYSD105B
321S255B/RV4NAY-255B	2.5 Megohms	321LT255B/RV4NAYSD255B

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MILITARY CONTROLS

INTERNATIONAL RESISTANCE COMPANY

IRC-CTS MILITARY VARIABLE RESISTORS TO MIL-R-19A AND MIL-R-94B

Fast, local delivery from Distributors' stock is now available for IRC-CTS military controls. A total of 255 variable resistors is included in this new, local service. The 6 styles illustrated cover the latest MIL-R-94B composition and MIL-R-19A wire wound specifications.

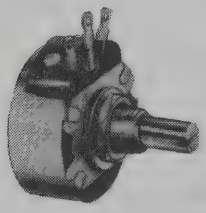
GENERAL SPECIFICATIONS

	MIL-R-19A			MIL-R-94B			
	RA20	RA30	Char.	RV2	RV4	RV5	RV6
Resistance Range (ohms)	3-15K	10-25K	X & Y	100-2.5 megs	100-5 megs	250-2.5 megs	1000-1.0 megs
Rotational Life	5% max, 25,000 cycles		X Y	10% max, 15,000 cycles 10% max, 25,000 cycles			
Load Life	3% max, 1,000 hours, rated load, 40°C		X Y	12% max, 1,000 hours, rated load, 70°C 10% max, 1,000 hours, rated load, 70°C			
Moisture Resistance	10% max, Method 106, MIL-STD-202, 3.5 megs min insulation resistance		X Y	10% average, 14% max, Method 106, MIL-STD-202, 50 megs min insulation resistance 6% average, 10% max, Method 106, MIL-STD-202, 100 megs min insulation resistance			
Low Temp. Storage	4% max		X Y	4% max 2% max			
Low Temp. Operation	4% max		X Y	4% max 3% max			
Thermal Cycling	4% max		X Y	10% max 6% max			
Acceleration	3% max		X & Y	3% max			
Shock	2% max		X & Y	2% max			
High Freq. Vibration	2% max		X & Y	2% max			
Temp. Range	—63°C to +105°C		X & Y	—63°C to 150°C			

IRC-CTS WIRE WOUND VARIABLE RESISTORS TO MIL-R-19A

STYLE RA20 2 WATT WIRE WOUND

Type 252, style RA20, $1\frac{17}{64}$" diameter wirewound variable resistor.



STYLE RA20

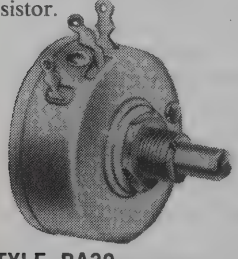
- 2 watt rating
- Compact size
- Meets MIL-R-19
- 15 resistance values
- Insulated housing
- Built-in high torque

Choice of 2 shaft styles, plain or locking bushings.

Resistance	IRC-CTS TYPE 252 ⅞" Slotted Shaft ⅜" Long Bushing Linear Resistance Taper	CTS TYPE 252LT ⅝" Slotted Shaft ½" Long Locking Bushing Linear Resistance Taper	CTS TYPE 252LT ⅞" Slotted Shaft ½" Long Locking Bushing Linear Resistance Taper
3 ± 10%	RA20NASD3R0A	RA20LASB3R0A	RA20LASD3R0A
10 ± 10%	RA20NASD100A	RA20LASB100A	—
25 ± 10%	RA20NASD250A	RA20LASB250A	RA20LASD250A
50 ± 10%	RA20NASD500A	RA20LASB500A	RA20LASD500A
75 ± 10%	RA20NASD750A	RA20LASB750A	—
100 ± 10%	RA20NASD101A	RA20LASB101A	RA20LASD101A
200 ± 10%	RA20NASD201A	RA20LASB201A	—
250 ± 10%	RA20NASD251A	RA20LASB251A	RA20LASD251A
500 ± 10%	RA20NASD501A	RA20LASB501A	RA20LASD501A
1,000 ± 10%	RA20NASD102A	RA20LASB102A	RA20LASD102A
2,500 ± 10%	RA20NASD252A	RA20LASB252A	RA20LASD252A
5,000 ± 10%	RA20NASD502A	RA20LASB502A	RA20LASD502A
7,500 ± 10%	RA20NASD752A	RA20LASB752A	RA20LASD752A
10,000 ± 10%	RA20NASD103A	RA20LASB103A	RA20LASD103A
15,000 ± 10%	RA20NASD153A	RA20LASB153A	RA20LASD153A

STYLE RA30 4 WATT WIRE WOUND

Type 25, style RA30, $1\frac{17}{32}$" diameter wirewound variable resistor.



STYLE RA30

- 4 watt rating
- Reliable CTS wirewound element
- Meets all MIL-R-19 requirements
- 15 resistance values
- Built-in high torque

Choice of 2 shaft styles, plain or locking bushings.

Resistance	IRC-CTS TYPE 25 ⅞" Slotted Shaft ⅜" Long Bushing Linear Resistance Taper	CTS TYPE 25LT ⅝" Slotted Shaft ½" Long Locking Bushing Linear Resistance Taper
10 ± 10%	RA30NASD100A	RA30LASB100A
25 ± 10%	RA30NASD250A	RA30LASB250A
50 ± 10%	RA30NASD500A	RA30LASB500A
100 ± 10%	RA30NASD101A	RA30LASB101A
200 ± 10%	RA30NASD201A	RA30LASB201A
250 ± 10%	RA30NASD251A	RA30LASB251A
500 ± 10%	RA30NASD501A	RA30LASB501A
750 ± 10%	RA30NASD751A	RA30LASB751A
1,000 ± 10%	RA30NASD102A	RA30LASB102A
2,500 ± 10%	RA30NASD252A	RA30LASB252A
5,000 ± 10%	RA30NASD502A	RA30LASB502A
7,500 ± 10%	RA30NASD752A	RA30LASB752A
10,000 ± 10%	RA30NASD103A	RA30LASB103A
15,000 ± 10%	RA30NASD153A	RA30LASB153A
25,000 ± 10%	RA30NASD253A	RA30LASB253A

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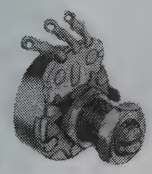
MILITARY CONTROLS

INTERNATIONAL RESISTANCE COMPANY

IRC-CTS COMPOSITION VARIABLE RESISTORS TO MIL-R-94B

STYLE RV2 1 WATT COMPOSITION

Type 90, style RV2, 15/16" diameter composition variable resistor.



STYLE RV2

- 1 watt rating
- Operational up to 150°C
- 14 resistance values
- Meets characteristics X and Y
- Designed for high temperature and humidity military applications

Choice of 2 shaft styles, plain or locking bushings.

Resistance	IRC-CTS TYPE 90 7/8" Slotted Shaft 3/8" Long Bushing Linear Resistance Taper		CTS TYPE 90LT 5/8" Slotted Shaft 1/2" Long Locking Bushing Linear Resistance Taper	
100 ± 10%	RV2NAXSD101A	RV2NAYSD101A	RV2LAXSA101A	RV2LAYSA101A
250 ± 10%	RV2NAXSD251A	RV2NAYSD251A	RV2LAXSA251A	RV2LAYSA251A
500 ± 10%	RV2NAXSD501A	RV2NAYSD501A	RV2LAXSA501A	RV2LAYSA501A
1,000 ± 10%	RV2NAXSD102A	RV2NAYSD102A	RV2LAXSA102A	RV2LAYSA102A
2,500 ± 10%	RV2NAXSD252A	RV2NAYSD252A	RV2LAXSA252A	RV2LAYSA252A
5,000 ± 10%	RV2NAXSD502A	RV2NAYSD502A	RV2LAXSA502A	RV2LAYSA502A
10,000 ± 10%	RV2NAXSD103A	RV2NAYSD103A	RV2LAXSA103A	RV2LAYSA103A
25,000 ± 10%	RV2NAXSD253A	RV2NAYSD253A	RV2LAXSA253A	RV2LAYSA253A
50,000 ± 10%	RV2NAXSD503A	RV2NAYSD503A	RV2LAXSA503A	RV2LAYSA503A
100,000 ± 10%	RV2NAXSD104A	RV2NAYSD104A	RV2LAXSA104A	RV2LAYSA104A
250,000 ± 10%	RV2NAXSD254A	RV2NAYSD254A	RV2LAXSA254A	RV2LAYSA254A
500,000 ± 10%	RV2NAXSD504A	RV2NAYSD504A	RV2LAXSA504A	RV2LAYSA504A
1.0 Meg. ± 20%	RV2NAXSD105B	RV2NAYSD105B	RV2LAXSA105B	RV2LAYSA105B
2.5 Meg. ± 20%	RV2NAXSD255B	RV2NAYSD255B	RV2LAXSA255B	RV2LAYSA255B

STYLE RV4 3 WATT COMPOSITION

Type 96/320/321, style RV4, 1 1/16" diameter composition variable resistor.



STYLE RV4

- 3 watt rating
- Completely enclosed construction
- Excellent heat sink qualities
- 15 resistance values
- Long life, no noise
- Reliable carbon-ceramic element

Choice of 2 shaft styles, plain or locking bushings.

Resistance	IRC-CTS TYPE 96/320/321 7/8" Slotted Shaft 3/8" Long Bushing Linear Resistance Taper	CTS TYPE 96LT/320LT/321LT 5/8" Slotted Shaft 1/2" Long Locking Bushing Linear Resistance Taper	7/8" Slotted Shaft 1/2" Long Locking Bushing Linear Resistance Taper
100 ± 10%	RV4NAYSD101A	RV4LAYSA101A	RV4LAYSD101A
250 ± 10%	RV4NAYSD251A	RV4LAYSA251A	RV4LAYSD251A
500 ± 10%	RV4NAYSD501A	RV4LAYSA501A	RV4LAYSD501A
1,000 ± 10%	RV4NAYSD102A	RV4LAYSA102A	RV4LAYSD102A
2,500 ± 10%	RV4NAYSD252A	RV4LAYSA252A	RV4LAYSD252A
5,000 ± 10%	RV4NAYSD502A	RV4LAYSA502A	RV4LAYSD502A
10,000 ± 10%	RV4NAYSD103A	RV4LAYSA103A	RV4LAYSD103A
25,000 ± 10%	RV4NAYSD253A	RV4LAYSA253A	RV4LAYSD253A
50,000 ± 10%	RV4NAYSD503A	RV4LAYSA503A	RV4LAYSD503A
100,000 ± 10%	RV4NAYSD104A	RV4LAYSA104A	RV4LAYSD104A
250,000 ± 10%	RV4NAYSD254A	RV4LAYSA254A	RV4LAYSD254A
500,000 ± 10%	RV4NAYSD504A	RV4LAYSA504A	RV4LAYSD504A
1.0 Meg. ± 10%	RV4NAYSD105A	RV4LAYSA105A	RV4LAYSD105A
1.0 Meg. ± 20%	RV4NAYSD105B	RV4LAYSA105B	—
2.5 Meg. ± 20%	RV4NAYSD255B	RV4LAYSA255B	—
5.0 Meg. ± 20%	RV4NAYSD505B	RV4LAYSA505B	—

STYLE RV5 ½ WATT MINIATURE COMPOSITION

Type 65, style RV5, ¾" diameter composition register.



STYLE RV5

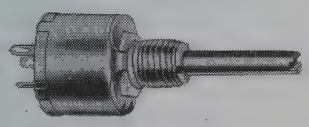
- ½ watt rating
- Small size
- 13 resistance values
- Operational up to 150°C
- Designed for high temperature and humidity applications

Choice of 2 shaft styles, plain or locking bushings.

Resistance	IRC-CTS TYPE 65 7/8" Slotted Shaft 1/4" Long Bushing Linear Resistance Taper		CTS TYPE 65LT 1/2" Slotted Shaft 3/8" Long Locking Bushing Linear Resistance Taper	
250 ± 10%	RV5NAXSD251A	RV5NAYSD251A	RV5LAXSB251A	RV5LAYSB251A
500 ± 10%	RV5NAXSD501A	RV5NAYSD501A	RV5LAXSB501A	RV5LAYSB501A
1,000 ± 10%	RV5NAXSD102A	RV5NAYSD102A	RV5LAXSB102A	RV5LAYSB102A
2,500 ± 10%	RV5NAXSD252A	RV5NAYSD252A	RV5LAXSB252A	RV5LAYSB252A
5,000 ± 10%	RV5NAXSD502A	RV5NAYSD502A	RV5LAXSB502A	RV5LAXSB502A
10,000 ± 10%	RV5NAXSD103A	RV5NAYSD103A	RV5LAXSB103A	RV5LAYSB103A
25,000 ± 10%	RV5NAXSD253A	RV5NAYSD253A	RV5LAXSB253A	RV5LAYSB253A
50,000 ± 10%	RV5NAXSD503A	RV5NAYSD503A	RV5LAXSB503A	RV5LAYSB503A
100,000 ± 10%	RV5NAXSD104A	RV5NAYSD104A	RV5LAXSB104A	RV5LAYSB104A
250,000 ± 10%	RV5NAXSD254A	RV5NAYSD254A	RV5LAXSB254A	RV5LAYSB254A
500,000 ± 10%	RV5NAXSD504A	RV5NAYSD504A	RV5LAXSB504A	RV5LAYSB504A
1.0 Meg. ± 20%	RV5NAXSD105B	RV5NAYSD105B	RV5LAXSB105B	RV5LAYSB105B
2.5 Meg. ± 20%	RV5NAXSD255B	RV5NAYSD255B	RV5LAXSB255B	RV5LAYSB255B

STYLE RV6 ½ WATT MINIATURE COMPOSITION

Type 300, style RV6, ½" diameter composition resistor.



STYLE RV6

- ¾ watt rating
- Miniature size
- Excellent stability
- 14 resistance values
- Reliable carbon-ceramic element
- High resolution

Choice of 2 shaft styles, plain or locking bushings.

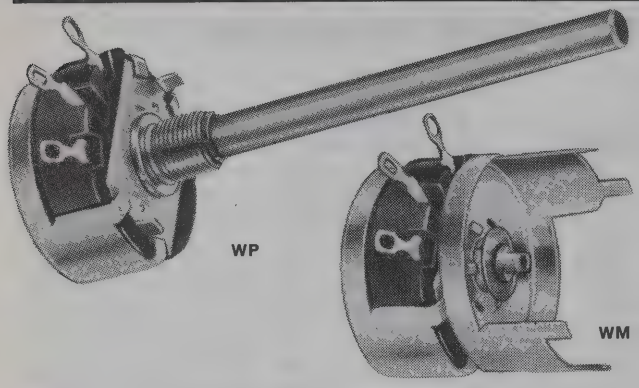
Resistance	IRC-CTS TYPE 300 7/8" Slotted Shaft 1/4" Long Bushing Linear Resistance Taper	CTS TYPE 300LT 5/8" Slotted Shaft 1/2" Long Locking Bushing Linear Resistance Taper
100 ± 10%	RV6NAYSD101A	RV6LAYSA101A
250 ± 10%	RV6NAYSD251A	RV6LAYSA251A
500 ± 10%	RV6NAYSD501A	RV6LAYSA501A
1,000 ± 10%	RV6NAYSD102A	RV6LAYSA102A
2,500 ± 10%	RV6NAYSD252A	RV6LAYSA252A
5,000 ± 10%	RV6NAYSD502A	RV6LAYSA502A
10,000 ± 10%	RV6NAYSD103A	RV6LAYSA103A
25,000 ± 10%	RV6NAYSD253A	RV6LAYSA253A
50,000 ± 10%	RV6NAYSD503A	RV6LAYSA503A
100,000 ± 10%	RV6NAYSD104A	RV6LAYSA104A
250,000 ± 10%	RV6NAYSD254A	RV6LAYSA254A
500,000 ± 10%	RV6NAYSD504A	RV6LAYSA504A
1.0 Meg. ± 20%	RV6NAYSD105B	RV6LAYSA105B
2.0 Meg. ± 20%	RV6NAYSD205B	RV6LAYSA205B
2.5 Meg. ± 20%	RV6NAYSD255B	RV6LAYSA255B

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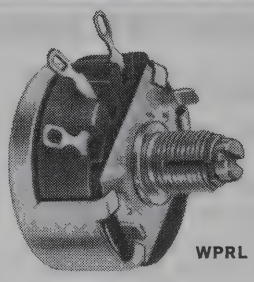
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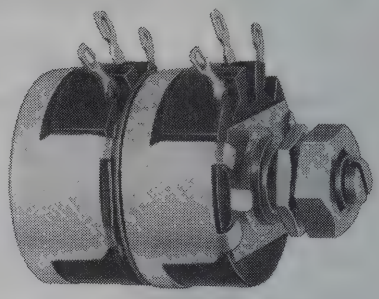
INDUSTRIAL 4W CONTROLS

INTERNATIONAL RESISTANCE COMPANY


WP

WM MULTISECTION


WPRL


WPRL with Multisection

TYPE 4/W INDUSTRIAL CONTROLS

IRC Type 4W Controls for industry provide 4 watt (linear) rating in conventional 2 watt size. Available in wide assortment of resistance values. Types WP and WPRL may be combined with Type WM Multisections to provide broad selection of tandem dual controls.

Special platings of metal parts provide outstanding appearance. Resistance tolerance of all units is ± 10%.

TYPE WP

A wirewound industrial control with ⅜-32 x ⅜" bushing and a full round shaft of ¼" diameter, approximately 3" long from mounting face. For 2, 3 and 4 watt requirements — 10% tolerance; linear taper; in 36 stock values as listed on the opposite page.

TYPE WM MULTISECTIONS

These 4 watt Multisections are rear control sections which add to Types WP and WPRL to supply a wide selection of tandem dual controls. Available in 13 factory-assembled stock numbers. WM Multisections do not operate power switches.

TYPE WPRL

A wirewound industrial control with a short, screwdriver slot shaft of ¼" diameter and approximately ½" long from mounting face, with ⅜" locking type bushing, and locking nut. For 2, 3 and 4 watt requirements — 10% tolerance; linear taper; 36 stock values.

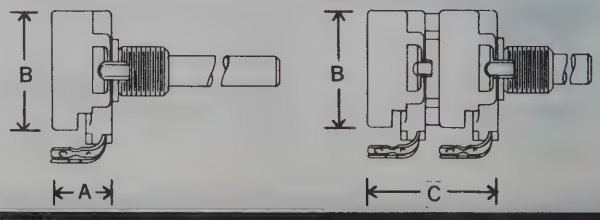
IRC-CTS TYPE 4/W INDUSTRIAL CONTROLS STOCK LIST

STOCK VALUES OF TYPE WP AND WPRL CONTROLS AND MULTISECTIONS 10% TOLERANCE

Ohms	Taper	Type WP	Type WPRL	Multisections
2	U (Lin.)	WP2	WPRL2	—
3	U	WP3	WPRL3	—
5	U	WP5	WPRL5	—
6	U	WP6	WPRL6	—
8	U	WP8	WPRL8	—
10	U	WP10	WPRL10	—
15	U	WP15	WPRL15	—
20	U	WP20	WPRL20	—
25	U	WP25	WPRL25	—
30	U	WP30	WPRL30	—
40	U	WP40	WPRL40	—
50	U	WP50	WPRL50	WM50
60	U	WP60	WPRL60	—
75	U	WP75	WPRL75	—
100	U	WP100	WPRL100	WM100
200	U	WP200	WPRL200	WM200
250	U	WP250	WPRL250	WM250
300	U	WP300	WPRL300	—
400	U	WP400	WPRL400	—
500	U	WP500	WPRL500	WM500
750	U	WP750	WPRL750	—
1,000	U	WP1000	WPRL1000	WM1000
1,500	U	WP1500	WPRL1500	WM1500
2,000	U	WP2000	WPRL2000	WM2000
2,500	U	WP2500	WPRL2500	WM2500
3,000	U	WP3000	WPRL3000	WM3000
4,000	U	WP4000	WPRL4000	—
5,000	U	WP5000	WPRL5000	WM5000
7,500	U	WP7500	WPRL7500	—
7,500	L (L.H. Log.)	—	—	WM7500L
10,000	U	WP10000	WPRL10000	WM10000
15,000	U	WP15000	WPRL15000	—
20,000	U	WP20000	WPRL20000	—
25,000	U	WP25000	WPRL25000	—
30,000	U	WP30000	WPRL30000	—
40,000	U	WP40000	WPRL40000	—
50,000	U	WP50000	WPRL50000	—

DIMENSIONS OF TYPE 4/W INDUSTRIAL CONTROLS

Dimension	WP	WPRL
A	23/32	23/32
B	1¼	1¼
C	1⅝2	1⅝2



CONSUMER AND DISTRIBUTOR PRODUCTS DIVISION

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INDUSTRIAL Q CONTROLS

IRC ½ watt controls for industrial and commercial applications provide a wide selection of resistance values, tapers and shaft styles. Types PQ, RQ and RQL may be combined with Type M Multisections to provide broad variety of multiple-section controls.

TYPE PQ

Control has full round ¼″ shaft, extending approximately 3″ from mounting face, and with ⅜″ long bushing. ½ watt power rating, 500 volts maximum. It is available in 33 stock values.

TYPE RQ

Control has a very short screwdriver slot shaft of ¼″ diameter and approximately ½″ long from mounting face, with ⅜″ long bushing. ½ watt power rating. Supplied in 33 stock values.

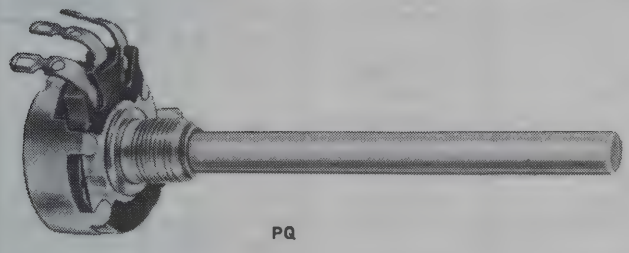
Electrical rotation of these controls is the same with or without power switches (See Type Q Accessories, pages 6 and 7). Special platings of metal parts provide excellent appearance. Resistance tolerance of all units is ± 10%.

TYPE RQL

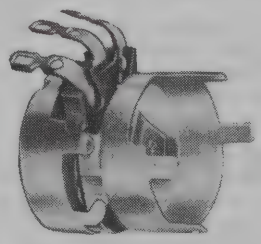
A 10% tolerance control with locking type bushing. Screwdriver slot shaft is ¼″ diameter and approximately ½″ long from mounting face, with a ⅜″ split type bushing, and locking nut. Supplied in 26 stock values. ½ watt power rating.

TYPE M MULTISECTIONS

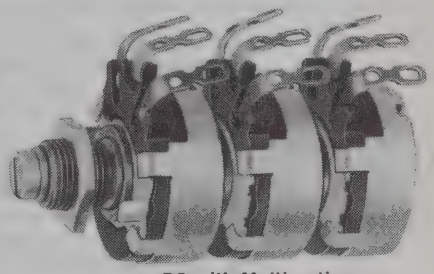
IRC Type M Multisections are rear control sections which add to Types PQ, RQ, RQL or any Type Q control to provide multiple-section tandem controls. Supplied in 25 stock numbers as listed on opposite page. Resistance tolerance is ± 10%. See pages and for power switches and other accessories.



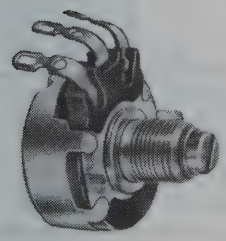
PQ



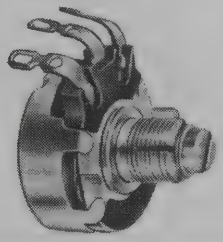
M



RQ with Multisections



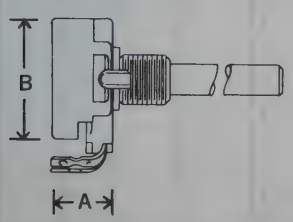
RQ

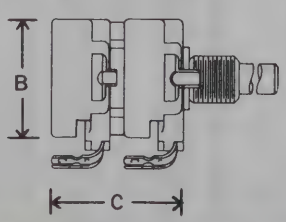


RQL

DIMENSIONS OF TYPE Q INDUSTRIAL CONTROLS

Dimension	PQ	RQ	RQL
A	33/64	33/64	33/64
B	15/16	15/16	15/16
C	1 1/64	1 1/64	1 1/64





IRC-CTS STOCK VALUES OF TYPES PQ, RQ, RQL CONTROLS AND MULTISECTIONS 10% TOLERANCE

Ohms	Taper*	Type PQ	Type RQ	Type RQL	Multisections
500	1(A)	PQ11-103	RQ11-103	RQL11-103	M11-103
1,000	2(A)	PQ11-108	RQ11-108	RQL11-108	M11-108
2,000	2(A)	PQ11-110	RQ11-110	RQL11-110	M11-110
3,000	2(A)	PQ11-112	RQ11-112	RQL11-112	M11-112
5,000	2(A)	PQ11-114	RQ11-114	RQL11-114	M11-114
7,500	2(A)	PQ11-115	RQ11-115	—	—
10K	2(A)	PQ11-116	RQ11-116	RQL11-116	M11-116
10K	3(C)	PQ13-116	RQ13-116	—	—
10K	23(D)	PQ14-116	RQ14-116	—	—
10K	4(Q)	—	—	—	M17-116
20K	2(A)	PQ11-119	RQ11-119	RQL11-119	—
25K	2(A)	PQ11-120	RQ11-120	RQL11-120	M11-120
25K	23(D)	PQ14-120	RQ14-120	—	—
30K	2(A)	PQ11-121	RQ11-121	RQL11-121	M11-121
50K	2(A)	RQ11-123	RQ11-123	RQL11-123	M11-123
50K	3(C)	PQ13-123	RQ13-123	RQL13-123	—
50K	23(D)	PQ14-123	RQ14-123	—	—
100K	2(A)	PQ11-128	RQ11-128	RQL11-128	M11-128
100K	3(C)	PQ13-128	RQ13-128	—	M13-128
200K	2(A)	PQ11-129	RQ11-129	RQL11-129	—
250K	2(A)	PQ11-130	RQ11-130	RQL11-130	M11-130
250K	3(C)	PQ13-130	RQ13-130	RQL13-130	M13-130
500K	2(A)	PQ11-133	RQ11-133	RQL11-133	M11-133
500K	3(C)	PQ13-133	RQ13-133	RQL13-133	M13-133
1.0 Meg.	2(A)	PQ11-137	RQ11-137	RQL11-137	M11-137
1.0 Meg.	3(C)	PQ13-137	RQ13-137	RQL13-137	M13-137
1.5 Meg.	2(A)	PQ11-138	RQ11-138	RQL11-138	—
1.5 Meg.	3(C)	—	—	—	M13-138
2.0 Meg.	2(A)	PQ11-139	RQ11-139	RQL11-139	M11-139
2.0 Meg.	3(C)	PQ13-139	RQ13-139	RQL13-139	M13-139
2.5 Meg.	2(A)	PQ11-239	RQ11-239	RQL11-239	—
3.0 Meg.	2(A)	PQ11-140	RQ11-140	RQL11-140	—
3.0 Meg.	3(C)	PQ13-140	RQ13-140	—	M13-140
3.0 Meg.	4(Q)	—	—	—	M17-140
5.0 Meg.	2(A)	PQ11-141	RQ11-141	RQL11-141	M11-141
10.0 Meg.	2(A)	PQ11-143	RQ11-143	RQL11-143	M11-143

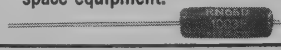
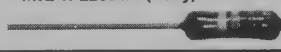
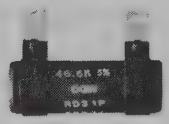
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CORNING® GLASS TIN OXIDE FILM RESISTORS

Fuse a tin oxide coating into the pure surface of freshly drawn glass, cut a helix in the coating, attach leads and you have a simple, rugged, exceptionally reliable CORNING resistor. Physically, the perfect matching of the thermal expansions of resistive film and substrate eliminates stressing of the film during sudden overloads and thermal shocking. Continuous process and quality monitoring combine with these high-quality inorganic materials to produce resistors with low TC guarantees from ±0.010% to 0.050%, depending on type. Noise levels are typically less than 0.1 uv/v. High-frequency characteristics assure non-inductive performance above 280 ohms.

Corning manufactures precision, general-purpose and power resistors to meet your circuit function, environment and duty-cycle requirements. Their performance and economic advantages will add value to your equipment.

	TYPE AND MIL SPEC	MODEL/MIL MODEL	RESISTANCE (ohms)	WATTAGE	TOLERANCE
NA	Especially designed for MIL-R-10509E, Characteristic D applications. Precise and predictable performance with surprising economy for military and space equipment. 	NA55D/RN55D NA60D/RN60D NA65D/RN65D NA70D/RN70D	51 to 150K 10 to 249K 10 to 500K 51 to 1 Meg.	⅛ @ 70°C ¼ @ 70°C ½ @ 70°C ¾ @ 70°C	1% 1% 1% 1%
C	General purpose, low-cost film type. Prices and sizes comparable to carbon composition type, but with film resistor performance characteristics MIL-R-22684A (Navy) 	C07/RL07AD C20/RL20AD C32/RL32AD C42S/RL42AD	51 to 150K 10 to 470K 10 to 1 meg. 10 to 1.5 meg.	¼ @ 70°C ½ @ 70°C 1 @ 70°C 2 @ 70°C	2%, 5% 2%, 5% 2%, 5% 2%, 5%
N-20	Proven stability in 60,000 hrs. testing. Uninsulated MIL-R-10509B. Char. X 	N12 N20/RN20 N25/RN25 N30/RN30	100 to 133K 10 to 500K 10 to 1.5 meg. 30 to 4.2 meg.	¼ @ 70°C ½ @ 70°C 1 @ 70°C 2 @ 70°C	1, 2, and 5% 1, 2, and 5% 1, 2, and 5% 1, 2. and 5%
LPI	Low-power resistors with exceptional frequency characteristics and glass stability. New LPI-10 in a substantially smaller package. Construction assures desired performance for rugged environmental duty. 			40°C / 70°C	
		LPI-2	9 to 1.5 Meg	3 / 2	5%, 10%
		LPI-3	9 to 40K	4 / 3	10%
		LPI-4	16 to 90K	5 / 4	10%
		LPI-5	19 to 110K	7 / 5	10%
		LPI-7	24 to 110K	— / 7	10%
		LPI-10	24 to 90K	10 / —	10%
S	Fixed-film type for high-temperature operation. Silicone baked lacquer. MIL-R-11804D. Char. P. 			130°C / 25°C	
		S20/RD60P	10 to 500K	½ / 1	1, 2, 5, 10%
		S25/RD65P	10 to 1.54 meg.	1 / 2	1, 2, 5, 10%
		S30/RD70P	30.1 to 4.22 meg.	2 / 4	1, 2, 5, 10%
R	Power type, essentially noninductive in high-frequency operations. MIL-R-11804D. 	R31/RD31P R33/RD33P R35/RD35P R37/RD37P R39/RD39P	10 to 70K 19.6 to 150K 19.6 to 301K 19.6 to 500K 30.1 to 1 meg.	7 @ 25°C 13 @ 25°C 25 @ 25°C 55 @ 25°C 115 @ 25°C	2, 5, 10% 2, 5, 10% 2, 5, 10% 2, 5, 10% 2,5 , 10%

STANDARD VALUES*

NA, N, S, R RESISTORS — 1, 2, and 5% Tolerances

1%	2%	5%	1%	2%	5%	1%	2%	5%	1%	2%	5%
1.00	1.00	1.00	1.78	1.78	1.78	3.16	3.16	3.16	5.62	5.62	5.62
1.02			1.82			3.24			5.76		
1.05	1.05		1.87	1.87		3.32	3.32		5.90	5.90	
1.07			1.91			3.40			6.04		
1.10	1.10	1.10	1.96	1.96	1.96	3.48	3.48	3.48	6.19	6.19	6.19
1.13			2.00			3.57			6.34		
1.15	1.15		2.05	2.05		3.65	3.65		6.49	6.49	
1.18			2.10			3.74			6.65		
1.21	1.21	1.21	2.15	2.15	2.15	3.83	3.83	3.83	6.81	6.81	6.81
1.24			2.21			3.92			6.98		
1.27	1.27		2.26	2.26		4.02	4.02		7.15	7.15	
1.30			2.32			4.12			7.32		
1.33	1.33	1.33	2.37	2.37	2.37	4.22	4.22	4.22	7.50	7.50	7.50
1.37			2.43			4.32			7.68		
1.40	1.40		2.49	2.49		4.42	4.42		7.87	7.87	
1.43			2.55			4.53			8.06		
1.47	1.47	1.47	2.61	2.61	2.61	4.64	4.64	4.64	8.25	8.25	8.25
1.50			2.67			4.75			8.45		
1.54	1.54		2.74	2.74		4.87	4.87		8.66	8.66	
1.58			2.80			4.99			8.87		
1.62	1.62	1.62	2.87	2.87	2.87	5.11	5.11	5.11	9.09	9.09	9.09
1.65			2.94			5.23			9.31		
1.69	1.69		3.01	3.01		5.36	5.36		9.53	9.53	
1.74			3.09			5.49			9.76		

C RESISTORS

±2% & ±5%	±10%†
10	10
11	—
12	12
13	—
15	15
16	—
18	18
20	—
22	22
24	—
27	27
30	—
33	33
36	—
39	39
43	—
47	47
51	—
56	56
62	—
68	68
75	—
82	82
91	—

*Standard resistance values are obtained from the decade table by multiplying by multiples of 10. As an example, 1.33 can represent 13.3 ohms, 133 ohms, 1.33k, 13.3k, 133k, 1.33 megohm.
*Values not listed are considered non-standard. †C42 only.

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VITREOUS ENAMELED RHEOSTATS

Twelve sizes in wirewound, vitreous enameled rheostats are stocked by Ohmite distributors all over the country and at the Ohmite factory. This selection, the most extensive available to industry, covers ratings that meet the major portion of design, production and emergency needs. Ratings of 7½, 12½, 25, 50, 75, 100, 150, 225, 300, 500, 750 and 1000 watts are standard.

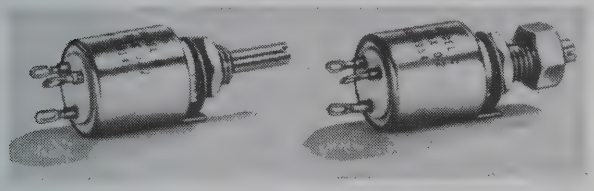
FEATURES OF CONSTRUCTION: Ohmite rheostats are designed to produce permanently smooth, close control. The construction is all ceramic and metal; there is nothing to smoke, char, shrink, or shift. All models have insulated shafts with provision to keep the rheostat from turning on the panel. The resistance wire is wound over a solid ceramic core. Each turn is a separate resistance step and is locked against shifting by vitreous enamel. The core and base are also bonded by vitreous enamel. The pivoted universal-action-mounted contact brush is of copper-graphite or silver-graphite on the heavier current rheostats. It rides upon a large flat surface and assures perfect contact without wear on the wire. Pressure at the contact and at the center lead are independent. Ohmite Rheostat Models H, J, G, K, L, P, and N, all marked Series A, are listed under the Underwriters' Laboratories Reexamination Service.

RATING: The current carrying capacities shown in the tables are for use in *free air;* when units are enclosed, these currents should be reduced possibly as much as 30% to 50%, depending upon the degree of ventilation. The rated current will cause the rheostat to dissipate its rated wattage when the full resistance is in the circuit.

MODEL "C" — MINIATURE RHEOSTAT

In this era of miniaturization and transistorization, the Model C enlarges the horizons of designers by providing greater design flexibility. In addition to its small size, its versatile solder terminals will also plug into common transistor sockets or circuit boards. It is stocked with both standard and locking type bushings.

Actual Size



MODEL "C" — 7½ WATT*

Standard & Locking Bushings

Diameter .515" max. — Depth behind panel ⅞" — Shaft ⅛" diameter, slotted for both types; Std. shaft accommodates knob — Rotation 300° — Mounting for panels up to ⅛" by means of ¼"-32 bushing and hex nut — Non-turn lug requires ⅛" hole ¼" below center of shaft — No. 5151 knob recommended — Solder terminals will fit EIA type TS-E3R100 transistor socket — Wt. 0.27 oz.

		Standard Shaft		Locking Shaft	
Ohms	Amps.	Stock No.	Net 1-4	Stock No.	Net 1-4
10	.86	4908	$ 8.59	4948	10.48
15	.71	4909	8.59	4949	10.48
25	.55	4910	8.59	4950	10.48
35	.46	4911	8.59	4951	10.48
50	.39	4912	8.59	4952	10.48
75	.32	4913	8.59	4953	10.48
100	.27	4914	8.59	4954	10.48
150	.22	4915	8.59	4955	10.48
200	.19	4916	8.59	4956	10.48
250	.17	4917	8.59	4957	10.48
350	.15	4918	8.59	4958	10.48
500	.12	4919	8.59	4959	10.48
750	.10	4920	8.59	4960	10.48
1000	.086	4921	9.72	4961	11.61
1500	.071	4922	9.72	4962	11.61
2500	.055	4923	9.72	4963	11.61
3500	.046	4924	10.15	4964	12.04
5000	.039	4925	10.15	4965	12.04

*Rating on metal panel.
3-Pin Socket for Model C Rheostat: Stock No. 6595, Net 1-4, $.42

MODEL "E" — 12.5 WATT*

Unenclosed and Enclosed

Diameter ⅞"—Depth behind panel 1 1/16"—Shaft ⅛" Diameter. Rotation 300°—Mounting for panels up to ⅛" by means of ¼"-32 Bushing and Hex. Nut—Non-turn lug requires ⅛" hole ¼" below center of shaft—Stock No. 5151 Knob Recommended.
Enclosure including terminals 1 3/32" long by 1 3/64" diameter.

		Unenclosed		Enclosed	
Total Ohms	Max. Amps.	Stock No.	Net 1-4	Stock No.	Net 1-4
1	3.53	0101	$4.63	W0101	$6.31
2	2.50	0102	4.63	W0102	6.31
2.5	2.24	0102A	4.63	W0102A	6.31
3	2.04	0103	4.63	W0103	6.31
5	1.58	0103A	4.63	W0103A	6.31
6	1.44	0104	4.63	W0104	6.31
8	1.25	0105	4.63	W0105	6.31
10	1.12	0106	4.63	W0106	6.31
15	.91	0107	4.11	W0107	5.79
25	.71	0108	4.11	W0108	5.79
35	.60	0109	4.11	W0109	5.79
50	.50	0110	4.11	W0110	5.79
75	.41	0111	4.11	W0111	5.79
100	.35	0112	4.11	W0112	5.79
125	.32	0113	4.11	W0113	5.79
150	.29	0113A	4.11	W0113A	5.79
175	.27	0114	4.11	W0114	5.79
200	.25	0114A	4.11	W0114A	5.79
250	.22	0115	4.11	W0115	5.79
350	.19	0116	4.11	W0116	5.79
500	.16	0117	4.11	W0117	5.79
750	.13	0118	4.11	W0118	5.79
1,000	.11	0119	4.63	W0119	6.31
1,500	.091	0120	4.63	W0120	6.31
2,500	.071	0121	4.63	W0121	6.31
3,500	.060	0122	4.90	W0122	6.58
5,000	.050	0123	4.90	W0123	6.58
7,500	.041	4190†	5.06	W4190†	6.74
10,000	.035	4191†	5.06	W4191†	6.74
12,500	.031	4192†	5.50	W4192†	7.18
15,000	.029	4193†	5.50	W4193†	7.18

†Silicone-ceramic coating, 350 V. max. *Rating on metal panel.

MODEL "H", Series A — 25 WATT

Diameter 1 1/16"—Depth behind panel 1⅜"—Shaft ¼" diameter. Rotation 300°—Mounting for panels up to ¼" by means of ⅜"-32 Bushing and Hex. Nut—Non-turn lug requires 5/16" hole ½" below center of shaft—Stock No. 5150 Knob Recommended.

Stock No.	Total Ohms	Max. Amps.	Net 1-4	Stock No.	Total Ohms	Max. Amps.	Net 1-4
0140	1	5.000	$4.63	0154	250	.316	$4.11
0141	2	3.540	4.63	0155	350	.267	4.11
0142	3	2.880	4.63	0156	500	.222	4.11
0143	6	2.040	4.63	0157	750	.182	4.11
0144	8	1.770	4.63	0158	1,000	.155	4.63
0145	10	1.580	4.63	0159	1,500	.129	4.63
0146	15	1.290	4.11	0160	2,500	.100	4.63
0147	25	1.000	4.11	0161	3,500	.084	4.90
0148	35	.845	4.11	0162	5,000	.070	4.90
0149	50	.707	4.11	4200†	7,500	.058	5.06
0150	75	.575	4.11	4201†	10,000	.050	5.06
0151	100	.500	4.11	4202†	15,000	.040	5.50
0152	125	.445	4.11	4203†	20,000	.035	6.16
0153	175	.375	4.11	4204†	25,000	.032	6.82

†Silicone-ceramic coating, 500 V. max. Not listed UL Ser. A.

MODEL "J", Series A — 50 WATT

Diameter 2 5/16"—Depth behind panel 1⅜"—Shaft ¼" Diameter. Rotation 300°—Mounting for panels up to ¼" by means of ⅜"-32 Bushing and Hex Nut—Non-turn lug requires 5/16" hole ½" below center of shaft—Stock No. 5150 Knob Recommended.

Stock No.	Total Ohms	Max. Amps.	Net 1-4	Stock No.	Total Ohms	Max. Amps.	Net 1-4
0308	0.5	10.000	$5.15	0324	500	.316	$4.63
0309	1	7.070	5.15	0325	800	.250	4.90
0310	2	5.000	5.15	0326	1,000	.224	4.90
0311	4	3.530	5.15	0327	1,600	.176	4.90
0312	6	2.880	5.15	0328	2,500	.141	4.90
0313	8	2.500	4.63	0329	3,500	.119	5.15
0314	12	2.040	4.63	0330	5,000	.100	5.15
0315	16	1.760	4.63	0331	8,000	.079	5.15
0316	22	1.500	4.63	0332	10,000	.070	5.15
0317	35	1.190	4.63	4210†	15,000	.058	5.83
0318	50	1.000	4.63	4211†	20,000	.050	6.60
0319	80	.790	4.63	4212†	25,000	.045	7.26
0320	125	.630	4.63	4213†	30,000	.041	8.03
0321	150	.575	4.63	4214†	40,000	.035	9.35
0322	225	.470	4.63	4215†	50,000	.032	10.23
0323	300	.408	4.63				

†Silicone-ceramic coating, 750 V. max. Not listed UL Ser. A.

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VITREOUS ENAMELED RHEOSTATS

MODEL "G" — 75 WATT

Diameter 2¾"—Depth behind panel 1¾"—Shaft ¼" Diameter. Rotation 300°—Mounting for panels up to ¼" by means of ⅜"-32 Bushing and Hex. Nut—Non-turn lug requires $\frac{3}{16}$" hole ½" below center of shaft—Stock No. 5150 Knob Recommended.

Stock No.	Total Ohms	Max. Amps	Net 1-4	Stock No.	Total Ohms	Max. Amps.	Net 1-4
1100	0.5	12.300	$6.97	1112	200	.612	$6.41
1101	1	8.660	6.97	1113	300	.500	6.41
1102	2	6.120	6.97	1114	400	.433	6.41
1103	3	5.000	6.97	1115	500	.388	6.41
1104	5	3.880	6.97	1116	750	.316	6.97
1105	7.5	3.160	6.97	1117	1,000	.274	6.97
1106	10	2.740	6.97	1118	1,500	.224	6.97
1107	16	2.170	6.41	1119	2,000	.194	6.97
1108	25	1.730	6.41	1120	2,500	.173	6.97
1109	50	1.230	6.41	1121	5,000	.123	7.45
1110	75	1.000	6.41	1122	7,500	.100	8.00
1111	100	.866	6.41	1123	10,000	.087	8.00

MODEL "K", Series A — 100 WATT

Diameter 3⅛"—Depth behind panel 1¾"—Shaft ¼" Diameter. Rotation 300°—Mounting for panels up to ¼" by means of ⅜"-32 Bushing and Hex. Nut—Non-turn lug requires $\frac{3}{16}$" hole ½" below center of shaft—Stock No. 5150 Knob Recommended.

Stock No.	Total Ohms	Max. Amps.	Net 1-4	Stock No.	Total Ohms	Max. Amps.	Net 1-4
0440	0.5	14.100	$7.72	0452	200	.707	$7.21
0441	1	10.000	7.72	0453	300	.575	7.21
0442	2	7.070	7.72	0454	400	.500	7.21
0443	3	5.750	7.72	0455	500	.447	7.21
0444	5	4.470	7.72	0456	750	.365	7.21
0445	7.5	3.650	7.72	0457	1,000	.316	7.72
0446	10	3.160	7.72	0458	1,500	.258	7.72
0447	16	2.500	7.21	0459	2,000	.224	7.72
0448	25	2.000	7.21	0460	2,500	.200	7.72
0449	50	1.410	7.21	0461	5,000	.141	8.24
0450	75	1.150	7.21	0462	7,500	.115	8.76
0451	100	1.000	7.21	0463	10,000	.100	9.26

MODEL "L", Series A — 150 WATT

Diameter 4"—Depth behind panel 2"—Shaft ¼" Diameter. Rotation 300°—Mounting for panels up to ¼", ⅜"-32 Bushing and Hex. Nut or two 10-32 x ¾" flat head screws, mounting centers ⅞" each side of center of shaft on line perpendicular to center terminal.—Stock No. 5150 Knob Recommended.

Stock No.	Total Ohms	Max. Amps.	Net 1-4	Stock No.	Total Ohms	Max. Amps.	Net 1-4
0524	0.5	17.300	$9.78	0537	150	1.000	$ 9.26
0525	1	12.300	9.78	0538	200	.865	9.26
0526	2	8.650	9.78	0539	250	.775	9.26
0527	3	7.070	9.78	0540	350	.655	9.26
0528	5	5.480	9.78	0541	500	.548	9.26
0529	7.5	4.470	9.78	0542	750	.447	9.78
0530	10	3.880	9.78	0543	1,250	.346	9.78
0531	15	3.613	9.78	0544	1,800	.288	10.30
0532	25	2.450	9.26	0545	2,250	.259	10.30
0533	35	2.070	9.26	0546	3,000	.224	10.30
0534	50	1.735	9.26	0547	4,500	.182	10.81
0535	75	1.415	9.26	0548	7,500	.141	11.33
0536	100	1.225	9.26	0549	10,000	.122	12.35

MODEL "P" — 225 WATT

Diameter 5"—Depth behind panel 2⅛"—Shaft ⅜" Diameter. Rotation 310°—Mounting for panels up to 1¼", two ¼"-20 x 1½" flat head screws, mounting centers ⅞" each side of center of shaft on center line of cross-bar.—Stock No. 5105 Knob Recom'd. Three 8-32 Terminal Screws, Nuts and Washers are supplied.

Stock No	Total Ohms	Max. Amps.	Net 1-2	Stock No.	Total Ohms	Max. Amps.	Net 1-2
1250	1	15.000	$14.11	1261	100	1.500	$14.11
1251	2	10.600	14.11	1262	150	1.220	14.11
1252	3	8.660	14.11	1263	200	1.060	14.11
1253	4	7.500	14.11	1264	300	.866	14.11
1254	5	6.710	14.11	1265	400	.750	14.11
1255	7.5	5.490	14.11	1266	700	.567	14.11
1256	10	4.740	14.11	1267	900	.500	14.11
1257	15	3.870	14.11	1268	1,200	.433	14.11
1258	25	3.000	14.11	1269	1,500	.387	14.11
1259	50	2.120	14.11	1270	1,750	.358	14.11
1260	75	1.730	14.11	1270A	2,000	.336	14.11
				1271	2,500	.300	14.11

MODEL "N", Series A — 300 WATT

Diameter 6"—Depth behind panel 2⅜"—Shaft ⅜" Diameter. Rotation 320°—Mounting for panels up to 1¼", two ¼"-20 x 1½" flat head screws, mounting centers $1\frac{3}{16}$" each side of center of shaft on center line of cross-bar.—Stock No. 5105 Knob Recom'd. Three 8-32 Terminal Screws, Nuts and Washers are supplied.

Stock No.	Total Ohms	Max. Amps.	Net 1-2	Stock No.	Total Ohms	Max. Amps.	Net 1-2
0650	1	17.320	$15.29	0661	100	1.730	$15.29
0651	2	12.240	15.29	0662	150	1.410	15.29
0652	3	10.000	15.29	0663	200	1.220	15.29
0653	4	8.660	15.29	0664	300	1.000	15.29
0654	5	7.750	15.29	0665	400	.866	15.29
0655	7.5	6.320	15.29	0666	700	.655	15.29
0656	10	5.480	15.29	0667	900	.578	15.29
0657	15	4.470	15.29	0668	1,200	.500	15.29
0658	25	3.460	15.29	0669	1,500	.447	15.29
0659	50	2.450	15.29	0670	1,750	.414	15.29
0660	75	2.000	15.29	0670A	2,000	.387	15.29
				0671	2,500	.346	15.29

MODEL "R" — 500 WATT

Diameter 8"—Depth behind panel 2⅛"—Shaft ⅜" Diameter. Rotation 325°—Mounting for panels up to 1¼", two ¼"-20 x 1½" flat head screws, mounting centers 1½" each side of center of shaft on center line of cross-bar.—Stock No. 5105 Knob Recom'd. Three 8-32 Terminal Screws, Nuts and Washers are supplied.

Stock No.	Total Ohms	Max. Amps.	Net 1-2	Stock No.	Total Ohms	Max. Amps.	Net 1-2
0849	1.0	22.300	$22.09	0872	50	3.160	$22.09
0850	1.5	18.200	22.09	0861	80	2.520	22.09
0851	2	15.800	22.09	0862	125	2.000	22.09
0852	2.5	14.100	22.09	0863	175	1.690	22.09
0853	3	12.900	22.09	0864	250	1.410	22.09
0854	4	11.200	22.09	0865	325	1.240	22.09
0855	5	10.000	22.09	0866	500	1.000	22.09
0856	8	7.900	22.09	0867	750	.817	22.09
0857	12.5	6.300	22.09	0868	1,000	.707	22.09
0858	16	5.600	22.09	0869	1,500	.577	22.09
0859	25	4.470	22.09	0870	2,000	.500	22.09
0860	40	3.540	22.09	0871	2,500	.447	22.09

MODEL "T" — 750 WATT

Diameter 10"—Depth behind panel 3"—Shaft ⅜" Diameter. Rotation 330°—Mounting for panels up to 1¼", two ¼"-20 x 1½" flat head screws, mounting centers 1⅞" each side of center of shaft on center line of cross-bar.—Stock No. 5105 Knob Recom'd. Three 8-32 Terminal Screws, Nuts and Washers are supplied.

Stock No.	Total Ohms	Max. Amps.	Net 1-2	Stock No.	Total Ohms	Max. Amps.	Net 1-2
1300	1	27.400	$31.20	1312	50	3.870	$31.20
1301	1.5	22.300	31.20	1313	80	3.060	31.20
1302	2	19.400	31.20	1314	100	2.740	31.20
1303	2.5	17.300	31.20	1315	160	2.170	31.20
1304	3	15.800	31.20	1316	200	1.940	31.20
1305	4	13.600	31.20	1317	300	1.580	31.20
1306	5	12.200	31.20	1318	400	1.370	31.20
1307	8	9.650	31.20	1319	600	1.117	31.20
1308	10	8.650	31.20	1320	750	1.000	31.20
1309	12.5	7.750	31.20	1321	1,200	.791	31.20
1310	16	6.820	31.20	1322	1,800	.646	31.20
1311	25	5.470	31.20	1322A	2,000	.610	31.20
				1323	2,500	.547	31.20

MODEL "U" — 1000 WATT

Diameter 12" — Depth behind panel 3" — Shaft ⅜" Diameter. Rotation 335°—Mounting for panels up to 1¼", two ¼"-20 x 1½" flat head screws, mounting centers 3" each side of center of shaft on center line of cross-bar.—Stock No. 5105 Knob Recom'd. Three 8-32 Terminal Screws, Nuts and Washers are supplied.

Stock No.	Total Ohms	Max. Amps.	Net 1-2	Stock No.	Total Ohms	Max. Amps	Net 1-2
1450	1	31.600	$36.45	1462	50	4.470	$36.45
1451	1.5	25.800	36.45	1463	75	3.650	36.45
1452	2	22.400	36.45	1464	100	3.160	36.45
1453	2.5	20.000	36.45	1465	175	2.390	36.45
1454	3	18.300	36.45	1466	225	2.110	36.45
1455	4	15.800	36.45	1467	300	1.830	36.45
1456	5	14.100	36.45	1468	400	1.580	36.45
1457	8	11.200	36.45	1469	500	1.410	36.45
1458	10	10.000	36.45	1470	750	1.150	36.45
1459	12.5	8.950	36.45	1471	1,000	1.000	36.45
1460	16	7.900	36.45	1472	1,500	.816	36.45
1461	25	6.330	36.45	1473	2,500	.633	36.45

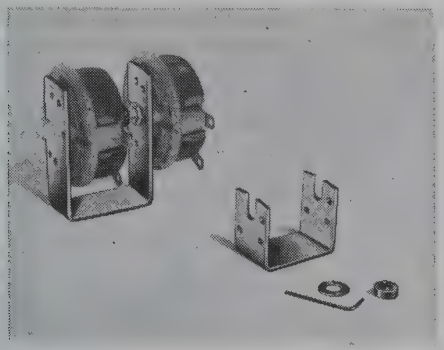
CATALOG 50 LISTS ALL RHEOSTATS TO MEET MILITARY SPECIFICATION MIL-R-22B

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semiconductor diodes • r.f. chokes

RHEOSTAT TANDEM COUPLING KITS



Inexpensive kits assemble standard Ohmite Model G, H, J, K, L or E (miniature) rheostats. Each kit consists of a steel "U" frame, a coupling with set screw, mica washer, Allen wrench and assembly instructions. Rheostat shafts are joined by the coupling which is fastened to the shaft of the rear unit. Projections on the coupling fit a recess in the rear hub of the front unit. Stock No. 6533 kit, mounts Model G, K or L units but accommodates Models H or J in the rear position. Stock No. 6532 unit mounts Models H or J but accommodates Models G, K or L in the rear position. Stock No. 6591 kit assembles only Model E (miniature) rheostats.

Stock No. 6532 — Max Panel 1/8".....Net Each (1-4) $2.01
Stock No. 6533 — Max Panel 5/32".....Net Each (1-4) 2.51
Stock No. 6591 — Max Panel 1/16".....Net Each (1-4) 2.01

BLACK BAKELITE KNOBS

Stock No.	Description	Knob Dia.	Hole Dia.	Net Ea. 1-2
5102	Bar Knob, 2¼" long		¼"	$ .50
5103	Bar Knob, 1¼" long		¼"	.21
5104	Handwheel with Pointer	3¼"	⅜"	1.38
5105	Handwheel without Pointer	3¼"	⅜"	1.16
5106	Handwheel with Pointer	3¼"	¼"	1.38
5107	Handwheel without Pointer	3¼"	¼"	1.16
5109	Finger-Grip with Pointer	1⅝"	¼"	.89
5110	Finger-Grip without Pointer	1⅝"	¼"	.82
5111	Finger-Grip with Pointer	2⅜"	¼"	1.32
5112	Finger-Grip without Pointer	2⅜"	¼"	1.21
*5115	Bar Knob, 4¾" long		⅜"	3.00
5116	Bar Knob, 1½" long		¼"	.50
5150	Skirted Finger-Grip	1½"	¼"	.29
5151	Finger-Grip	¾"	⅛"	.29
5152A	Like 5104 but shorter pointer	3¼"	¼"	1.60

*Requires pin and tapped hole in shaft.



MOLDED COMPOSITION POTENTIOMETERS, ½ and 2 WATTS

Used in commercial and military electronic applications where high quality and dependable performance are important. Type AB, 1 5/32" dia., is rated 2 watts at 70°C ambient and is available with ⅞" slotted shaft (CMU), 2" unslotted shaft (CU, CA, CB, CCU dual unit) and locking type slotted shaft (CLU). Type AS, a miniature unit ½" dia. rated ½ watt, is available with locking type shaft (Style AS) or ⅞" slotted shaft for knob control (Style ASM).

Because of their molded composition elements, these units outlast and outperform film type units. Noise level is exceedingly low. Single control Type AB units extend ⅝" behind panel; dual control 1 17/64". Type AS miniature unit extends 11/16" behind panel. An SPST switch for single Type AB units is available. Units are dust and splash proof, fungus and corrosion resistant and meet the latest requirements of MIL-R-94. Styles CMU, CLU, Styles AS and ASM conform respectively to MIL-R-94 Styles RV4N, RV4L, RV6L, and RV6N.

STOCK "POTS" — MIL Units are Stamped with MIL and Commercial Designations

Resistance Ohms Except As Noted Tol. ±10% except *±20%	TYPE AB (1 5/32" Dia.) Single Unit ⅞" Shaft: Style CMU Linear	MIL Design-nation	Single Unit 2" Shaft: Style CU Linear	Style CA CW log	Style CB CCW log	Locking: Style CLU Linear	MIL Design-nation	Dual: Style CCU Linear	TYPE AS (½" Dia.) Miniature Locking: Style AS Linear	MIL Design-nation	Miniature ⅞" Shaft: Style ASM Linear	MIL Design-nation
50	CMU5001	500A	CU5001			CLU5001	500A					
100	CMU1011	101A	CU1011			CLU1011	101A		AS3601	101A	ASM6661	101A
150	CMU1511	151A	CU1511			CLU1511	151A					
250	CMU2511	251A	CU2511			CLU2511	251A		AS3602	251A	ASM6662	251A
350	CMU3511	351A	CU3511			CLU3511	351A					
500	CMU5011	501A	CU5011			CLU5011	501A		AS3603	501A	ASM6663	501A
750	CMU7511	751A	CU7511			CLU7511	751A					
1,000	CMU1021	102A	CU1021			CLU1021	102A		AS3604	102A	ASM6664	102A
1,500	CMU1521	152A	CU1521			CLU1521	152A					
2,500	CMU2521	252A	CU2521			CLU2521	252A		AS3605	252A	ASM6665	252A
3,500	CMU3521	352A	CU3521			CLU3521	352A					
5,000	CMU5021	502A	CU5021			CLU5021	502A		AS3606	502A	ASM6666	502A
7,500	CMU7521	752A	CU7521			CLU7521	752A					
10,000	CMU1031	103A	CU1031		CB1031	CLU1031	103A		AS3607	103A	ASM6667	103A
15,000	CMU1531	153A	CU1531			CLU1531	153A					
25,000	CMU2531	253A	CU2531		CB2531	CLU2531	253A		AS3608	253A	ASM6668	253A
35,000	CMU3531	353A	CU3531			CLU3531	353A					
50,000	CMU5031	503A	CU5031		CB5031	CLU5031	503A		AS3609	503A	ASM6669	503A
75,000	CMU7531	753A	CU7531			CLU7531	753A					
.1 meg.	CMU1041	104A	CU1041	CA1041		CLU1041	104A		AS3610	104A	ASM6670	104A
.15 meg.	CMU1541	154A	CU1541			CLU1541	154A					
.25 meg.	CMU2541	254A	CU2541	CA2541		CLU2541	254A		AS3611	254A	ASM6671	254A
.35 meg.	CMU3541	354A	CU3541			CLU3541	354A					
.5 meg.	CMU5041	504A	CU5041	CA5041		CLU5041	504A		AS3612	504A	ASM6672	504A
.75 meg.*	CMU7542	754B	CU7542			CLU7542	754B					
1.0 meg.*	CMU1052	105B	CU1052	CA1052		CLU1052	105B		AS3613	105B	ASM6673	105B
1.5 meg.*	CMU1552	155B	CU1552			CLU1552	155B					
2.0 meg.*	CMU2052	205B	CU2052			CLU2052	205B		AS3684	205B	ASM6674	205B
2.5 meg.*	CMU2552	255B	CU2552	CA2552		CLU2552	255B		AS3614	255B	ASM6675	255B
3.5 meg.*	CMU3552	355B	CU3552			CLU3552	355B					
5.0 meg.*	CMU5052	505B	CU5052			CLU5052	505B		AS3615	505B	ASM6676	505B
Weight	.064 lb.		.084 lb.			.070 lb.		.123 lb.	.017 lb.		.017 lb.	
Net Price 1-9	$1.95		$1.95	$2.25	$2.25	$2.55		$5.85	$5.10		$5.10	

Resistance Shown is for Each Unit

RV4NAYSD — RV4LAYSA — RV6LAYSA — RV6NAYSD

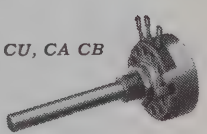
Switch CS-1 (Unmounted) for CMU, CU, CA, CB, CLU.....Net $.66

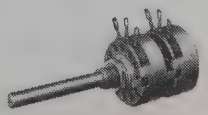

Style AS
MIL Style RV6L


Style ASM
MIL Style RV6N


Style CMU
MIL Style RV4N


Style CLU
MIL Style RV4L


Styles CU, CA CB


Style CCU

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OHMITE VITREOUS ENAMELED FIXED AND DIVIDOHM® RESISTORS

10 WATT SIZE RESISTOR

Core: 1¾" x 5/16" — Mounting Centers 2 3/16"

Res. Ohms	Max. Amps.	Fixed Resist. Stock No.	Fixed Resist. Net 1-9	Adj. Resist. Stock No.	Adj. Resist. Net 1-9
.51	4.43	3723	$ .57		
1.0	3.16	3730	.57	1001	$1.14
1.5	2.57	3734	.57		
2	2.24			1002	1.14
2.2	2.13	3738	.57		
3	1.83			1003	1.14
3.3	1.74	3742	.57		
4.7	1.46	3746	.57		
5	1.41			1004	1.14
6.8	1.21	3750	.57		
7.5	1.16			1005	1.14
10	1.00	3754	.57	1006	1.14
12	.91	3756	.57		
15	.82	3758	.57	1007	1.14
18	.74	3760	.57		
20	.71			1008	1.14
22	.67	3762	.57		
25	.63			1009	1.14
27	.61	3764	.57		
33	.55	3766	.57		
39	.51	3768	.57		
47	.46	3770	.57		
50	.45			1010	1.14
56	.42	3772	.57		
68	.38	3774	.57		
75	.37			1011	1.14
82	.35	3776	.57		
100	.32	3778	.57	1012	1.14
120	.29	3780	.57		
150	.26	3782	.57	1013	1.14
180	.24	3784	.57		
200	.22			1014	1.14
220	.21	3786	.57		
250	.20			1015	1.14
270	.19	3788	.57		
300	.18			1016	1.14
330	.17	3790	.57		
350	.17			1017	1.14
390	.16	3792	.57		
400	.16			1018	1.14
470	.15	3794	.57		
500	.14			1019	1.14
560	.13	3796	.57		
600	.13			1020	1.14
680	.12	3798	.57		
750	.12			1021	1.14
800	.11			1022	1.14
820	.11	3800	.57		
1,000	.10	3802	.57	1023	1.14
1,200	.091	3804	.61		
1,250	.089			1024	1.18
1,500	.081	3806	.61	1025	1.18
1,800	.075	3808	.61		
2,000	.071			1026	1.18
2,200	.067	3810	.61		
2,250	.066			1027	1.18
2,500	.063			1028	1.18
2,700	.062	3812	.61		
3,000	.057			1029	1.18
3,300	.055	3814	.61		
3,500	.053			1030	1.18
3,900	.051	3816	.61		
4,000	.050			1031	1.18
4,500	.047			1032	1.18
4,700	.046	3818	.61		
5,000	.045			1033	1.18
5,600	.042	3820	.70		
6,000	.041			1034	1.27
6,800	.038	3822	.70		
7,000	.038			1035	1.27
7,500	.036			1036	1.27
8,000	.035			1037	1.27
8,200	.035	3824	.70		
8,500	.034			1038	1.27
9,000	.033			1039	1.27
10,000	.032	3826	.70	1040	1.27
12,000	.029	3828	.79		
15,000	.026	3830	.79		
18,000	.023	3832	.79		
22,000	.021	3834	.83		
27,000	.019	3836	.83		
33,000	.017	3838	.83		
39,000	.016	3840	.83		
47,000	.015	3842	.93		
51,000	.014	3843	.93		

ADJUSTABLE LUGS

Bakelite Knob Res. Dia.	Bakelite Knob Stock No.	Bakelite Knob Net 1-9	Screw Driver Type Res. Dia.	Screw Driver Type Stock No.	Screw Driver Type Net 1-9
9/16"	0359	$0.31	5/16"	1058	$0.14
3/4"	1959	.31	9/16"	0358	.14
1 1/8"	2159	.40	3/4"	1958	.14
			1 1/8"	2158	.23

25 WATT SIZE RESISTOR

Core: 2" x 5/16" — Mounting Centers 2¾"

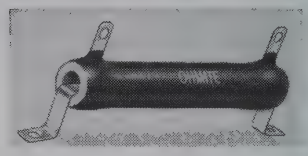
Res. Ohms	Max. Amps.	Fixed Resist. Stock No.	Fixed Resist. Net 1-9	Adj. Resist. Stock No.	Adj. Resist. Net 1-9
1	5.00	0200J	$0.72	0360	$1.29
2	3.54	0200K	.72	0360B	1.29
3	2.88	0200L	.72	0361	1.29
5	2.24	0200A	.72	0362	1.29
7.5	1.82			0362B	1.29
10	1.58	0200B	.72	0363	1.29
15	1.29	0200R	.72	0364	1.29
20	1.12			0364B	1.29
25	1.00	0200C	.72	0365	1.29
50	.71	0200D	.72	0366	1.29
75	.58	0200E	.72	0367	1.29
100	.50	0200F	.72	0368	1.29
150	.41	0200G	.72	0369	1.29
200	.35	0200H	.72	0370	1.29
250	.32	0201	.72	0371	1.29
300	.29			0371B	1.29
400	.25			0371C	1.29
500	.22	0202	.72	0372	1.29
750	.18	0203	.72	0373	1.29
800	.17	0204	.72	0374	1.29
1,000	.16	0205	.72	0375	1.29
1,250	.14			0375B	1.32
1,500	.13	0206	.75	0376	1.32
2,000	.12	0207	.75	0377	1.32
2,250	.11			0377B	1.32
2,500	.10	0208	.75	0378	1.32
3,000	.091	0209	.75	0379	1.32
3,500	.084	0210	.75	0380	1.32
4,000	.079	0211	.75	0381	1.32
4,500	.074			0381B	1.32
5,000	.070	0212	.75	0382	1.32
6,000	.064	0213	.85	0383	1.42
7,000	.060			0383B	1.42
7,500	.057	0214	.85	0384	1.42
8,000	.055			0384B	1.42
9,000	.052			0384C	1.42
10,000	.050	0215	.85	0385	1.42
12,000	.042	0216	.90	0386	1.47
15,000	.036	0217	.90	0387	1.47
20,000	.031	0218	.90	0388	1.47
25,000	.028	0219	1.04	0389	1.61
40,000	.022	0222	1.04		
50,000	.020	0224	1.21		
100,000	.010	0229	1.64		

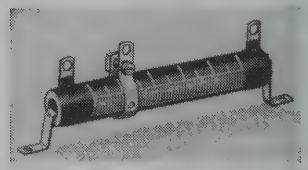
50 WATT SIZE RESISTOR

Core: 4" x 5/16" — Mounting Centers 4¾"

Res. Ohms	Max. Amps.	Fixed Resist. Stock No.	Fixed Resist. Net 1-9	Adj. Resist. Stock No.	Adj. Resist. Net 1-9
5	3.16	0400A	$1.11	0560	$1.68
10	2.23	0400B	1.11	0561	1.68
25	1.41	0400C	1.11	0562	1.68
50	1.00	0400D	1.11	0563	1.68
75	.82	0400E	1.11	0564	1.68
100	.71	0400F	1.11	0565	1.68
150	.58	0400G	1.11	0566	1.68
200	.50	0400H	1.11	0567	1.68
250	.45	0401	1.11	0568	1.68
300	.41			0568B	1.68
400	.35			0568C	1.68
500	.32	0402	1.11	0569	1.68
750	.26	0403	1.11	0570	1.68
1,000	.22	0405	1.11	0572	1.68
1,250	.20			0572B	1.71
1,500	.18	0406	1.14	0573	1.71
2,000	.16	0407	1.14	0574	1.71
2,500	.14	0408	1.14	0575	1.71
3,000	.13	0409	1.14	0576	1.71
3,500	.12			0576B	1.71
4,000	.11	0410	1.14	0577	1.71
4,500	.10			0577B	1.71
5,000	.10	0411	1.14	0578	1.71
6,000	.091			0578B	1.80
7,000	.084			0578C	1.80
7,500	.081	0412	1.23	0579	1.80
8,000	.079	0413	1.23	0580	1.80
9,000	.074			0580B	1.80
10,000	.071	0414	1.23	0581	1.80
12,000	.064	0415	1.35	0582	1.92
15,000	.057	0416	1.35	0583	1.92
20,000	.050	0417	1.35	0584	1.92
25,000	.045	0418	1.54	0585	2.11
30,000	.036			0586	2.11
35,000	.032	0419	1.54		
40,000	.029			0587	2.11
50,000	.026	0420	1.72	0588	2.29
60,000	.024			0589	2.29
75,000	.021	0421	1.97		
80,000	.021			0590	2.54
100,000	.018	0422	2.13	0591	2.70

These all-welded construction resistors have welded high-strength alloy terminals. For perfect electrical connection, the resistance wire is welded to the terminal. Units are wire-wound on ceramic cores and protected by Ohmite Vitreous Enamel. Furnished with mounting brackets and on DIVIDOHM with one adjustable lug.





75 WATT SIZE — Dividohm

Core: 6" x 5/16" — Mounting Centers 6¾"

Adjustable Res. Res. Ohms	Adjustable Res. Max. Amps.	Adjustable Res. Stock No.	Adjustable Res. Res. Ohms	Adjustable Res. Max. Amps.	Adjustable Res. Stock No.
5	3.87	0769	5,000	.12	0783
10	2.74	0770	6,000	.11	0783B
15	2.24	0771	7,000	.10	0783C
25	1.73	0772	7,500	.10	0784
50	1.22	0773	8,000	.096	0784B
100	.86	0774	9,000	.091	0784C
200	.61	0774B	10,000	.086	0785
250	.55	0775	12,000	.079	0785B
300	.50	0775B	15,000	.070	0786
400	.43	0775C	20,000	.061	0787
500	.39	0776	25,000	.054	0788
750	.32	0777	30,000	.050	0789
1,000	.27	0778	35,000	.046	0790
1,250	.24	0778B	40,000	.043	0791
1,500	.22	0779	45,000	.035	0792
2,000	.19	0780	50,000	.033	0793
2,500	.17	0781	60,000	.030	0794
3,000	.16	0781B	80,000	.026	0795
3,500	.15	0782	100,000	.023	0796
4,000	.14	0782B			

Net (1-9), 5 thru 1,000 ohms	**$1.87**
Net (1-9), 1,250 thru 5,000 ohms	**1.92**
Net (1-9), 6,000 thru 10,000 ohms	**2.01**
Net (1-9), 12,000 thru 20,000 ohms	**2.13**
Net (1-9), 25,000 thru 40,000 ohms	**2.32**
Net (1-9), 45,000 thru 60,000 ohms	**2.52**
Net (1-9), 80,000 ohms	**2.78**
Net (1-9), 100,000 ohms	**2.93**

100 WATT SIZE RESISTOR

Core: 6½" x ¾" — Mounting Centers 7⅜"

Res. Ohms	Max. Amps.	Fixed Resist. Stock No.	Fixed Resist. Net 1-9	Adj. Resist. Stock No.	Adj. Resist. Net 1-9
5	4.47	0600A	$1.54	0956	$2.11
10	3.16	0600B	1.54	0957	2.11
25	2.00	0601	1.54	0958	2.11
50	1.41	0602	1.54	0959	2.11
75	1.15	0603	1.54		
100	1.00	0604	1.54	0960	2.11
150	.816	0605	1.54		
250	.63	0606	1.54	0960B	2.11
500	.45	0607	1.54	0961	2.11
750	.365	0608	1.54		
1,000	.32	0609	1.54	0962	2.11
1,500	.26	0610	1.60	0962B	2.17
2,000	.223	0611	1.60		
2,500	.20	0612	1.60	0963	2.17
3,000	.18	0613	1.60		
5,000	.14	0614	1.60	0964	2.17
7,500	.115	0615	1.73		
10,000	.10	0616	1.73	0965	2.30
15,000	.081	0617	1.87	0966	2.44
20,000	.071	0618	1.87	0967	2.44
25,000	.063	0619	2.13	0968	2.70
30,000	.058	0620	2.13	0969	2.70
40,000	.050	0621	2.13	0970	2.70
50,000	.045	0622	2.21	0971	2.78
60,000	.041	0623	2.21		
75,000	.032	0624	2.45	0972	3.02
100,000	.028	0625	2.75	0973	3.32

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OHMITE

resistors • rheostats • tap switches • relays
variable transformers • tantalum capacitors
semiconductor diodes • r.f. chokes

FIXED AND DIVIDOHM® RESISTORS (CONT.)

160 WATT SIZE RESISTOR

Core: 8½" x 1⅛" — Mounting Centers 9⅜"

Res. Ohms	Max. Amps.	Fixed Resist. Stock No.	Fixed Resist. Net 1-9	Adj. Resist. Stock No.	Adj. Resist. Net 1-9
5	5.66	0700A	$3.19	1156	$4.07
10	4.00	0700B	2.28	1157	3.16
25	2.53	0701	2.28	1158	3.16
50	1.79	0702	2.28	1159	3.16
75	1.46	0703	2.28		
100	1.26	0704	2.28	1160	3.16
150	1.03	0705	2.28		
250	.80	0706	2.28	1160B	3.16
500	.57	0707	2.28	1161	3.16
750	.46	0708	2.28		
1,000	.40	0709	2.28	1162	3.16
1,500	.33	0710	2.32	1162B	3.20
2,000	.28	0711	2.32		
2,500	.25	0712	2.32	1163	3.20
3,000	.23	0713	2.32		
5,000	.18	0714	2.32	1164	3.20
7,500	.15	0715	2.53		
10,000	.13	0716	2.53	1165	3.41
15,000	.10	0717	2.71	1166	3.59
20,000	.089	0718	2.71	1167	3.59
25,000	.080	0719	2.80	1168	3.68
30,000	.073	0720	2.80	1169	3.68
40,000	.063	0721	2.80	1170	3.68
50,000	.057	0722	2.89	1171	3.77
60,000	.051	0723	2.89		
75,000	.046	0724	3.08	1172	3.96
100,000	.040	0725	3.26	1173	4.14

200 WATT SIZE RESISTOR

Core: 10½" x 1⅛"—Mounting Centers 11⅜"

Res. Ohms	Max. Amps.	Fixed Resist. Stock No.	Fixed Resist. Net 1-9	Adj. Resist. Stock No.	Adj. Resist. Net 1-9
5	6.32	0900A	$3.44	1356	$4.32
10	4.47	0900B	2.46	1357	3.34
25	2.83	0901	2.46	1358	3.34
50	2.00	0902	2.46	1359	3.34
75	1.64	0903	2.46		
100	1.41	0904	2.46	1360	3.34
150	1.15	0905	2.46		
250	.89	0906	2.46	1360B	3.34
500	.63	0907	2.46	1361	3.34
750	.52	0908	2.46		
1,000	.45	0909	2.46	1362	3.34
1,500	.37	0910	2.53	1362B	3.41
2,000	.32	0911	2.53		
2,500	.28	0912	2.53	1363	3.41
3,000	.258	0913	2.53		
5,000	.20	0914	2.53	1364	3.41
7,500	.16	0915	2.71		
10,000	.14	0916	2.71	1365	3.59
15,000	.12	0917	2.89	1366	3.77
20,000	.10	0918	2.89	1367	3.77
25,000	.089	0919	2.98	1368	3.86
30,000	.082	0920	2.98	1369	3.86
40,000	.071	0921	2.98	1370	3.86
50,000	.063	0922	3.08	1371	3.96
60,000	.058	0923	3.08		
75,000	.052	0924	3.26	1372	4.14
100,000	.045	0925	3.46	1373	4.34

8 Watt—1" x 5/16" Core Size

Ohms	Amps	Ohms	Amps	Ohms	Amps
1	2.83	200	.20	2,250	.059
1.5	2.30	225	.18	2,500	.056
2	2.00	250	.17	3,000	.051
3	1.63	300	.16	3,500	.047
4	1.41	350	.15	4,000	.044
5	1.26	400	.14	4,500	.042
7.5	1.00	450	.13	5,000	.040
10	.89	500	.12	6,000	.036
12	.81	600	.11	7,000	.033
15	.73	700	.11	7,500	.032
20	.63	750	.10	8,000	.031
25	.56	800	.10	9,000	.029
30	.51	900	.094	10,000	.028
35	.47	1,000	.089	12,500	.025
40	.44	1,100	.085	15,000	.023
50	.40	1,200	.081	17,500	.021
75	.32	1,250	.080	20,000	.020
100	.28	1,500	.073	22,500	.018
125	.25	1,750	.067	25,000	.017
150	.23	2,000	.063		

Net (1-9), 1 thru 1,000 ohms.....$0.52
Net (1-9), 1,100 thru 5,000 ohms..... .55
Net (1-9), 6,000 thru 10,000 ohms..... .58
Net (1-9), 12,500 thru 20,000 ohms..... .65
Net (1-9), 22,500 and 25,000 ohms..... .68

Popular OHMITE "BROWN DEVIL"® RESISTORS



High quality, small size, wire-wound resistors ideal for voltage dropping, bias units, bleeders, etc. They're extra-sturdy, all-ceramic, vitreous enameled. These all-welded construction units have welded high-strength alloy terminals. For perfect electrical connection, the resistance wire is welded to the terminal. They give time-proved protection against shock, vibration, heat and humidity. Their long record of continuous trouble-free service—their wide use in all climates of the world—prove their complete reliability and economy. All units can be conveniently mounted by means of their 1½" tinned wire leads. Standard resistance tolerance is ±5%.

3 Watt—7/16" x .20" Core Size

Ohms	Amps	Ohms	Amps	Ohms	Amps
1.0	1.73	24	.35	510	.077
1.1	1.65	27	.33	560	.073
1.2	1.58	30	.32	620	.070
1.3	1.52	33	.30	680	.067
1.5	1.41	36	.29	750	.063
1.6	1.37	39	.28	820	.060
1.8	1.29	43	.26	910	.057
2.0	1.22	47	.25	1,000	.055
2.2	1.17	51	.24	1,100	.052
2.4	1.12	56	.23	1,200	.050
2.7	1.05	62	.22	1,300	.048
3.0	1.00	68	.21	1,500	.045
3.3	.95	75	.20	1,600	.043
3.6	.91	82	.19	1,800	.042
3.9	.88	91	.18	2,000	.039
4.3	.83	100	.17	2,200	.037
4.7	.80	110	.16	2,400	.035
5.1	.77	120	.16	2,700	.033
5.6	.73	130	.15	3,000	.032
6.2	.69	150	.14	3,300	.030
6.8	.66	160	.14	3,600	.029
7.5	.63	180	.13	3,900	.028
8.2	.60	200	.12	4,300	.026
9.1	.57	220	.12	4,700	.025
10	.55	240	.11	5,100	.024
11	.52	270	.11	5,600	.023
12	.50	300	.10	6,200	.022
13	.48	330	.095	6,800	.021
15	.45	360	.091	7,500	.020
16	.43	390	.088	8,200	.019
18	.42	430	.083	9,100	.018
20	.39	470	.080	10,000	.017
22	.37				

Net (1-9), 1 thru 1,000 ohms.....$0.49
Net (1-9), 1,100 thru 4,700 ohms.....52
Net (1-9), 5,100 thru 10,000 ohms..... .55

5¼ Watt—⅝" x ¼" Core Size

Ohms	Amps	Ohms	Amps	Ohms	Amps
1.0	2.29	30	.42	820	.080
1.1	2.19	33	.40	910	.076
1.2	2.09	36	.38	1,000	.072
1.3	2.01	39	.37	1,100	.069
1.5	1.87	43	.35	1,200	.066
1.6	1.81	47	.33	1,300	.064
1.8	1.71	51	.32	1,500	.059
2.0	1.62	56	.31	1,600	.057
2.2	1.54	62	.29	1,800	.054
2.4	1.48	68	.28	2,000	.051
2.7	1.39	75	.27	2,200	.049
3.0	1.32	82	.25	2,400	.047
3.3	1.24	91	.24	2,700	.044
3.6	1.21	100	.23	3,000	.042
3.9	1.16	110	.22	3,300	.040
4.3	1.10	120	.21	3,600	.038
4.7	1.06	130	.20	3,900	.037
5.1	1.01	150	.19	4,300	.035
5.6	.97	160	.18	4,700	.033
6.2	.92	180	.17	5,100	.032
6.8	.88	200	.16	5,600	.031
7.5	.84	220	.16	6,200	.029
8.2	.80	240	.15	6,800	.028
9.1	.76	270	.14	7,500	.027
10	.72	300	.13	8,200	.025
11	.69	330	.12	9,100	.024
12	.66	360	.12	10,000	.023
13	.64	390	.12	11,000	.022
15	.59	430	.11	12,000	.021
16	.57	470	.11	13,000	.020
18	.54	510	.10	15,000	.019
20	.51	560	.097	16,000	.018
22	.49	620	.092	18,000	.017
24	.47	680	.088	20,000	.016
27	.44	750	.084		

Net (1-9), 1 thru 1,000 ohms.....$0.52
Net (1-9), 1,100 thru 4,700 ohms..... .55
Net (1-9), 5,100 thru 10,000 ohms..... .58
Net (1-9), 11,000 thru 20,000 ohms..... .65

12 Watt—1¾" x 5/16" Core Size

Ohms	Amps	Ohms	Amps	Ohms	Amps
0.5	4.90	300	.20	6,000	.044
1	3.46	350	.18	7,000	.041
1.5	2.82	400	.17	7,500	.040
2	2.45	450	.16	8,000	.038
3	2.00	500	.15	8,500	.037
4	1.73	600	.14	9,000	.036
5	1.54	700	.13	10,000	.035
7.5	1.26	750	.12	11,000	.033
10	1.09	800	.12	12,000	.031
12	1.00	900	.11	12,500	.031
15	.89	1,000	.11	13,500	.029
20	.77	1,100	.10	15,000	.028
25	.69	1,200	.10	16,000	.027
30	.63	1,250	.097	17,500	.026
35	.58	1,500	.089	18,000	.025
40	.54	1,750	.082	20,000	.024
50	.49	2,000	.077	22,500	.023
75	.40	2,250	.073	25,000	.022
100	.34	2,500	.069	30,000	.020
125	.31	3,000	.063	35,000	.018
150	.28	3,500	.058	40,000	.017
200	.24	4,000	.054	45,000	.016
225	.23	4,500	.051	50,000	.015
250	.22	5,000	.049		

Net (1-9), 0.5 thru 1,000 ohms.....$0.57
Net (1-9), 1,100 thru 5,000 ohms..... .61
Net (1-9), 6,000 thru 10,000 ohms..... .70
Net (1-9), 11,000 thru 20,000 ohms..... .79
Net (1-9), 22,500 thru 40,000 ohms..... .83
Net (1-9), 45,000 and 50,000 ohms..... .93

20 Watt—2" x 7/16" Core Size

Ohms	Amps	Ohms	Amps	Ohms	Amps
0.5	6.32	800	.15	10,000	.043
1.0	4.47	850	.15	12,500	.035
2.0	3.16	1,000	.14	15,000	.032
3.0	2.58	1,200	.13	20,000	.027
4.0	2.24	1,250	.12	25,000	.024
5	2.00	1,500	.12	30,000	.022
10	1.41	1,750	.11	35,000	.021
25	.89	2,000	.10	40,000	.019
50	.63	2,250	.094	45,000	.018
75	.52	2,500	.089	50,000	.017
100	.45	2,750	.085	55,000	.016
150	.36	3,000	.081	60,000	.016
200	.32	3,500	.075	65,000	.015
250	.28	4,000	.070	70,000	.014
300	.26	4,500	.066	75,000	.013
350	.24	5,000	.063	80,000	.012
400	.22	6,000	.057	85,000	.012
500	.20	7,000	.053	90,000	.011
650	.18	7,500	.051	95,000	.010
700	.17	8,000	.050	100,000	.010
750	.16	9,000	.047		

Net (1-9), 0.5 ohms.....$0.95
Net (1-9), 1.0 thru 1,000 ohms..... .68
Net (1-9), 1,200 thru 5,000 ohms..... .70
Net (1-9), 6,000 thru 10,000 ohms..... .83
Net (1-9), 12,500 thru 20,000 ohms..... .85
Net (1-9), 25,000 thru 40,000 ohms..... .99
Net (1-9), 45,000 thru 60,000 ohms..... 1.15
Net (1-9), 65,000 thru 80,000 ohms..... 1.37
Net (1-9), 85,000 thru 100,000 ohms..... 1.57

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OHMITE

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semiconductor diodes • r.f. chokes

OHMITE Series 99 Resistors

SERIES 99 MOLDED VITREOUS AXIAL LEAD RESISTORS



All welded resistors with 1000 v. AC insulation. They meet general requirements of specification MIL-R-26C for RW57, RW58, RW59, RW67, RW68 and RW69. Chip and break resistant, uniformly molded white vitreous enamel protects against moisture, salt spray and immersion. Vitrified markings resist high temperatures, solvents and abrasion. Can be mounted on component clips. **Tolerance:** ±5%, standard. **Size:** 1.5-watt, 0.422″ lg. x 0.125″ dia.; 2¼-watt, 0.375″ lg. x 0.188″ dia.; 3¼-watt, 0.547″ lg. x 0.203″ dia.; 5-watt, 0.938″ lg. x 0.203″ dia.; 11-watt, 1.781″ lg. x 0.312″ dia. Tinned leads 1½″ lg., #20 AWG except 1-watt, #24 AWG.

STYLE 995-1A 1.5-WATT AND STYLE 995-2A 2¼-WATT

Ohms	Stock Number 1.5-Watt	Stock Number 2¼-Watt	Ohms	Stock Number 1.5-Watt	Stock Number 2¼-Watt
1.0	4030	3860	75	4087	3918
1.1	4031	3861	82	4089	3920
1.2	4032	3862	91	4091	3922
1.3	4033	3863	100	4092	3923
1.5	4034	3864	110	4093	3924
1.6	4035	3865	120	4094	3925
1.8	4036	3866	130	4095	3926
2.0	4037	3867	150	4096	3927
2.2	4038	3868	160	4097	3928
2.4	4039	3869	180	4098	3929
2.7	4041	3871	200	4099	3930
3.0	4042	3872	220	4100	3931
3.3	4043	3873	240	4101	3932
3.6	4044	3874	250	4102	3933
3.9	4045	3875	270	4103	3934
4.0	4046	3876	300	4104	3935
4.3	4047	3877	330	4105	3936
4.7	4048	3878	350	4105A	3937
5.0	4049	3879	360	4106	3938
5.1	4050	3880	390	4107	3939
5.6	4051	3881	400	4108	3940
6.2	4053	3883	430	4109	3941
6.8	4054	3884	450	4109A	3942
7.5	4056	3886	470	4110	3943
8.2	4058	3888	500	4111	3944
9.1	4060	3890	510	4112	3945
10	4061	3891	560	4113	3946
11	4062	3892	600	4114	3947
12	4063	3893	620	4115	3948
13	4064	3894	680	4116	3949
15	4065	3895	700	4117	3950
16	4066	3896	750	4118	3951
18	4067	3897	800	4119	3952
20	4068	3898	820	4120	3953
22	4069	3899	900	4121	3954
24	4070	3900	910	4122	3955
25	4071	3901	1000	4123	3956
27	4072	3902	1100	4124	3957
30	4073	3903	1200	4125	3958
33	4074	3904	1300	4126	3959
35	4074A	3905	1400	4126A	3960
36	4075	3906	1500	4127	3961
39	4076	3907	1600	4128	3962
40	4077	3908	1800	4129	3963
43	4078	3909	2000	4130	3964
47	4079	3910	2200	4131	3965
50	4080	3911	2400	4132	3966
51	4081	3912	2500	4133	3967
56	4082	3913	2700	4134	3968
62	4084	3915	3000	4135	3969
68	4085	3916			

Values Ohms*	Style 995-1A 1.5-Watt Net Each, Lots of 1-9	10-24	25-99	100-249	Style 995-2A 2¼-Watt Net Each, Lots of 1-9	10-24	25-99	100-249
1–1000	62c	53c	43c	37c	60c	51c	42c	36c
1100–3000	66c	56c	46c	40c	64c	54c	45c	38c

STYLE 995-10A 11-WATT

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
1.0	4730	10	4761	82	4789	600	4814
1.1	4731	11	4762	91	4791	620	4815
1.2	4732	12	4763	100	4792	680	4816
1.3	4733	13	4764	110	4793	700	4817
1.5	4734	15	4765	120	4794	750	4818
1.6	4735	16	4766	130	4795	800	4819
1.8	4736	18	4767	150	4796	820	4820
2.0	4737	20	4768	160	4797	900	4821
2.2	4738	22	4769	180	4798	910	4822
2.4	4739	24	4770	200	4799	1000	4823
2.7	4741	25	4771	220	4800	1100	4824
3.0	4742	27	4772	240	4801	1200	4825
3.3	4743	30	4773	250	4802	1300	4826
3.6	4744	33	4774	270	4803	1400	4826A
3.9	4745	35	4774A	300	4804	1500	4827
4.0	4746	36	4775	330	4805	1600	4828
4.3	4747	39	4776	350	4805A	1800	4829
4.7	4748	40	4777	360	4806	2000	4830
5.0	4749	43	4778	390	4807	2200	4831
5.1	4750	47	4779	400	4808	2400	4832
5.6	4751	50	4780	430	4809	2500	4833
6.2	4753	51	4781	450	4809A	2700	4834
6.8	4754	56	4782	470	4810	3000	4835
7.5	4756	62	4784	500	4811	3300	4836
8.2	4758	68	4785	510	4812	3500	4836A
9.1	4760	75	4787	560	4813	3600	4837

*Restricted to those values shown in the table of stock numbers.

STYLE 995-3A 3¼-WATT AND STYLE 995-5B 5-WATT

Ohms	Stock Number 3¼-Watt	Stock Number 5-Watt	Ohms	Stock Number 3¼-Watt	Stock Number 5-Watt
1.0	4330	4530	330	4405	4605
1.1	4331	4531	350	4405A	4605A
1.2	4332	4532	360	4406	4606
1.3	4333	4533	390	4407	4607
1.5	4334	4534	400	4408	4608
1.6	4335	4535	430	4409	4609
1.8	4336	4536	450	4409A	4609A
2.0	4337	4537	470	4410	4610
2.2	4338	4538	500	4411	4611
2.4	4339	4539	510	4412	4612
2.7	4341	4541	560	4413	4613
3.0	4342	4542	600	4414	4614
3.3	4343	4543	620	4415	4615
3.6	4344	4544	680	4416	4616
3.9	4345	4545	700	4417	4617
4.0	4346	4546	750	4418	4618
4.3	4347	4547	800	4419	4619
4.7	4348	4548	820	4420	4620
5.0	4349	4549	900	4421	4621
5.1	4350	4550	910	4422	4622
5.6	4351	4551	1000	4423	4623
6.2	4353	4553	1100	4424	4624
6.8	4354	4554	1200	4425	4625
7.5	4356	4556	1300	4426	4626
8.2	4358	4558	1400	4426A	4626A
9.1	4360	4560	1500	4427	4627
10	4361	4561	1600	4428	4628
11	4362	4562	1800	4429	4629
12	4363	4563	2000	4430	4630
13	4364	4564	2200	4431	4631
15	4365	4565	2400	4432	4632
16	4366	4566	2500	4433	4633
18	4367	4567	2700	4434	4634
20	4368	4568	3000	4435	4635
22	4369	4569	3300	4436	4636
24	4370	4570	3500	4436A	4636A
25	4371	4571	3600	4437	4637
27	4372	4572	3900	4438	4638
30	4373	4573	4000	4439	4639
33	4374	4574	4300	4440	4640
35	4374A	4574A	4500	4440A	4640A
36	4375	4575	4700	4441	4641
39	4376	4576	5000	4442	4642
40	4377	4577	5100	4443	4643
43	4378	4578	5600	4444	4644
47	4379	4579	6000	4445	4645
50	4380	4580	6200	4446	4646
51	4381	4581	6800	4447	4647
56	4382	4582	7000	4448	4648
62	4384	4584	7500	4449	4649
68	4385	4585	8000	4450	4650
75	4387	4587	8200	4451	4651
82	4389	4589	9000	4452	4652
91	4391	4591	9100	4453	4653
100	4392	4592	10,000	4454	4654
110	4393	4593	11,000	.....	4655
120	4394	4594	12,000	.....	4656
130	4395	4595	13,000	.....	4657
150	4396	4596	14,000	.....	4657A
160	4397	4597	15,000	.....	4658
180	4398	4598	16,000	.....	4659
200	4399	4599	17,000	.....	4659B
220	4400	4600	18,000	.....	4660
240	4401	4601	20,000	.....	4661
250	4402	4602	22,000	.....	4662
270	4403	4603	24,000	.....	4663
300	4404	4604	25,000	.....	4664

Values Ohms*	Style 995-3A 3¼-Watt Net Each, Lots of 1-9	10-24	25-99	100-249	Style 995-5B 5-Watt Net Each, Lots of 1-9	10-24	25-99	100-249
1–1000	59c	50c	41c	35c	62c	53c	43c	37c
1100–5000	62c	53c	43c	37c	66c	56c	46c	40c
5100–10,000	66c	56c	46c	40c	70c	60c	49c	42c
11,000–20,000	.....	.....	.....	.....	78c	66c	55c	47c
22,000–25,000	.....	.....	.....	.....	82c	70c	57c	49c

STYLE 995-10A 11-WATT (CONTINUED)

Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.	Ohms	Stock No.
3900	4838	7000	4848	15,000	4858	35,000	4867A
4000	4839	7500	4849	16,000	4859A	36,000	4868
4300	4840	8000	4850	17,000	4859C	39,000	4869
4500	4840A	8200	4851	18,000	4860	40,000	4870
4700	4841	9000	4852	20,000	4861	43,000	4871
5000	4842	9100	4853	22,000	4862	45,000	4871A
5100	4843	10,000	4854	24,000	4863	47,000	4872
5600	4844	11,000	4855A	25,000	4864	50,000	4873
6000	4845	12,000	4856	27,000	4865	51,000	4874
6200	4846	13,000	4857	30,000	4866		
6800	4847	14,000	4857B	33,000	4867		

Values Ohms*	Net Each, Lots of 1-9	10-24	25-99	100-249
1–1000	$0.68	$0.58	$0.48	$0.41
1100–5000	.73	.62	.51	.44
5100–10,000	.84	.71	.59	.50
11,000–20,000	.95	.81	.67	.57
22,000–40,000	1.00	.85	.70	.60
43,000–51,000	1.12	.95	.78	.67

50-64B

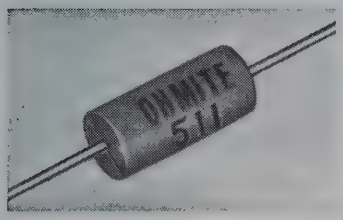
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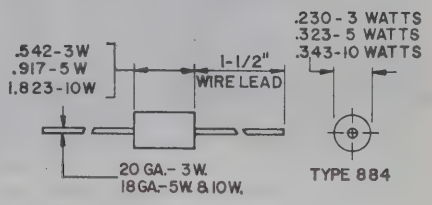
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RITEOHM® TYPE 884 MOLDED WIREWOUND RESISTORS ± 1% TOLERANCE



These precision power resistors are furnished from stock in power ratings of 3, 5 and 10 watts depending upon resistance. Single layer wound on ceramic core, Type 884 units feature a pressure-molded jacket of tough, resilient, silicone-ceramic material. Negligible inductance at audio frequencies. Temperature coefficient of resistance is 0±20ppm/°C. Values shown are selected from MIL Standard MS90169, MIL-R-10509 and Bell Tel. Labs.



Ohms	Max. Volts	Ohms	Max. Volts	Ohms	Max. Volts	Ohms	Max. Volts	Ohms	Max. Volts	Ohms	Max. Volts	Ohms	Max. Volts
3 WATT		3 WATT (Cont.)		3 WATT (Cont.)		3 WATT (Cont.)		3 WATT (Cont.)		3 WATT (Cont.)		3 WATT (Cont.)		5 WATT (Cont.)	
.100	.547	3.40	3.19	16.9	7.12	84.5	15.9	422	35.6	2100	79.4	10,500*	170	49,900*	450
.121	.602	3.48	3.23	17.4	7.22	86.6	16.1	432	36.1	2150	80.3	10,700*	170	51,100*	450
.150	.670	3.57	3.27	17.8	7.30	88.7	16.3	442	36.4	2210	81.4	11,000*	170	52,300*	450
.182	.739	3.65	3.31	18.2	7.39	90.9	16.5	453	36.9	2260	82.3	11,300*	170	53,600*	450
.200	.774	3.74	3.35	18.7	7.49	93.1	16.7	464	37.3	2320	83.4	11,500*	170	54,900*	450
.221	.814	3.83	3.39	19.1	7.57	95.3	16.9	475	37.7	2370	84.3	11,800*	170	56,200*	450
.249	.864	3.92	3.43	19.6	7.66	97.6	17.1	487	38.2	2430	85.4	12,100*	170	57,600*	450
.274	.906	4.02	3.47	20.0	7.74	100	17.3	499	38.7	2490	86.4	12,400*	170	59,000*	450
.332	.998	4.12	3.51	20.5	7.84	102	17.5	511	39.1	2550	87.4	12,700*	170	60,400*	450
.392	1.08	4.22	3.56	21.0	7.94	105	17.7	523	39.6	2610	88.4	13,000*	170	61,900*	450
.475	1.19	4.32	3.60	21.5	8.03	107	17.9	536	40.1	2670	89.5	13,300*	170	63,400*	450
.499	1.22	4.42	3.64	22.1	8.14	110	18.2	549	40.6	2740	90.6	13,700*	170	64,900*	450
.562	1.30	4.53	3.69	22.6	8.23	113	18.4	562	41.0	2800	91.6	14,000*	170	66,500*	450
.681	1.43	4.64	3.73	23.2	8.34	115	18.6	576	41.6	2870	92.8	14,300*	170	68,100*	450
.750	1.50	4.75	3.77	23.7	8.43	118	18.8	590	42.0	2940	93.9	14,700*	170	69,800*	450
.825	1.57	4.87	3.82	24.3	8.54	121	19.1	604	42.5	3010	95.0	15,000*	170	71,500*	450
1.00	1.73	4.99	3.87	24.9	8.64	124	19.3	619	43.1	3090	96.2	15,400*	170	73,200*	450
1.02	1.75	5.11	3.91	25.5	8.74	127	19.5	634	43.6	3160	97.4	15,800*	170	75,000*	450
1.05	1.77	5.23	3.96	26.1	8.84	130	19.7	649	44.1	3240	98.6	16,200*	170	76,800*	450
1.07	1.79	5.36	4.01	26.7	8.95	133	20.0	665	44.6	3320	99.8	16,500*	170	78,700*	450
1.10	1.82	5.49	4.06	27.4	9.06	137	20.3	681	45.2	3400	101	16,900*	170	80,600*	450
1.13	1.84	5.62	4.10	28.0	9.16	140	20.5	698	45.7	3480	102	17,400*	170	10 WATT	
1.15	1.86	5.76	4.16	28.7	9.28	143	20.7	715	46.3	3570	103	17,800*	170		
1.18	1.88	5.90	4.20	29.4	9.39	147	21.0	732	46.8	3650	105	18,200*	170	82,500	908
1.21	1.91	6.04	4.25	30.1	9.50	150	21.2	750	47.4	3740	106	18,700*	170	84,500	919
1.24	1.93	6.19	4.31	30.9	9.62	154	21.5	768	48.0	3830	107	19,100*	170	86,600	930
1.27	1.95	6.34	4.36	31.6	9.74	158	21.8	787	48.6	3920	108	19,600*	170	88,700	942
1.30	1.97	6.49	4.41	32.4	9.86	162	22.0	806	49.2	4020	110	20,000*	170	90,900	952
1.33	2.00	6.65	4.46	33.2	9.98	165	22.2	825	49.7	4120	111	20,500*	170	93,100	965
1.37	2.03	6.81	4.52	34.0	10.1	169	22.5	845	50.4	4220	112	21,000*	170	95,300	976
1.40	2.05	6.98	4.57	34.8	10.2	174	22.8	866	51.0	4320	114	21,500*	170	97,600	988
1.43	2.07	7.15	4.63	35.7	10.3	178	23.1	887	51.6	4420	115	22,100*	170	100,000	1000
1.47	2.10	7.32	4.68	36.5	10.5	182	23.4	909	52.2	4530	117	5 WATT		102,000*	1000
1.50	2.12	7.50	4.74	37.4	10.6	187	23.7	931	52.8	4640	118			105,000*	1000
1.54	2.15	7.68	4.80	38.3	10.7	191	23.9	953	53.4	4750	119	22,600	337	107,000*	1000
1.58	2.18	7.87	4.86	39.2	10.8	196	24.2	976	54.1	4870	121	23,200	341	110,000*	1000
1.62	2.20	8.06	4.92	40.2	11.0	200	24.5	1000	54.7	4990	122	23,700	344	113,000*	1000
1.65	2.22	8.25	4.97	41.2	11.1	205	24.8	1020	55.3	5110	124	24,300	347	115,000*	1000
1.69	2.25	8.45	5.04	42.2	11.2	210	25.1	1050	56.1	5230	125	24,900	353	118,000*	1000
1.74	2.28	8.66	5.10	43.2	11.4	215	25.4	1070	56.6	5360	127	25,500	357	121,000*	1000
1.78	2.31	8.87	5.16	44.2	11.5	221	25.7	1100	57.4	5490	128	26,100	361	124,000*	1000
1.82	2.34	9.09	5.22	45.3	11.7	226	26.0	1130	58.2	5620	130	26,700	365	127,000*	1000
1.87	2.37	9.31	5.28	46.4	11.8	232	26.4	1150	58.7	5760	131	27,400	370	130,000*	1000
1.91	2.39	9.53	5.34	47.5	11.9	237	26.7	1180	59.5	5900	133	28,000	374	133,000*	1000
1.96	2.42	9.76	5.41	48.7	12.1	243	27.0	1210	60.2	6040	134	28,700	379	137,000*	1000
2.00	2.45	10.0	5.47	49.9	12.2	249	27.3	1240	61.0	6190	136	29,400	383	140,000*	1000
2.05	2.48	10.2	5.53	51.1	12.4	255	27.7	1270	61.7	6340	138	30,100	388	143,000*	1000
2.10	2.51	10.5	5.61	52.3	12.5	261	28.0	1300	62.4	6490	140	30,900	393	147,000*	1000
2.15	2.54	10.7	5.66	53.6	12.7	267	28.3	1330	63.2	6650	141	31,600	397	150,000*	1000
2.21	2.57	11.0	5.74	54.9	12.8	274	28.7	1370	64.1	6810	143	32,400	402	154 000*	1000
2.26	2.60	11.3	5.82	56.2	13.0	280	29.0	1400	64.8	6980	145	33,200	407	158,000*	1000
2.32	2.64	11.5	5.87	57.6	13.1	287	29.3	1430	65.5	7,150	146	34,000	412	162,000*	1000
2.37	2.67	11.8	5.95	59.0	13.3	294	29.7	1470	66.4	7,320	148	34,800	417	165,000*	1000
2.43	2.70	12.1	6.02	60.4	13.4	301	30.0	1500	67.0	7,500	150	35,700	422	169,000*	1000
2.49	2.73	12.4	6.10	61.9	13.6	309	30.4	1540	68.0	7,680	152	36,500	427	174,000*	1000
2.55	2.77	12.7	6.17	63.4	13.8	316	30.8	1580	68.8	7,870	154	37,400	432	178,000*	1000
2.61	2.80	13.0	6.24	64.9	13.9	324	31.2	1620	69.7	8,060	155	38,300	437	182,000*	1000
2.67	2.83	13.3	6.32	66.5	14.1	332	31.6	1650	70.3	8,250	157	39,200	442	187,000*	1000
2.74	2.87	13.7	6.41	68.1	14.3	340	31.9	1690	71.2	8 450	159	40,200	448	191,000*	1000
2.80	2.90	14.0	6.48	69.8	14.5	348	32.3	1740	72.2	8,660	161	41 200*	450	196,000*	1000
2.87	2.93	14.3	6.55	71.5	14.6	357	32.7	1780	73.0	8,870	163	42,200*	450	200,000*	1000
2.94	2.97	14.7	6.64	73.2	14.8	365	33.1	1820	73.9	9,090	165	43,200*	450		
3.01	3.00	15.0	6.70	75.0	15.0	374	33.5	1870	74.9	9,310	167	44,200*	450		
3.09	3.04	15.4	6.80	76.8	15.2	383	33.9	1910	75.7	9,530	169	45,200*	450		
3.16	3.08	15.8	6.88	78.7	15.4	392	34.3	1960	76.6	9,760*	170	46,400*	450		
3.24	3.12	16.2	6.97	80.6	15.5	402	34.7	2000	77.4	10 000*	170	47,500*	450		
3.32	3.16	16.5	7.03	82.5	15.7	412	35.1	2050	78.4	10 200*	170	48,700*	450		

TYPE 884 NET PRICES

.10 thru .99 ohms	Net 1-24	$1.98	15,001 thru 20K ohms	Net 1-24	.88	100,001 thru 125K ohms	Net 1-24	1.33
1.0 thru 1K ohms	Net 1-24	.71	20,001 thru 40K ohms	Net 1-24	.93	125,001 thru 150K ohms	Net 1-24	1.45
1,001 thru 5K ohms	Net 1-24	.78	40,001 thru 55K ohms	Net 1-24	1.00	150,001 thru 175K ohms	Net 1-24	1.59
5,001 thru 10K ohms	Net 1-24	.82	55,001 thru 75K ohms	Net 1-24	1.10	175,001 thru 200K ohms	Net 1-24	1.73
10,001 thru 15K ohms	Net-1-24	.84	75,001 thru 100K ohms	Net 1-24	1.21			

Resistance values marked * are derated in wattage because of maximum voltage gradient considerations. Even with these voltage limitations, however, the wattage ratings are still adequate for most precision applications. However, where wattage requirements dictate, the same value shown in a derated area for either the 3 or 5 watt sizes can be supplied in the next higher wattage as the case may be.

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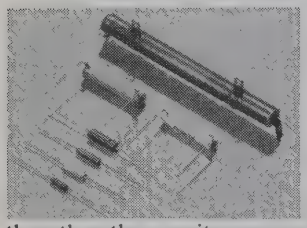
LITTLE DEVIL® RESISTOR ASSORTMENTS FOR SERVICE USE



Serviceman's assortments of 150 Ohmite "Little Devil," ¼-watt or ½-watt, or 125, 1-watt or 2-watt insulated composition resistors, in the 40 values (10 ohms to 10 megohms) most frequently used by servicemen. CAB-4 has 37 resistance values. The assortment is offered at the price of the resistors alone—the cabinet is furnished without extra cost! Cabinet is only 9" long, 4¾" high, and 5¼" deep.

Assortment	Stock No.	Quantity of Resistors	Wattages	Net Price
SERVICE ±10% tolerance (40 resistance values)	CAB-4	150	¼ watt	$19.50
	CAB-10	150	½ watt	18.00
	CAB-2	125	1 watt	22.50
	CAB-3	125	2 watt	30.00

OHMITE R.F. PLATE CHOKES



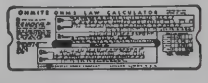
This series of seven Ohmite single layer wound solenoid radio frequency plate chokes covers the entire frequency range of 3 to 520 megacycles. The four highest frequency chokes are wound on low power factor plastic cores while the other three units are wound on steatite tubes. The single layer winding is designed to avoid adverse harmonic effects within the recommended operating range and also prevents breakdown from high r.f. potentials.

Stock Number	Operating Range Megacycles	Micro-henries	Core Dimensions	Net Each 1-9
Z-7	3 to 20 Mc.	84.0	6" x 3/16"	$1.37
Z-14	7 to 35 Mc.	44.0	2" x 7/16"	.68
Z-28	20 to 60 Mc.	21.0	1¾" x 5/16"	.57
Z-50	35 to 110 Mc.	7.0	⅞" x 1/32"	.46
Z-144	80 to 200 Mc.	1.8	¾" x 3/16"	.43
Z-235	160 to 350 Mc.	0.84	¾" x 3/16"	.43
Z-460	320 to 520 Mc.	0.20	½" x 1/32"	.43

Non-magnetic Brackets Furnished with Z-7. The Z-14 and Z-28 are rated at 600 ma. All others 1000 ma.

NEW OHM'S LAW CALCULATOR

Redesigned! This new, improved version of the famous Ohmite Ohm's Law Calculator — popular the world over with servicemen, engineers and students — now has scales for solving parallel resistance problems, AND a standard slide rule. More useful than ever! With one setting of the scale the calculator gives the answer to any Ohm's Law problem—reading directly in ohms, volts, amperes, and watts. Three of the new scales on the back provide a quick, one-setting means of solving parallel resistance problems. The slide rule scales will multiply, divide, find squares, and square roots.



Ohm's Law Calculator (Cardboard) ..... **Net Price $0.25**

Ohm's Law Calculator (Plastic) ..... **Net Price 1.50**

LITTLE DEVIL COLOR CODER

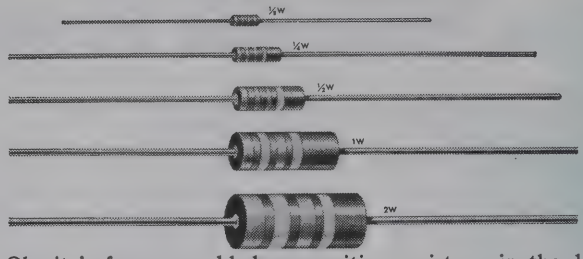


Here is a handy little device that makes it easy to determine the resistance and tolerance values of EIA color coded composition resistors. Just turn the color wheels until the color corresponds to the color band on the resistor and read the resistance value directly in ohms in the windows.

Little Devil Color Coder.... Net Price $ .10

OHMITE LITTLE DEVIL RESISTORS

MOLDED COMPOSITION TYPE



on Tally Tape EXCEPT ⅛W SIZE

Ohmite's famous molded composition resistors, in the ⅛, ¼, ½, 1 and 2-watt sizes, conform respectively to Styles RC05, RC07, RC20, RC32 and RC42 of MIL-R-11E and meet all the requirements of this military specification.

Little Devils have molded insulation and feature great stability, low noise level, low voltage coefficient, high insulation breakdown voltage and rapid heat dissipation. They may be used at full rated wattage at 70°C (158°F) ambient temperature.

Available from stock in the standard EIA resistance values in the tolerances and resistance ranges shown in the price table below. Ratings for maximum continuous RMS voltage drop are high: 150 volts for ⅛ watt units, 250 volts for ¼ watt, 350 volts for ½ watt, 500 volts for 1 watt and 750 volts for 2 watt units.

STANDARD EIA VALUES

Figures in large, bold type are ±10% EIA values. *All* values listed are ±5% values. Price table lists the various "Little Devil" sizes and indicates the tolerances and resistance ranges in which they are supplied.

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Megs.	Megs.
1.0	9.1	**82**	**680**	**5600**	**47000**	0.36	3.0
1.1	**10**	91	750	6200	51000	**0.39**	**3.3**
1.2	11	**100**	**820**	**6800**	**56000**	0.43	3.6
1.3	**12**	110	910	7500	62000	**0.47**	**3.9**
1.5	13	**120**	**1000**	**8200**	**68000**	0.51	4.3
1.6	**15**	130	1100	9100	75000	**0.56**	**4.7**
1.8	16	**150**	**1200**	**10000**	**82000**	0.62	5.1
2.0	**18**	160	1300	11000	91000	**0.68**	**5.6**
2.2	20	**180**	**1500**	**12000**		0.75	6.2
2.4	**22**	200	1600	13000	Megs.	**0.82**	**6.8**
2.7	24	**220**	**1800**	**15000**	**0.1**	0.91	7.5
3.0	**27**	240	2000	16000	0.11	**1.0**	**8.2**
3.3	30	**270**	**2200**	**18000**	**0.12**	1.1	9.1
3.6	**33**	300	2400	20000	0.13	**1.2**	**10.0**
3.9	36	**330**	**2700**	**22000**	**0.15**	1.3	11.0
4.3	**39**	360	3000	24000	0.16	**1.5**	**12.0**
4.7	43	**390**	**3300**	**27000**	**0.18**	1.6	13.0
5.1	**47**	430	3600	30000	0.20	**1.8**	**15.0**
5.6	51	**470**	**3900**	**33000**	**0.22**	2.0	16.0
6.2	**56**	510	4300	36000	0.24	**2.2**	**18.0**
6.8	62	**560**	**4700**	**39000**	**0.27**	2.4	20.0
7.5	**68**	620	5100	43000	0.30	**2.7**	**22.0**
8.2	75				**0.33**		

PRICES, RESISTANCE RANGES, DIMENSIONS

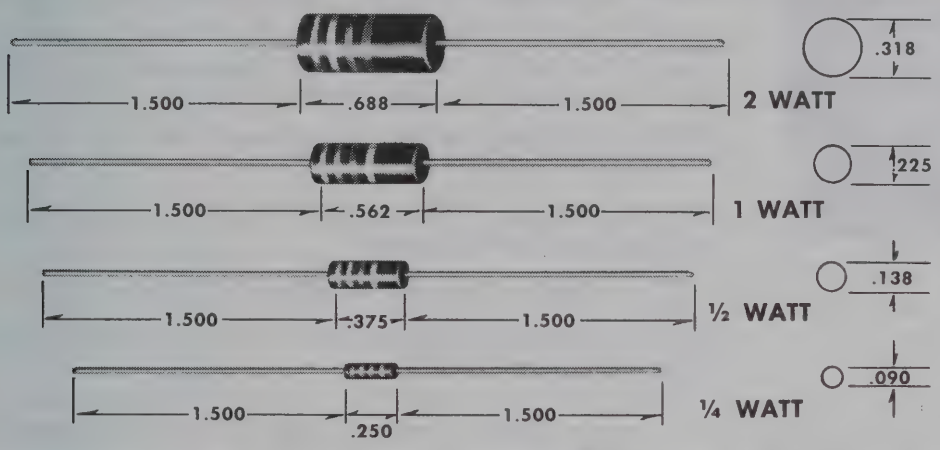
Size Watts	Size Lgth.	Size Dia.	Resistance Range From	Resistance Range Thru	MIL Type	±5% Net 1-4	±5% Net 5-49	±10% Net 1-4	±10% Net 5-49
1/8	.145"	.062"	2.7 ohms	9.1 ohms	RC 05†	37c LIDNU	31c LIDNU	27c LIDVS	22c LIDVS
			10 ohms	22 megs		34c LIDNU	28c LIDNU	24c LIDVS	20c LIDVS
1/4	1/4"	.090"	2.7 ohms	9.1 ohms	RC 07	29c LIDED	24c LIDED	14c LIDSM	12c LIDSM
			10 ohms	22 megs		26c LIDED	22c LIDED	13c LIDSM	11c LIDSM
1/2	3/8"	9/64"	1 ohm	2.4 ohms	RC 20*	26c LIDFA	22c LIDFA	13c LIDLO	11c LIDLO
			2.7 ohms	22 megs		24c LIDFA	20c LIDFA	12c LIDLO	10c LIDLO
1	9/16"	7/32"	2.7 ohms	22 megs	RC 32	36c LIDBU	30c LIDBU	18c LIDME	15c LIDME
2	11/16"	5/16"	10 ohms	22 megs	RC 42	48c LIDOC	40c LIDOC	24c LIDHI	20c LIDHI

*Min. res. under MIL-R-11E is 2.7 ohms. †Min. res. under MIL-R-11E is 10 ohms. Leads 1½" long.

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STACKPOLE

FIXED COMPOSITION RESISTORS



Stackpole Resistors offer superior performance in terms of load life, moisture resistance, shelf life, and other important characteristics. Available in ¼, ½, 1, and 2 watt insulated types in resistance values with 5%, 10% and 20% tolerances as shown below.

EASIEST SOLDERING

is asured thanks to an exclusive extra solder coating applied after the usual tin dipping. Leads of Stackpole Resistors solder readily by any method—dip or iron—stay tarnish free even after months in storage. And, their baked-on color codes resist solvent scrubbing operations . . . maintain uniform, attractive appearance.

269 STANDARD VALUES FOR MODERN CIRCUITRY

±20%	±10%	±5%	±20%	±10%	±5%	±20%	±10%	±5%	±20%	±10%	±5%
10	10	10		390	390	15000	15000	15000		560000	560000
		11			430			16000			620000
	12	12	470	470	470		18000	18000	680000	680000	680000
		13			510			20000			750000
15	15	15		560	560	22000	22000	22000		820000	820000
		16			620			24000			910000
	18	18	680	680	680		27000	27000	1.0 Meg	1.0 Meg	1.0 Meg
		20			750			30000			1.1 Meg
22	22	22		820	820	33000	33000	33000		1.2 Meg	1.2 Meg
		24			910			36000			1.3 Meg
	27	27	1000	1000	1000		39000	39000	1.5 Meg	1.5 Meg	1.5 Meg
		30			1100			43000			1.6 Meg
33	33	33		1200	1200	47000	47000	47000		1.8 Meg	1.8 Meg
		36			1300			51000			2.0 Meg
	39	39	1500	1500	1500		56000	56000	2.2 Meg	2.2 Meg	2.2 Meg
		43			1600			62000			2.4 Meg
47	47	47		1800	1800	68000	68000	68000		2.7 Meg	2.7 Meg
		51			2000			75000			3.0 Meg
	56	56	2200	2200	2200		82000	82000	3.3 Meg	3.3 Meg	3.3 Meg
		62			2400			91000			3.6 Meg
68	68	68		2700	2700	100000	100000	100000		3.9 Meg	3.9 Meg
		75			3000			110000			4.3 Meg
	82	82	3300	3300	3300		120000	120000	4.7 Meg	4.7 Meg	4.7 Meg
		91			3600			130000			5.1 Meg
100	100	100		3900	3900	150000	150000	150000		5.6 Meg	5.6 Meg
		110			4300			160000			6.2 Meg
	120	120	4700	4700	4700		180000	180000	6.8 Meg	6.8 Meg	6.8 Meg
		130			5100			200000			7.5 Meg
150	150	150		5600	5600	220000	220000	220000		8.2 Meg	8.2 Meg
		160			6200			240000			9.1 Meg
	180	180	6800	6800	6800		270000	270000	10.0 Meg	10.0 Meg	10.0 Meg
		200			7500			300000			11.0 Meg
220	220	220		8200	8200	330000	330000	330000		12.0 Meg	12.0 Meg
		240			9100			360000			13.0 Meg
	270	270	10000	10000	10000		390000	390000	15.0 Meg	15.0 Meg	15.0 Meg
		300			11000			430000			16.0 Meg
330	330	330		12000	12000	470000	470000	470000		18.0 Meg	18.0 Meg
		360			13000			510000			20.0 Meg
									22.0 Meg	22.0 Meg	22.0 Meg

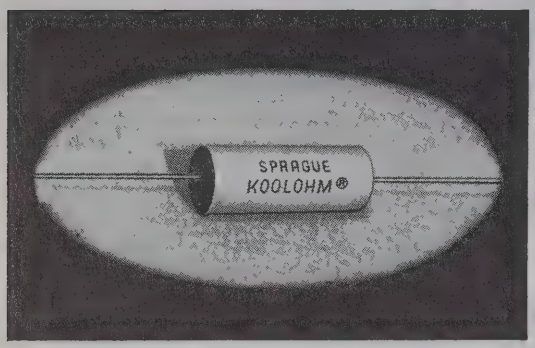
AVAILABLE THROUGH LEADING INDUSTRIAL ELECTRONIC PARTS DISTRIBUTORS

Electronic Components Div., **STACKPOLE CARBON COMPANY**

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SPRAGUE RESISTORS

KOOLOHM® AXIAL-LEAD WIREWOUND RESISTORS
FOR INDUSTRIAL APPLICATIONS



- Types 450E, 452E, 454E, 456E and 458E are Standard Resistors. Types 451E, 453E, 455E, 457E and 459E are Non-Inductive Resistors

- Insulated-Shell Design for Easy Mounting
- Feature Improved Internal Construction in Which Windings and Leads are Welded to End-Cap for Superior Mechanical Strength
- Ceramic-Insulated Wire is Space Wound and Cemented, to Prevent Turn-to-Turn Shorting. Permits Higher Resistance Values in a Given Size Than in Conventional Resistors
- Non-Porous Tubular Ceramic Shells Sealed With High Temperature Silicone Cement
- Unexcelled Insulation and Mechanical Protection. Can be Mounted in Direct Contact With Chassis
- Call Your Sprague Industrial Distributor for Quantity Prices.
- For Complete Technical Details, Refer to Latest Issue of Sprague Engineering Bulletin 7300

	Type 450E 3 WATTS ¼" x 9/16"		Type 452E 5 WATTS ¼" x 1"		Type 454E 7 WATTS 15/32" x 15/16"		Type 456E 10 WATTS 15/32" x 1 29/32"		Type 458E 14 WATTS 15/32" x 1 29/32"	
Ohms	Cat. No.		Cat. No.		Cat. No.		Cat. No.		Cat. No.	
1	450E1R05	Call Your Sprague Industrial Distributor for Current Quantity Prices	452E1R05	Call Your Sprague Industrial Distributor for Current Quantity Prices	454E1R05	Call Your Sprague Industrial Distributor for Current Quantity Prices	456E1R05	Call Your Sprague Industrial Distributor for Current Quantity Prices	458E1R05	Call Your Sprague Industrial Distributor for Current Quantity Prices
1.5	450E1R55		452E1R55		454E1R55		456E1R55		458E1R55	
2	450E2R05		452E2R05		454E2R05		456E2R05		458E2R05	
3	450E3R05		452E3R05		454E3R05		456E3R05		458E3R05	
4	450E4R05		452E4R05		454E4R05		456E4R05		458E4R05	
5	450E5R05		452E5R05		454E5R05		456E5R05		458E5R05	
7.5	450E7R55		452E7R55		454E7R55		456E7R55		458E7R55	
10	450E1005		452E1005		454E1005		456E1005		458E1005	
12	450E1205		452E1205		454E1205		456E1205		458E1205	
15	450E1505		452E1505		454E1505		456E1505		458E1505	
18	450E1805		———		———		———		———	
20	450E2005		452E2005		454E2005		456E2005		458E2005	
22	450E2205		———		———		———		———	
25	450E2505		452E2505		454E2505		456E2505		458E2505	
27	450E2705		———		———		———		———	
30	450E3005		452E3005		454E3005		456E3005		458E3005	
33	450E3305		———		———		———		———	
35	———		452E3505		454E3505		456E3505		458E3505	
39	450E3905		———		———		———		———	
40	450E4005		452E4005		454E4005		456E4005		458E4005	
47	450E4705		———		———		———		———	
50	450E5005		452E5005		454E5005		456E5005		458E5005	
56	450E5605		———		———		———		———	
68	450E6805		———		———		———		———	
75	450E7505		452E7505		454E7505		456E7505		458E7505	
82	450E8205		———		———		———		———	
100	450E1015		452E1015		454E1015		456E1015		458E1015	
120	450E1215		452E1215		454E1215		456E1215		458E1215	
150	450E1515		452E1515		454E1515		456E1515		458E1515	
180	450E1815		———		———		———		———	

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Sizes subject to change without notice.

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SPRAGUE RESISTORS

KOOLOHM AXIAL-LEAD WIREWOUND RESISTORS, continued

Ohms	Type 450E 3 WATTS 1/4" x 9/16" Cat. No.	Type 452E 5 WATTS 1/4" x 1" Cat. No.	Type 454E 7 WATTS 15/32" x 15/16" Cat. No.	Type 456E 10 WATTS 15/32" x 1 29/32" Cat. No.	Type 458E 14 WATTS 15/32" x 1 29/32" Cat. No.
200	450E2015	452E2015	454E2015	456E2015	458E2015
220	450E2215	452E2215	454E2215	456E2215	458E2215
250	450E2515	452E2515	454E2515	456E2515	458E2515
270	450E2715	———	———	———	———
300	450E3015	452E3015	454E3015	456E3015	458E3015
330	450E3315	———	———	———	———
350	———	452E3515	454E3515	456E3515	458E3515
390	450E3915	———	———	———	———
400	450E4015	452E4015	454E4015	456E4015	458E4015
450	———	452E4515	———	———	———
470	450E4715	———	———	———	———
500	450E5015	452E5015	454E5015	456E5015	458E5015
560	450E5615	———	———	———	———
600	450E6015	452E6015	454E6015	456E6015	458E6015
680	450E6815	———	———	———	———
700	450E7015	452E7015	454E7015	456E7515	458E7015
750	———	452E7515	454E7515	———	458E7515
800	450E8015	452E8015	454E8015	456E8015	458E8015
820	450E8215	———	———	———	———
900	450E9015	452E9015	454E9015	456E9015	458E9015
1000	450E1025	452E1025	454E1025	456E1025	458E1025
1100	———	452E1125	454E1125	456E1125	458E1125
1200	450E1225	452E1225	454E1225	456E1225	458E1225
1400	450E1425	452E1425	454E1425	456E1425	458E1425
1500	450E1525	452E1525	454E1525	456E1525	458E1525
1800	450E1825	452E1825	454E1825	456E1825	458E1825
2000	450E2025	452E2025	454E2025	456E2025	458E2025
2200	450E2225	452E2225	454E2225	465E2225	458E2225
2500	450E2525	452E2525	454E2525	456E2525	458E2525
2700	450E2725	———	———	———	———
3000	450E3025	452E3025	454E3025	456E3025	458E3025
3300	450E3325	———	454E3325	456E3325	458E3325
3500	———	452E3525	454E3525	456E3525	458E3525
3900	450E3925	———	454E3925	456E3925	458E3925
4000	450E4025	452E4025	454E4025	456E4025	458E4025
4500	———	452E4525	454E4525	456E4525	458E4525
4700	450E4725	———	———	———	———
5000	450E5025	452E5025	454E5025	456E5025	458E5025
5600	450E5625	———	———	———	———
6000	450E6025	452E6025	454E6025	456E6025	458E6025
6800	450E6825	———	———	———	———
7000	———	452E7025	454E7025	456E7025	458E7025
7500	450E7525	452E7525	454E7525	456E7525	458E7525
8000	450E8025	452E8025	454E8025	456E8025	458E8025
8200	450E8225	———	———	———	———
9000	450E9025	452E9025	454E9025	456E9025	458E9025
10000	450E1035	452E1035	454E1025	456E1035	458E1035
11000	———	———	454E1135	456E1135	458E1135
12000	———	452E1235	454E1235	456E1235	458E1125
14000	———	452E1435	454E1435	456E1435	458E1435
15000	———	452E1535	454E1535	456E1535	458E1535
16000	———	———	454E1635	456E1635	458E1635
18000	———	452E1835	454E1835	456E1835	458E1835
20000	———	452E2035	454E2035	456E2035	458E2035
22000	———	———	454E2235	456E2235	———
25000	———	———	454E2535	456E2535	———
30000	———	———	454E3035	456E3035	———
35000	———	———	454E3535	456E3535	———
40000	———	———	454E4035	456E4035	———
45000	———	———	———	456E4535	———
50000	———	———	———	456E5035	———
60000	———	———	———	456E6035	———
70000	———	———	———	456E7035	———

CALL YOUR SPRAGUE INDUSTRIAL DISTRIBUTOR FOR CURRENT QUANTITY PRICES

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SPRAGUE RESISTORS

NON-INDUCTIVE KOOLOHM AXIAL-LEAD WIREWOUND RESISTORS

Ohms	Type 451E 3 WATTS 1/4" x 9/16" Cat. No.	Type 453E 5 WATTS 1/4" x 1" Cat. No.	Type 455E 7 WATTS 15/32" x 1 5/16" Cat. No.	Type 457E 10 WATTS 15/32" x 1 29/32" Cat. No.	Type 459E 14 WATTS 15/32" x 1 29/32" Cat. No.
1	451E1R05	453E1R05	455E1R05	457E1R05	459E1R05
1.5	451E1R55	453E1R55	455E1R55	457E1R55	459E1R55
2	451E2R05	453E2R05	455E2R05	457E2R05	459E2R05
3	451E3R05	453E3R05	455E3R05	457E3R05	459E3R05
4	451E4R05	453E4R05	455E4R05	457E4R05	459E4R05
5	451E5R05	453E5R05	455E5R05	457E5R05	459E5R05
7.5	451E7R55	453E7R55	455E7R55	457E7R55	459E7R55
10	451E1005	453E1005	455E1005	457E1005	459E1005
12	451E1205	453E1205	455E1205	457E1205	459E1205
15	451E1505	453E1505	455E1505	457E1505	459E1505
18	451E1805	———	———	———	———
20	451E2005	453E2005	455E2005	457E2005	459E2005
22	451E2205	———	———	———	———
25	451E2505	453E2505	455E2505	457E2505	459E2505
27	451E2705	———	———	———	———
30	451E3005	453E3005	455E3005	457E3005	459E3005
33	451E3305	———	———	———	———
35	451E3505	453E3505	455E3505	457E3505	459E3505
39	451E3905	———	———	———	———
40	451E4005	453E4005	455E4005	457E4005	459E4005
47	451E4705	———	———	———	———
50	451E5005	453E5005	455E5005	457E5005	459E5005
56	451E5605	———	———	———	———
68	451E6805	———	———	———	———
75	451E7505	453E7505	455E7505	457E7505	459E7505
82	451E8205	———	———	———	———
100	451E1015	453E1015	455E1015	457E1015	459E1015
120	451E1215	453E1215	455E1215	457E1215	459E1215
150	451E1515	453E1515	455E1515	457E1515	459E1515
180	451E1815	———	———	———	———
200	451E2015	453E2015	455E2015	457E2015	459E2015
220	451E2215	453E2215	455E2215	457E2215	459E2215
250	451E2515	453E2515	455E2515	457E2515	459E2515
270	451E2715	———	———	———	———
300	451E3015	453E3015	455E3015	457E3015	459E3015
330	451E3315	———	———	———	———
350	451E3515	453E3515	455E3515	457E3515	459E3515
390	451E3915	———	———	———	———
400	451E4015	453E4015	455E4015	457E4015	459E4015
450	451E4515	453E4515	———	———	———
470	451E4715	———	———	———	———
500	451E5015	453E5015	455E5015	457E5015	459E5015
560	451E5615	———	———	———	———
600	451E6015	453E6015	455E6015	457E6015	459E6015
680	451E6815	———	———	———	———
700	451E7015	453E7015	455E7015	457E7015	459E7015
750	451E7515	453E7515	455E7515	457E7515	459E7515
800	451E8015	453E8015	455E8015	457E8015	459E8015
820	451E8215	———	———	———	———
900	451E9015	453E9015	455E9015	457E9015	459E9015
1000	451E1025	453E1025	455E1025	457E1025	459E1025
1100	———	453E1125	455E1125	457E1125	459E1125
1200	451E1225	453E1225	455E1225	457E1225	459E1225
1400	451E1425	453E1425	455E1425	457E1425	459E1425
1500	451E1525	453E1525	455E1525	457E1525	459E1525
1800	451E1825	453E1825	455E1825	457E1825	459E1825
2000	451E2025	453E2025	455E2025	457E2025	459E2025
2200	———	453E2225	455E2225	457E2225	459E2225
2500	———	453E2525	455E2525	457E2525	459E2525
3000	———	453E3025	455E3025	457E3025	459E3025
3300	———	———	455E3325	457E3325	459E3325
3500	———	453E3525	455E3525	457E3525	459E3525
3900	———	———	455E3925	457E3925	459E3925
4000	———	453E4025	455E4025	457E4025	459E4025
4500	———	———	455E4525	457E4525	459E4525
5000	———	———	455E5025	457E5025	459E5025
6000	———	———	———	457E6025	459E6025
7000	———	———	———	457E7025	459E7025
7500	———	———	———	457E7525	459E7525
8000	———	———	———	457E8025	459E8025
9000	———	———	———	457E9025	459E9025
10000	———	———	———	457E1035	459E1035

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VITREOUS ENAMELED FIXED RESISTORS

5 WATT

Type FR-5 Terminal-#10
Type FRL-5 Terminal-#107

Core Size: 5/16"x3/16"x1" Weight: .012 lbs.

Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts
1	2,230	2.2	750	81	61
1.5	1,820	2.7	800	79	63
2	1,580	3.2	900	74	67
3	1,290	3.9	1,000	71	71
4	1,120	4.5	1,100	67	74
5	1,000	5.0	1,100	64	77
7.5	816	6.1	1.250	63	79
10	707	7.1	1,500	58	87
12	646	7.8	1,750	53	93
15	576	8.6	2,000	50	100
20	500	10	2,250	47	106
25	447	11	2,500	45	112
30	409	12	3,000	41	123
35	378	13	3,500	38	133
40	353	14	4,000	35	140
50	316	16	4,500	33	149
75	258	19	5,000	32	160
100	223	22	6,000	29	174
125	200	25	7,000	27	189
150	182	27	7,500	26	195
200	158	32	8,000	25	200
225	149	33	9,000	23	207
250	141	35	10,000	22	220
300	129	39	12,500	20	250
350	119	42	15,000	18	275
400	112	45	17,500	17	295
450	105	47	20,000	16	320
500	100	50	22,500	14	360
600	91	55	25,000	13	390
700	84	59			

10 WATT

Type FR-10 Terminal-#10
Type FRL-10 Terminal-#107

Core Size: 5/16"x3/16"x1-3/4" Mounting Centers: 2-5/32" Weight: .019 lbs.
With Brackets: #P-4989

Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts
1	3,160	3.1	1,200	91	109
1.5	2,580	3.8	1,250	89	111
2	2,230	4.4	1,500	82	123
3	1,820	5.4	1,750	76	133
4	1,580	6.3	2,000	71	142
5	1,410	7.0	2,250	67	151
7.5	1,150	8.6	2,500	63	158
10	1,000	10	3,000	57	171
12	914	11	3,500	53	185
15	816	12	4,000	50	200
20	707	14	4,500	47	212
25	631	16	5,000	45	225
30	577	17	6,000	41	246
35	535	19	7,000	38	266
40	500	20	7,500	36	270
50	447	22	8,000	35	280
75	365	27	8,500	34	289
100	316	31	9,000	33	297
125	283	35	10,000	32	316
150	254	38	11,000	30	332
200	223	44	12,000	29	346
225	211	47	12,500	28	353
250	200	50	13,500	27	365
300	182	54	15,000	26	385
350	169	59	16,000	25	400
400	158	63	17,500	24	417
450	149	67	18,000	23	434
500	141	70	20,000	22	454
600	129	77	22,500	21	472
700	120	84	25,000	20	500
750	115	86	30,000	18	540
800	112	89	35,000	17	595
900	105	94	40,000	16	638
1,000	100	100	45,000	15	668
1,100	95	104	50,000	14	707

20 WATT

Type FR-20 Terminal-#10
Type FRL-20 Terminal-#107

Core Size: 7/16"x1/4"x2" Mounting Centers: 2-17/32" Weight: .033 lbs.
With Brackets: #P-3749

Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts
1	4,480	4.4	2,400	91	218
3	2,580	7.7	2,500	89	222
5	2,000	10	2,750	85	234
10	1,410	14	3,000	81	243
15	1,150	17	3,500	75	262
25	895	22	4,000	70	280
50	633	31	4,500	67	301
75	516	39	5,000	63	315
100	447	44	6,000	57	342
150	365	54	7,000	53	371
175	338	59	7,500	51	382
200	316	63	8,000	50	400
250	283	71	10,000	44	440
300	258	77	12,500	36	450
350	239	84	15,000	31	465
400	223	89	20,000	27	520
500	200	100	25,000	24	600
650	175	114	30,000	22	660
700	169	118	35,000	21	735
750	164	123	40,000	19	760
800	158	126	45,000	18	810
850	154	131	50,000	17	850
1,000	141	141	55,000	16	880
1,200	129	155	60,000	15	900
1,250	126	157	65,000	15	970
1,500	115	172	70,000	14	980
1,750	107	187	75,000	13	990
1,850	104	192	80,000	12	990
2,000	100	200	85,000	11	990
2,250	94	211	90,000	10.5	990
			95,000	10	990
			100,000	10	990

25 WATT

Type FR-25 Terminal-#12

Core Size: 9/16"x5/16"x2" Mounting Centers: 2-3/4" Weight: .051 lbs.
With Brackets: #P-3747

Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts
1	5,000	5.0	1,500	129	193
2	3,535	7.0	2,000	111	222
3	2,885	8.6	2,500	100	250
4	2,500	10	3,000	91	273
5	2,236	11	3,500	84	294
10	1,580	15	4,000	79	316
15	1,291	19	5,000	70	350
25	1,000	25	6,000	64	384
50	707	35	7,500	57	427
75	577	43	10,000	50	500
100	500	50	12,000	42	505
150	408	61	15,000	36	540
200	353	70	20,000	31	620
250	316	79	25,000	28	700
300	289	86	30,000	26	780
400	250	100	35,000	24	840
500	223	111	40,000	22	880
750	182	136	50,000	20	950
800	177	141	60,000	16	960
850	171	145	70,000	15	960
1,000	158	158	80,000	12	990
1,250	141	176	100,000	10	990

75 WATT

Type FR-75 Terminal-#12

Core Size: 9/16"x5/16"x6" Mounting Centers: 6-3/4" Weight: .140 lbs.
With Brackets: #P-3747

Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts
1	8,660	8	2,500	173	432
2	6,120	12	3,000	158	474
3	5,000	15	4,000	137	548
4	4,330	17	5,000	122	610
5	3,875	19	6,000	111	666
10	2,740	27	7,500	100	750
25	1,732	43	8,000	96	769
50	1,225	61	10,000	86	860
100	866	86	12,000	79	948
150	707	106	12,500	77	962
200	612	122	15,000	70	1,050
250	548	137	20,000	61	1,220
300	500	150	25,000	49	1,225
400	433	173	30,000	42	1,260
500	387	193	35,000	36	1,270
750	316	237	40,000	32	1,280
800	306	242	45,000	29	1,310
1,000	274	274	50,000	26	1,320
1,500	223	234	75,000	18	1,340
2,000	193	386	100,000	13	1,360

Values of resistance listed are in stock for immediate delivery. Special resistance values or terminal dimensions are given prompt attention and Tru-Ohm's famous delivery is assured.

Fixed wire wound, vitreous enameled resistors. Stock resistance values range from 1Ω thru 250,000Ω Standard tolerance of ±5%. Closer resistance tolerances available on order.

The sturdy terminals are hot-tinned for soldering ease, and the holes in the terminal are of suitable size to accommodate screws.

50 WATT

Type FR-50 Terminal-#12

Core Size: 9/16"x5/16"x4" Mounting Centers: 4-3/4" Weight: .082 lbs.
With Brackets: #P-3747

Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts
1	7,070	7	4,000	111	444
2	5,000	10	5,000	100	500
3	4,070	12	6,000	91	545
4	3,535	14	7,500	81	608
5	3,160	15	8,000	79	632
10	2,236	22	10,000	70	700
25	1,414	35	12,000	64	768
50	1,000	50	12,500	63	787
75	816	61	15,000	57	855
100	707	70	20,000	50	1,000
150	577	86	25,000	44	1,090
200	500	100	30,000	37	1,100
250	447	111	35,000	32	1,120
300	408	122	40,000	29	1,140
400	353	141	50,000	26	1,300
500	316	158	75,000	21	1,575
750	258	193	100,000	18	1,800
800	250	200	125,000	16	1,950
1,000	223	223	150,000	13	1,950
1,500	182	273	175,000	11	1,950
2,000	158	316	200,000	10	1,950
2,500	141	350	225,000	9	1,950
3,000	129	384	250,000	8	1,950

100 WATT

Type FR-100 Terminal-#12

Core Size: 3/4"x1/2"x6-1/2" Mounting Centers: 7-3/8" Weight: .200 lbs.
With Brackets: #P-3689

Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts
1	10,000	10	3,000	181	543
2	7,070	14	3,500	170	595
3	5,770	17	4,000	160	640
4	5,000	20	4,500	150	675
5	4,470	22	5,000	141	705
10	3,160	31	7,500	115	864
25	2,000	50	10,000	100	1,000
50	1,414	70	15,000	81	1,215
75	1,150	86	20,000	70	1,400
100	1,000	100	25,000	60	1,500
125	895	112	30,000	57	1,720
150	816	122	40,000	50	2,000
250	630	157	50,000	45	2,250
500	447	223	60,000	40	2,400
750	365	274	70,000	38	2,400
1,000	316	316	75,000	32	2,400
1,250	285	356	100,000	28	2,400
1,500	259	388			
2,000	224	448			
2,500	200	500			

Wattage rating in free air – thru 60,000 ohms

160 WATT

Type FR-160 Terminal-#14

Core Size: 1-1/8"x3/4"x8-1/2" Mounting Centers: 9-3/8" Weight: .445 lbs.
With Brackets: #P-4898

Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts
1	12,650	12	3,000	231	693
2	8,940	18	3,500	215	753
3	7,300	21	4,000	200	800
4	6,320	25	4,500	185	832
5	5,650	28	5,000	179	895
10	4,000	40	7,500	15	1,070
15	3,265	49	10,000	13	1,230
25	2,525	63	15,000	10	1,570
50	1,786	89	20,000	089	1,780
75	1,460	109	25,000	08	2,000
100	1,265	126	30,000	73	2,090
150	1,033	155	35,000	67	2,370
200	894	178	40,000	63	2,540
250	800	200	50,000	57	2,800
500	565	282	60,000	52	3,080
750	461	346	75,000	46	3,470
1,000	400	400	100,000	40	4,000
1,500	326	489			
2,000	282	564			
2,500	252	630			

Wattage rating in free air – All values listed

200 WATT

Type FR-200 Terminal-#14

Core Size: 1-1/8"x3/4"x10-1/2" Mounting Centers: 11-3/8" Weight: .740 lbs.
With Brackets: #P-4898

Ohms	Milli-Amps	Volts	Ohms	Milli-Amps	Volts
1	14,140	14	4,000	225	900
2	10,000	20	4,500	210	945
3	8,162	24	5,000	200	1,000
4	7,070	28	7,500	163	1,222
5	6,325	31	10,000	14	1,410
10	4,470	44	15,000	12	1,725
25	2,828	70	20,000	10	2,000
50	2,000	100	25,000	089	2,225
75	1,635	122	30,000	082	2,460
100	1,414	141	35,000	075	2,640
150	1,152	173	40,000	070	2,830
250	895	224	50,000	063	3,150
500	632	316	60,000	058	3,480
750	516	387	75,000	052	3,900
1,000	447	447	100,000	045	4,490
1,500	365	547			
2,000	316	632			
2,500	283	707			
3,000	259	776			
3,500	240	840			

Wattage rating in free air – All values listed

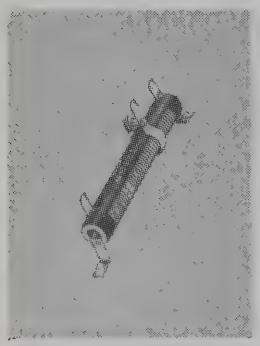
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VITREOUS ENAMELED ADJUSTABLE RESISTORS



These resistors are used in applications where it is necessary to make adjustment in resistance periodically; where intermediate values of resistance are required; or when provided with more than one adjustable lug as multiple tap resistors.

The wattage rating between the adjustable band and either end terminal is proportional to the distance between the terminal and the band and should be considered when figuring any maximum section wattage dissipation.



Type AR-10

10 WATT

Core Size: 5/16" x 3/16" x 1-3/4"
Mounting Centers – 2-3/16"
With Brackets #P-4989
Standard Lug #10
Weight: .019 lbs.

Catalog No.	Ohms	Milliamps	Catalog No.	Ohms	Milliamps
AR-10	1	3,160	AR-10	750	115
AR-10	2	2,230	AR-10	800	112
AR-10	3	1,820	AR-10	1,000	100
AR-10	5	1,410	AR-10	1,250	89
AR-10	7.5	1,150	AR-10	1,500	82
AR-10	10	1,000	AR-10	2,000	71
AR-10	15	816	AR-10	2,250	67
AR-10	20	707	AR-10	2,500	63
AR-10	25	631	AR-10	3,000	57
AR-10	50	447	AR-10	3,500	53
AR-10	75	365	AR-10	4,000	50
AR-10	100	316	AR-10	4,500	47
AR-10	150	254	AR-10	5,000	45
AR-10	200	223	AR-10	6,000	41
AR-10	250	200	AR-10	7,000	38
AR-10	300	182	AR-10	7,500	36
AR-10	350	169	AR-10	8,000	35
AR-10	400	158	AR-10	8,500	34
AR-10	500	141	AR-10	9,000	33
AR-10	600	129	AR-10	10,000	32

Type AR-25

25 WATT

Core Size: 9/16" x 5/16" x 2"
Mounting Centers – 2-3/4"
With Brackets #P-3747
Standard Lug #12
Weight: .057 lbs.

Catalog No.	Ohms	Milli-Amps	Catalog No.	Ohms	Milli-Amps
AR-25	1	5,000	AR-25	4,500	74
AR-25	2	3,535	AR-25	5,000	70
AR-25	3	2,885	AR-25	6,000	64
AR-25	5	2,236	AR-25	7,000	60
AR-25	7.5	1,825	AR-25	7,200	59
AR-25	10	1,580	AR-25	7,500	57
AR-25	15	1,291	AR-25	8,000	55
AR-25	20	1,117	AR-25	9,000	52
AR-25	25	1,000	AR-25	10,000	50
AR-25	50	707	AR-25	12,000	42
AR-25	75	577	AR-25	15,000	36
AR-25	100	500	AR-25	20,000	31
AR-25	150	408	AR-25	25,000	28
AR-25	200	353			
AR-25	250	316			
AR-25	300	289			
AR-25	400	250			
AR-25	500	223			
AR-25	750	182			
AR-25	800	177			
AR-25	850	171			
AR-25	1,000	158			
AR-25	1,250	141			
AR-25	1,500	129			
AR-25	2,000	120			
AR-25	2,250	105			
AR-25	2,500	100			
AR-25	3,000	91			
AR-25	3,500	84			
AR-25	4,000	79			

Type AR-50

50 WATT

Core Size: 9/16" x 5/16" x 4"
Mounting Centers – 4-3/4"
With Brackets #P-3747
Standard Lug #12
Weight: .096 lbs.

Catalog No.	Ohms	Milli-Amps	Catalog No.	Ohms	Milli-Amps
AR-50	1	7,070	AR-50	7,000	84
AR-50	2	5,000	AR-50	7,200	83
AR-50	3	4,070	AR-50	7,500	81
AR-50	4	3,535	AR-50	8,000	79
AR-50	5	3,160	AR-50	9,000	74
AR-50	10	2,236	AR-50	10,000	70
AR-50	25	1,414	AR-50	12,000	64
AR-50	50	1,000	AR-50	15,000	57
AR-50	75	816	AR-50	20,000	50
AR-50	100	707	AR-50	25,000	45
AR-50	150	577	AR-50	30,000	36
AR-50	200	500	AR-50	40,000	29
AR-50	250	447	AR-50	50,000	26
AR-50	300	408	AR-50	60,000	24
AR-50	400	353	AR-50	75,000	22
AR-50	500	316	AR-50	80,000	21
AR-50	750	258	AR-50	100,000	18
AR-50	800	250			
AR-50	1,000	223			
AR-50	1,250	200			
AR-50	1,500	182			
AR-50	2,000	158			
AR-50	2,250	149			
AR-50	2,500	141			
AR-50	3,000	129			
AR-50	3,500	119			
AR-50	4,000	111			
AR-50	4,500	105			
AR-50	5,000	100			
AR-50	6,000	91			

Type AR-75

75 WATT

Core Size: 9/16" x 5/16" x 6"
Mounting Centers – 6-3/4"
With Brackets #P-3747
Standard Lug #12
Weight: .150 lbs.

Catalog No.	Ohms	Milli-Amps	Catalog No.	Ohms	Milli-Amps
AR-75	1	8,660	AR-75	7,000	103
AR-75	2	6,120	AR-75	7,200	102
AR-75	3	5,000	AR-75	7,500	100
AR-75	4	4,330	AR-75	8,000	96
AR-75	5	3,875	AR-75	9,000	91
AR-75	10	2,740	AR-75	10,000	86
AR-75	15	2,236	AR-75	12,000	79
AR-75	25	1,732	AR-75	15,000	70
AR-75	50	1,225	AR-75	20,000	61
AR-75	75	1,000	AR-75	25,000	54
AR-75	100	866	AR-75	30,000	50
AR-75	200	612	AR-75	35,000	46
AR-75	250	548	AR-75	40,000	42
AR-75	300	500	AR-75	45,000	35
AR-75	400	433	AR-75	50,000	33
AR-75	500	387	AR-75	60,000	29
AR-75	750	316	AR-75	70,000	27
AR-75	800	306	AR-75	80,000	25
AR-75	1,000	274	AR-75	100,000	22
AR-75	1,250	244			
AR-75	1,500	223			
AR-75	2,000	193			
AR-75	2,250	182			
AR-75	2,500	173			
AR-75	3,000	158			
AR-75	3,500	146			
AR-75	4,000	137			
AR-75	4,500	129			
AR-75	5,000	122			
AR-75	6,000	111			

Type AR-100

100 WATT

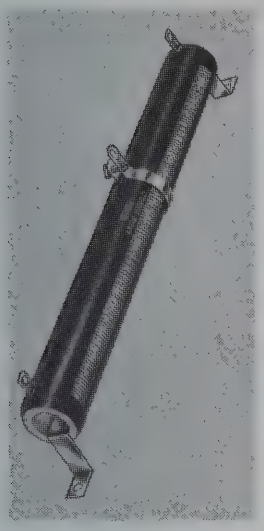
Core Size: 3/4" x 1/2" x 6-1/2"
Mounting Centers – 7-3/8"
With Brackets #P-3689
Standard Lug #12
Weight: .200 lbs.

Catalog No.	Ohms	Milli-Amps	Catalog No.	Ohms	Milli-Amps
AR-100	1	10,000	AR-100	5,000	141
AR-100	2	7,070	AR-100	6,000	129
AR-100	3	5,770	AR-100	7,500	115
AR-100	4	5,000	AR-100	10,000	100
AR-100	5	4,470	AR-100	15,000	81
AR-100	10	3,160	AR-100	20,000	70
AR-100	25	2,000	AR-100	25,000	62
AR-100	50	1,414	AR-100	30,000	57
AR-100	100	1,000	AR-100	40,000	49
AR-100	200	707	AR-100	50,000	44
AR-100	250	630	AR-100	60,000	24
AR-100	400	500	AR-100	75,000	30
AR-100	500	447	AR-100	100,000	28
AR-100	750	365			
AR-100	1,000	316			
AR-100	1,500	259			
AR-100	2,000	224			
AR-100	2,500	200			
AR-100	3,000	181			
AR-100	4,000	160			

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MEMCOR/COMPONENTS DIVISION
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VITREOUS ENAMELED ADJUSTABLE RESISTORS



Type AR-160

160 WATT

Core Size: 1-1/8" x 3/4" x 8-1/2"
Mounting Centers – 9-3/8"
With Brackets #P-4898 Weight:
Standard Lug #14 .460 lbs.

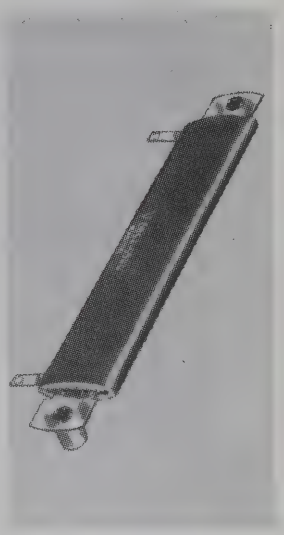
Catalog No.	Ohms	Milli-Amps	Catalog No.	Ohms	Milli-Amps
AR-160	1	12,650	AR-160	4,500	185
AR-160	2	8,940	AR-160	5,000	179
AR-160	3	7,300	AR-160	7,500	146
AR-160	4	6,320	AR-160	10,000	126
AR-160	5	5,650	AR-160	15,000	104
AR-160	10	4,000	AR-160	20,000	89
AR-160	15	3,265	AR-160	25,000	80
AR-160	25	2,525	AR-160	30,000	72
AR-160	50	1,786	AR-160	40,000	62
AR-160	100	1,265	AR-160	50,000	56
AR-160	200	894	AR-160	60,000	52
AR-160	250	800	AR-160	75,000	46
AR-160	500	565	AR-160	80,000	44
AR-160	1,000	400	AR-160	100,000	40
AR-160	1,500	326			
AR-160	2,000	282			
AR-160	2,500	252			
AR-160	3,000	231			
AR-160	3,500	215			
AR-160	4,000	200			

Type AR-200

200 WATT

Core Size: 1-1/8" x 3/4" x 10-1/2"
Mounting Centers – 11-3/8"
With Brackets #P-4898 Weight:
Standard Lug #14 .670 lbs.

Catalog No.	Ohms	Milli-Amps	Catalog No.	Ohms	Milli-Amps
AR-200	1	14,140	AR-200	7,500	163
AR-200	2	10,000	AR-200	10,000	141
AR-200	3	8,162	AR-200	15,000	115
AR-200	4	7,070	AR-200	20,000	100
AR-200	5	6,325	AR-200	25,000	89
AR-200	10	4,470	AR-200	30,000	82
AR-200	25	2,828	AR-200	40,000	71
AR-200	50	2,000	AR-200	50,000	62
AR-200	100	1,414	AR-200	60,000	57
AR-200	250	895	AR-200	75,000	52
AR-200	500	632	AR-200	100,000	45
AR-200	1,000	447			
AR-200	1,500	365			
AR-200	2,000	316			
AR-200	2,500	283			
AR-200	3,000	259			
AR-200	3,500	240			
AR-200	4,000	225			
AR-200	4,500	210			
AR-200	5,000	200			



VITREOUS ENAMELED FIXED RESISTORS

Midget Oval Type MOR-Series

These units are very desirable for applications where the size of components must be kept to a minimum. Integral mounting brackets are supplied as standard and are designed for stack mounting of the resistors. Three standard sizes are available. Ratings are based on metal panel mounting, on plate 10" x .040".

Type MOR-10

10 WATT

Core: 3/8" x 3/4"

Ohms	Max. Amps	Ohms	Max. Amps
1	3.16	600	0.13
2	2.24	750	0.12
5	1.41	1,000	0.10
7.5	1.15	1,250	0.089
10	1.00	1,500	0.081
15	0.82	1,750	0.075
20	0.70	2,000	0.071
25	0.63	2,500	0.063
30	0.57	3,000	0.057
40	0.50	4,000	0.050
50	0.46	5,000	0.045
75	0.36	6,000	0.041
100	0.32	7,000	0.038
125	0.28	7,500	0.036
150	0.26	10,000	0.032
200	0.22	12,500	0.028
250	0.20	15,000	0.026
300	0.18		
400	0.16		
500	0.14		

Type MOR-15

15 WATT

Core: 3/8" x 1"

Ohms	Max. Amps	Ohms	Max. Amps
1	3.81	2,000	0.087
2	2.73	2,500	0.077
5	1.73	3,000	0.072
10	1.23	3,500	0.065
15	1.00	4,000	0.059
25	0.77	5,000	0.054
40	0.61	6,000	0.050
50	0.54	7,500	0.044
75	0.44	10,000	0.038
100	0.38	12,500	0.034
150	0.31	15,000	0.032
200	0.27	20,000	0.028
250	0.24	25,000	0.024
300	0.22		
400	0.18		
500	0.17		
750	0.14		
1,000	0.12		
1,250	0.11		
1,500	0.10		

Type MOR-20

20 WATT

Core: 3/8" x 2"

Ohms	Max. Amps	Ohms	Max. Amps
1	4.47	2,000	0.10
2	3.16	2,500	0.09
5	2.00	3,000	0.081
10	1.41	3,500	0.075
15	1.16	4,000	0.070
25	0.89	5,000	0.063
40	0.71	6,000	0.058
50	0.63	7,500	0.052
75	0.52	10,000	0.044
100	0.45	12,500	0.040
150	0.36	15,000	0.036
200	0.32	20,000	0.032
250	0.26	25,000	0.028
300	0.26	30,000	0.026
400	0.22	35,000	0.024
500	0.20	40,000	0.022
800	0.16	50,000	0.020
1,000	0.14		
1,250	0.12		
1,500	0.11		

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MODEL ENGINEERING and MANUFACTURING CORP.
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VITREOUS ENAMELED FIXED RESISTORS

Oval Type OR-Series

Type OR-30

30 WATT

Core: 5/16" x 1" x 1-1/4"
Weight: .0555 lbs.

Ohms	Max. Volts	Max. Amps.
1	5.4	5.480
3	9.4	3.160
5	12	2.455
10	17	1.732
15	21	1.414
25	27	1.097
50	38	.775
100	54	.548
150	67	.447
200	77	.387
250	86	.346
400	109	.274
500	122	.245
750	150	.200
1,000	173	.173
1,250	193	.155
1,500	211	.141
2,000	244	.122
2,500	272	.109
3,000	300	.100
3,500	322	.092
4,000	344	.086
5,000	385	.077
7,500	526	.057
10,000	610	.049

Type OR-40

40 WATT

Core: 5/16" x 1" x 2"
Weight: .075 lbs.

Ohms	Max. Volts	Max. Amps.
1	6.3	6.330
3	10	3.645
5	14	2.830
10	20	2.000
15	24	1.637
25	31	1.265
50	44	.895
100	63	.633
150	77	.516
200	89	.447
250	100	.400
400	126	.316
500	141	.282
750	173	.231
1,000	200	.200
1,250	223	.179
1,500	244	.163
2,000	282	.141
2,500	315	.126
3,000	345	.115
3,500	374	.107
4,000	400	.100
5,000	445	.089
7,500	547	.073
10,000	630	.063
15,000	765	.051
20,000	1,000	.039
25,000	1,140	.035

Type OR-55

55 WATT

Core: 5/16" x 1" x 3-1/2"
Weight: .130 lbs.

Ohms	Max. Volts	Max. Amps.
1	7.4	7.410
3	12	4.280
5	16	3.318
10	23	2.345
15	28	1.917
25	37	1.482
50	52	1.050
100	74	.741
150	90	.605
200	104	.524
250	117	.469
400	148	.370
500	165	.331
750	203	.271
1,000	234	.234
1,250	259	.207
1,500	286	.191
2,000	332	.166
2,500	370	.148
3,000	405	.135
3,500	437	.125
4,000	469	.117
5,000	525	.105
7,500	638	.085
10,000	740	.074
15,000	900	.060
20,000	1,040	.052
25,000	1,150	.046
30,000	1,260	.042

Type OR-65

65 WATT

Core: 5/16" x 1" x 4-3/4"
Weight: .160 lbs.

Ohms	Max. Volts	Max. Amps.
1	8	8.060
3	14	4.655
5	18	3.605
10	25	2.550
15	31	2.080
25	40	1.612
50	57	1.140
100	80	.805
150	98	.658
200	114	.570
250	127	.510
400	161	.403
500	181	.360
750	220	.294
1,000	255	.255
1,250	285	.228
1,500	312	.208
2,000	360	.180
2,500	402	.161
3,000	444	.147
3,500	475	.136
4,000	508	.127
5,000	570	.114
7,500	698	.093
10,000	800	.080
15,000	975	.065
20,000	1,140	.057
25,000	1,275	.051
30,000	1,380	.046
35,000	1,505	.043
40,000	1,600	.040
50,000	1,800	.036

Type OR-75

75 WATT

Core: 5/16" x 1" x 6"
Weight: .195 lbs.

Ohms	Max. Volts	Max. Amps.
1	8.6	8.660
3	15	5.000
5	19	3.875
10	27	2.740
15	33	2.236
25	43	1.732
50	61	1.225
100	86	.866
150	106	.707
200	118	.591
250	137	.548
400	173	.432
500	193	.387
750	237	.316
1,000	274	.274
1,250	306	.245
1,500	334	.223
2,000	386	.193
2,500	432	.173
3,000	474	.158
3,500	510	.146
4,000	548	.137
5,000	611	.122
7,500	750	.100
10,000	860	.086
15,000	1,050	.070
20,000	1,220	.061
25,000	1,350	.054
30,000	1,500	.050
35,000	1,610	.046
40,000	1,720	.043
50,000	1,900	.038

VITREOUS ENAMELED RESISTORS

Axial Lead Val-Type

The cores are of a high grade ceramic material to which are affixed lead and cup assemblies of low expansion alloys. After winding, the units are coated with high temperature vitreous enamel which makes them resistant to humidity. This type unit is capable of continuous operation at 340°C.

This type resistor lends itself to applications where size is a factor in the design and miniaturization of equipment. They are capable of dissipating power equal to their larger counterpart tab type terminal resistors, but because of the axial lead construction they require less space for mounting.

VAL-3

3 WATT

Core: 1/4" x 9/16" Weight: .002 lbs.

Ohms	Amps	Volts	Ohms	Amps	Volts
1	1.73	1.73	750	.063	47.4
1.5	1.41	2.12	800	.061	49.0
2	1.22	2.45	900	.058	52.0
3	1.00	3.00	1,000	.055	54.8
4	.87	3.46	1,100	.052	57.4
5	.77	3.87	1,200	.050	60.0
7.5	.63	4.74	1,250	.049	61.1
10	.55	5.48	1,500	.045	67.0
12	.50	6.00	1,750	.041	72.3
15	.45	6.70	2,000	.039	77.4
20	.39	7.74	2,250	.037	82.3
25	.35	8.66	2,500	.035	86.3
30	.32	9.50	3,000	.032	95.0
35	.29	10.2	3,500	.029	103
40	.27	11.0	4,000	.027	110
50	.25	12.2	4,500	.026	116
75	.20	15.0	5,000	.025	122
100	.17	17.3	6,000	.022	134
125	.16	19.4	7,000	.020	145
150	.14	21.2	7,500	.020	150
200	.13	24.5	8,000	.019	155
225	.12	26.0	9,000	.018	163
250	.11	27.4	10,000	.017	172
300	.10	30.0			
350	.093	32.4			
400	.087	34.6			
450	.082	36.7			
500	.077	38.7			
600	.071	42.4			
700	.065	45.8			

VAL-5

5 WATT

Core: 11/32" x 1-1/16" Weight: .006 lbs.

Ohms	Amps	Volts	Ohms	Amps	Volts
1	2.23	2.23	750	.082	61.5
1.5	1.82	2.74	800	.078	63.0
2	1.58	3.16	900	.074	67.0
3	1.29	3.87	1,000	.070	70.0
4	1.12	4.47	1,100	.067	74.0
5	1.00	5.00	1,200	.064	77.0
7.5	.81	6.12	1,250	.063	79.0
10	.71	7.07	1,590	.057	86.0
12	.64	7.74	1,750	.053	93.0
15	.58	8.66	2,000	.050	100
20	.50	10.0	2,250	.047	106
25	.45	11.2	2,500	.045	112
30	.41	12.3	3,000	.041	123
35	.38	13.3	3,500	.037	132
40	.35	14.0	4,000	.035	141
50	.32	16.0	4,500	.033	149
75	.25	19.5	5,000	.032	156
100	.22	22.0	6,000	.029	172
125	.20	25.0	7,000	.027	189
150	.18	27.0	7,500	.026	195
200	.16	32.0	8,000	.025	200
225	.15	33.8	9,000	.024	212
250	.14	35.0	10,000	.022	220
300	.13	39.0	12,500	.020	250
350	.12	42.0	15,000	.018	270
400	.11	44.0	17,500	.017	295
450	.10	45.0	18,000	.017	302
500	.10	50.0	20,000	.016	320
600	.09	54.0	22,500	.015	335
700	.085	60.0	25,000	.014	350

VAL-10

10 WATT

Core: 3/8" x 1-27/32" Weight: .014 lbs.

Ohms	Amps	Volts	Ohms	Amps	Volts
1.0	3.16	3.16	2,250	.066	149
1.5	2.57	3.86	2,500	.063	158
2.0	2.24	4.47	3,000	.057	173
3.0	1.83	5.47	3,500	.053	187
4.0	1.58	6.33	4,000	.050	200
5.0	1.41	7.07	4,500	.047	212
7.5	1.16	8.65	5,000	.045	223
10	1.00	10.0	6,000	.041	245
12	.91	10.9	7,000	.038	265
15	.82	12.2	7,500	.036	274
20	.71	14.1	8,000	.035	283
25	.63	15.8	8,500	.034	291
30	.58	17.3	9,000	.033	300
35	.53	18.7	10,000	.032	316
40	.50	20.0	11,000	.030	332
50	.45	22.4	12,000	.029	346
75	.37	27.4	12,500	.028	353
100	.32	31.6	13,500	.027	367
125	.28	35.4	15,000	.026	387
150	.26	38.7	16,000	.025	400
200	.22	44.7	17,500	.024	418
225	.21	47.4	18,000	.023	424
250	.20	50.0	20,000	.022	447
300	.18	54.7	22,500	.021	474
350	.17	59.1	25,000	.020	500
400	.16	63.2	30,000	.018	548
450	.15	66.8	35,000	.017	591
500	.14	70.7	40,000	.016	632
600	.13	77.4	45,000	.015	670
700	.12	83.6	50,000	.014	707
750	.11	86.6			
800	.11	89.4			
900	.11	94.8			
1,000	.10	100			
1,100	.095	104			
1,200	.091	109			
1,250	.090	113			
1,500	.081	122			
1,750	.075	132			
2,000	.071	142			

WATTS	DIAMETER "D"	LENGTH "L"	LENGTH "A" ± 1/16"	LEAD SIZE A.W.G.**	MIN. RES.	RES. MAX.
3	1/4	9/16	1-1/2	#20	0.1 Ω	10,000 Ω
5	11/32	1-1/16	1-1/2	#19	0.4 Ω	25,000 Ω
10	3/8	1-27/32	1-1/2	#19	0.75 Ω	50,000 Ω

*Lengths shown are standard and can be supplied up to 2-1/2 inches long.
**Sizes shown are standard and can be supplied with #18, #19, or #20 A.W.G.

4

TRU-OHM® PRODUCTS MEMCOR/COMPONENTS DIVISION
MODEL ENGINEERING and MANUFACTURING CORP
MEMCOR®

VITREOUS ENAMELED POWER RHEOSTATS

All Values Listed are in Stock for Immediate Shipment

Type R-12½-12½ Watts

CAT. NO.	TOTAL OHMS	MAX. AMPS	APPROX. STEPS	CAT. NO.	TOTAL OHMS	MAX. AMPS	APPROX. STEPS
600	1	2.53	27	611	100	.35	102
601	2	2.50	38	612	125	.32	102
602	3	2.04	36	613	175	.27	112
603	6	1.44	45	614	250	.22	124
604	8	1.25	49	615	350	.19	150
605	10	1.12	42	616	500	.16	164
606	15	.91	49	617	750	.13	188
607	25	.71	65	618	1000	.11	198
608	35	.60	72	619	1500	.091	235
609	50	.50	81	620	2500	.071	260
610	75	.41	98	621	3500	.060	285
				622	5000	.050	315

Type R-25-25 Watts

CAT. NO.	RES.	MAX. AMPS	APPROX. STEPS	CAT. NO.	RES.	MAX. AMPS	APPROX. STEPS
100	1	5.000	26	112	125	.445	145
101	2	3.540	28	113	175	.375	153
102	3	2.880	44	114	250	.316	170
103	6	2.040	50	115	350	.267	180
104	8	1.770	54	116	500	.222	215
105	10	1.580	60	117	750	.182	230
106	15	1.290	78	118	1000	.155	270
107	25	1.000	80	119	1500	.129	325
108	35	.845	100	120	2500	.100	410
109	50	.707	105	121	3500	.084	440
110	75	.575	120	122	5000	.070	480
111	100	.500	140				

Type R-50-50 Watts

CAT. NO.	RES.	MAX. AMPS	APPROX. STEPS	CAT. NO.	RES.	MAX. AMPS	APPROX. STEPS
200	0.5	10.000	22	213	150	.574	175
201	1	7.070	36	214	225	.470	215
202	2	5.000	38	215	300	.408	225
203	4	3.540	38	216	500	.316	295
204	6	2.880	75	217	800	.250	360
205	8	2.500	78	218	1000	.223	375
206	12	2.040	80	219	1600	.176	465
207	16	1.760	90	220	2500	.141	560
208	22	1.500	95	221	3500	.119	585
209	35	1.190	120	222	5000	.100	600
210	50	1.000	120	223	8000	.079	710
211	80	.790	135	224	10,000	.070	720
212	125	.630	185				

Type R-75-75 Watts

CAT. NO.	RES.	MAX. AMPS	APPROX. STEPS	CAT. NO.	RES.	MAX. AMPS	APPROX. STEPS
300	0.5	12.300	27	312	200	.612	180
301	1	8.660	18	313	300	.500	227
302	2	6.120	30	314	400	.433	232
303	3	5.000	30	315	500	.388	250
304	5	3.880	45	316	750	.316	260
305	7.5	3.160	47	317	1,000	.274	290
306	10	2.740	50	318	1,500	.224	350
307	16	2.170	87	319	2,000	.194	380
308	25	1.730	92	320	2,500	.173	425
309	50	1.230	118	321	5,000	.123	630
310	75	1.000	135	322	7,500	.100	715
311	100	.866		323	10,000	.087	820

Type R-100-100 Watts

CAT. NO.	RES.	MAX. AMPS	APPROX. STEPS	CAT. NO.	RES.	MAX. AMPS	APPROX. STEPS
400	0.5	14.100	30	412	200	.707	190
401	1	10.000	20	413	300	.575	260
402	2	7.070	32	414	400	.500	262
403	3	5.750	32	415	500	.447	270
404	5	4.470	50	416	750	.365	280
405	7.5	3.650	52	417	1,000	.316	316
406	10	3.160	58	418	1,500	.258	370
407	16	2.500	97	419	2,000	.224	420
408	25	2.000	105	420	2,500	.200	460
409	50	1.410	140	421	5,000	.141	650
410	75	1.150	155	422	7,500	.115	740
411	100	1.000	168	423	10,000	.100	850

Type R-150-150 Watts

CAT. NO.	RES.	MAX. AMPS	APPROX. STEPS	CAT. NO.	RES.	MAX. AMPS	APPROX. STEPS
500	0.5	17.300	28	513	150	1.000	230
501	1	12.300	37	514	200	.865	242
502	2	8.650	38	515	250	.775	250
503	3	7.070	67	516	350	.655	280
504	5	5.480	68	517	500	.548	330
505	7.5	4.470	71	518	750	.447	370
506	10	3.880	70	519	1,250	.346	460
507	15	3.163	138	520	1,800	.288	550
508	25	2.450	140	521	2,250	.259	570
509	35	2.070	133	522	3,000	.224	600
510	50	1.735	160	523	4,500	.182	680
511	75	1.415	185	524	7,500	.141	980
512	100	1.225	190	525	10,000	.122	990

Type R-300-300 Watts

CAT. NO.	TOTAL OHMS	MAX. AMPS	APPROX. STEPS	CAT. NO.	TOTAL OHMS	MAX. AMPS	APPROX. STEPS	CAT. NO.	TOTAL OHMS	MAX. AMPS	APPROX. STEPS	CAT. NO.	TOTAL OHMS	MAX. AMPS	APPROX. STEPS
700	1	17.32	50	706	10	5.48	76	712	150	1.41	272	718	1,200	.50	446
701	2	12.24	50	707	15	4.47	130	713	200	1.22	251	719	1,500	.45	460
702	3	10.00	71	708	25	3.47	88	714	300	1.00	300	720	1,750	.41	500
703	4	8.66	65	709	50	2.45	225	715	400	.87	290	721	2,500	.35	508
704	5	7.75	61	710	75	2.00	315	716	700	.66	450				
705	7.5	6.32	88	711	100	1.73	258	717	900	.58	470				

Type R-225-225 Watts

STOCK CAT. NO.	OHMS	MAX. AMPS*	APPROX. NO. OF STEPS
4001	1	15.00	55
4002	1.5	12.30	55
4003	2	10.60	55
4004	2.5	9.50	55
4005	3	8.66	55
4006	4	7.50	55
4007	5	6.71	55
4008	7.5	5.49	115
4009	10	4.74	115
4010	15	3.87	115
4011	25	3.00	115
4012	50	2.12	256
4013	75	1.73	306
4014	100	1.50	315
4015	150	1.22	385
4016	200	1.06	357
4017	250	.950	350
4018	300	.866	335
4019	400	.750	344
4020	500	.671	450
4021	700	.567	495
4022	750	.549	533
4023	750	.500	500
4024	1000	.474	555
4025	1200	.433	526
4026	1500	.387	630
4027	1750	.358	620
4028	2500	.300	670

Type R-500-500 Watts

STOCK CAT. NO.	OHMS	MAX. AMPS*	APPROX. NO. OF STEPS
4101	1	22.3	70
4102	1.5	18.2	64
4103	2	15.8	68
4104	2.5	14.1	67
4105	3	12.9	65
4106	4	11.2	96
4107	5	10.0	96
4108	7.5	8.17	98
4109	8	7.90	97
4110	10	7.07	105
4111	12.5	6.30	103
4112	15	5.77	202
4113	16	5.60	192
4114	25	4.47	195
4115	40	3.54	205
4116	50	3.16	200
4117	75	2.58	395
4118	80	2.52	425
4119	100	2.24	450
4120	125	2.00	505
4121	150	1.82	544
4122	175	1.69	500
4123	250	1.41	570
4124	325	1.24	515
4125	500	1.00	620
4126	750	.817	740
4127	1000	.707	780
4128	1500	.577	940
4129	2000	.500	986
4130	2500	.447	940

Type R-750-750 Watts

STOCK CAT. NO.	OHMS	MAX. AMPS*	APPROX. NO. OF STEPS
4201	1	27.4	85
4202	1.5	22.3	85
4203	2	19.4	81
4204	2.5	17.3	87
4205	3	15.8	83
4206	4	13.6	87
4207	5	12.2	122
4208	7.5	10.0	129
4209	8	9.65	122
4210	10	8.65	121
4211	12.5	7.75	120
4212	15	7.07	127
4213	16	6.82	120
4214	25	5.47	210
4215	50	3.87	238
4216	75	3.19	250
4217	80	3.06	266
4218	100	2.74	265
4219	150	2.23	500
4220	160	2.17	485
4221	200	1.94	472
4222	250	1.73	470
4223	300	1.58	500
4224	400	1.37	472
4225	500	1.22	565
4226	600	1.12	677
4227	750	1.00	670
4228	1000	.865	715
4229	1200	.791	860
4230	1500	.707	840
4231	1800	.646	1020
4232	2500	.547	1085

Type R-1000-1000 Watts

STOCK CAT. NO.	OHMS	MAX. AMPS*	APPROX. NO. OF STEPS
4301	1	31.60	81
4302	1.5	25.80	84
4303	2	22.40	109
4304	2.5	20.00	105
4305	3	18.30	113
4306	4	15.80	106
4307	5	14.10	155
4308	7.5	11.50	105
4309	8	11.20	105
4310	10	10.00	105
4311	12.5	8.95	165
4312	15	8.16	156
4313	16	7.90	166
4314	25	6.33	160
4315	50	4.47	331
4316	75	3.65	303
4317	100	3.16	320
4318	150	2.58	306
4319	175	2.39	550
4320	225	2.11	585
4321	250	2.00	640
4322	300	1.83	605
4323	400	1.58	640
4324	500	1.41	635
4325	750	1.15	820
4326	1000	1.00	862
4327	1500	.816	1030
4328	2500	.633	1300

*Through all or any part of winding

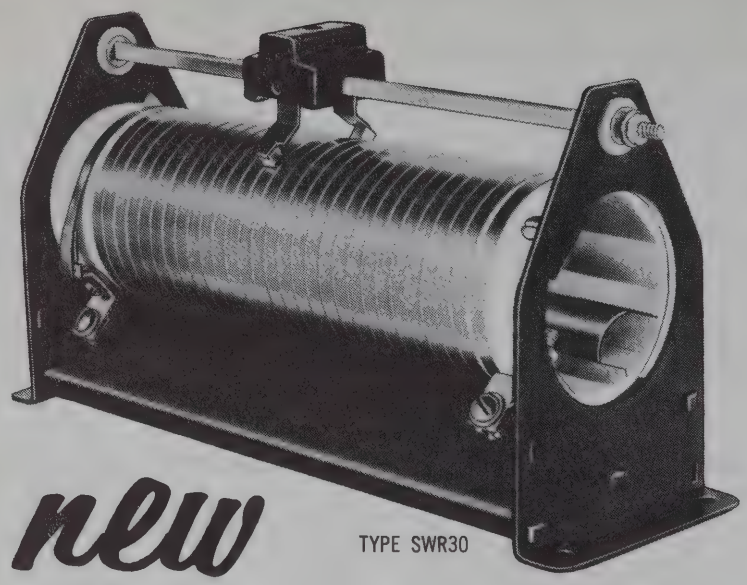
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new TYPE SWR30

- **THERMAL EXPANSION COMPENSATED TUBE AND WIRE ASSEMBLY**
- **FAST HEAT DISSIPATION, NO LOCALIZED HEATING**
- **BASE PLATE PREVENTS TRANSFER OF HEAT TO MOUNTING SURFACE**
- **NEGLIGIBLE INDUCTANCE AT 400 CYCLES**
- **STURDY CONSTRUCTION, LONG LIFE**

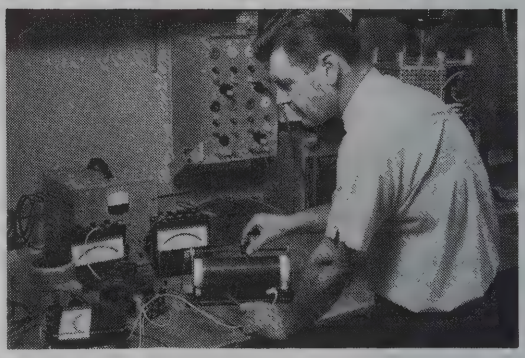
Patent Pending

OHMSTAT

SLIDEWIRE RESISTORS

The new OHMSTAT Slidewire Resistors are the result of an extensive development program to provide units combining excellent electrical characteristics and long life. They incorporate unique design features which make them ideal for use in laboratories, test and research departments or for classroom demonstrations. A wide selection of ratings is available.

OHMSTAT Slidewire Resistors utilize an aluminum tube having a fired-on, high temperature coating. A stainless steel spring compensates for the difference in thermal expansion between the tube and the resistance wire, permitting the resistor to operate at peak wattage with no slackening of the winding turns. The excellent heat conducting properties of aluminum prevent "hot spots" as are common with resistors using porcelain tubes. Chrome plated brass is used for the slider bar. A double sliding contact arrangement is used to provide a reliable connection to the resistance wire. A protective plate on the frame effectively shields the mounting surface from heat. OHMSTAT Slidewire Resistors have negligible inductance at frequencies as high as 400 cycles. Eight air-cooled models are offered in ratings from 0.55 to 1000 ohms.



RATINGS				
TYPE	RATED AMPERES	NOMINAL RESISTANCE OHMS	WATTS	MAXIMUM INPUT VOLTS
SWR05	0.5	1000	250	500
SWR1	1	500	500	500
SWR2	2	125	500	250
SWR3	3	55	500	165
SWR5	5	20	500	100
SWR10	10	5	500	50
SWR20	20	1.25	500	25
SWR30	30	0.55	500	16.5

THE SUPERIOR ELECTRIC COMPANY

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VECO® VICTORY ENGINEERING CORPORATION

THERMISTORS • VARISTORS

VECO THERMISTOR AND VARISTOR KITS
For Experimentors and Circuit Designers

Each kit contains an assortment of Thermistors or Varistors for experimentation and development of prototype circuitry. Schematics and complete technical data are included.

KD25	12 Thermistor Disks	$10.50
KP50	6 Thermistor Probes	14.50
KR75	8 Thermistor Rods	8.75
KTB1	8 Thermistor Beads	19.50
KW125	12 Thermistor Washers (6 types) & Mtg. Kit	13.50
KV1001	9 Silicon Carbide Varistor Disks	7.50
KV1002	4 Silicon Carbide Varistors	1.50
M168	7 Thermistors and Varistors	5.00
M168A	10 Thermistors and Varistors	10.00

VECO sets the pace for PRODUCT RELIABILITY

New! VECO "THINISTOR"* KITS
(Thin Film Thermistors)

VECO's new revolutionary, ultra-thin, ultra-fast Thinistor Thermistors (See Figs. 12 and 13) now available in kit form for evaluation and for prototype circuitry development.

KFN101	4 Free-standing (no substrate) Thinistors)	$ 50.00
KFN201	6 Substrate-backed Thinistors	100.00
KFN301	2 Free-standing and 2 Substrate Thinistors	60.00
KFN401	2 Matched Pairs of Thinistors (Within 1%) (For Infra-red Detection)	189.50

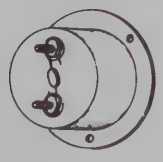
*Trade mark and pat. applied for.

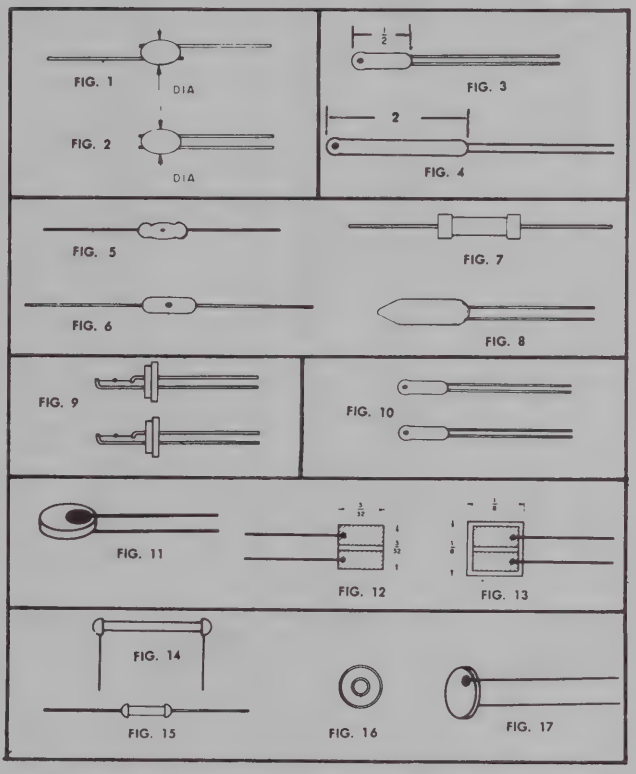
VECO Number	Resistance @ 25°C (Ohms)	Net Price	Fig.
BEAD THERMISTORS .043" Dia. 3/16" Min. Leads			
21A2	100 ± 20%	$ 3.00	2
25A5	500 ± 20%	2.40	2
32A12	2,000 ± 20%	1.95	2
51A2	100,000 ± 15%	1.95	2
65A5	5 MEG ± 20%	3.30	2
.013" Dia. 3/16" Min. Leads			
32A5	2,000 ± 25%	3.00	1
32A48	2,000 ± 25%	2.60	1
34A2	3,500 ± 15%	4.20	1
51A30	100,000 ± 25%	3.20	1
61A9	1 MEG ± 25%	3.90	1
.010" Dia. 1/4" Min. Leads			
31A7	1,000 ± 25%	5.70	1
32A50	2,000 ± 25%	5.70	1
41A5	10,0000 ± 25%	5.40	1
51A22	100,000 ± 25%	5.50	1
61A5	1 MEG ± 25%	6.40	1
.005" Dia. 1/4" Min. Leads			
31A401C	1,000 ± 25%	20.00	1
32A401C	2,000 ± 25%	20.00	1
51A401C	100,000 ± 25%	20.00	1
GLASS PROBE THERMISTORS			
13A13	30 ± 20%	4.00	4
22A31	200 ± 20%	3.00	4
32A11	2,000 ± 20%	1.95	3
45A11	50,000 ± 20%	2.25	3
72A10	15 MEG ± 20%	3.80	4
GLASS ROD & BULB THERMISTORS			
32A3	2,000 ± 25%	4.60	5
37A1	7,000 ± 20%	3.60	6
44A1	35,000 ± 25%	1.90	7
45B2	50,000 ± 40%	2.60	7
46A2	60,500 ± 29%	2.60	7
MATCHED THERMISTORS			
A33	2,000 ± 25%	15.00	9
A59	100,000 ± 15%	7.00	10
A60	2,000 ± 20%	7.00	10
ROD THERMISTORS .05" Dia.			
41S2	10,000 ± 10%	1.35	14
51R2	100,000 ± 10%	1.35	14
ROD THERMISTORS .110" Dia.			
33S1	3,150 ± 10%	1.10	15
36S1	6,300 ± 10%	1.10	15
41R1	10,000 ± 10%	1.10	15
45R1	50,000 ± 10%	1.10	15
51R1	100,000 ± 10%	1.10	15
ROD THERMISTORS .172" Dia.			
32S2	2,000 ± 10%	1.20	15
35S3	5,000 ± 10%	1.20	15
42R5	20,000 ± 10%	1.20	15
43R6	30,000 ± 10%	1.20	15
45R9	50,000 ± 10%	1.20	15

New! "VECO-VAMP"
(VAristor Meter Protector)

Non-polarized, current-sensitive "VECO-VAMP" placed across the terminals of a sensitive meter, will shunt overload current in excess of normal range automatically! Save coil burnouts, damaged pointers!

Price $1.50





VECO Number	Resistance @ 25°C (Ohms)	Net Price	Fig.
DISK THERMISTORS .1" Dia.			
25E2	500 ± 10%	.80	11
31E2	1,000 ± 10%	.80	11
33D7	3,000 ± 10%	.80	11
35D2	5,000 ± 10%	.80	11
41D2	10,000 ± 10%	.80	11
DISK THERMISTORS .2" Dia.			
21E23	100 ± 10%	.80	11
23E16	300 ± 10%	.80	11
31D10	1,000 ± 10%	.80	11
33D16	3,000 ± 10%	.80	11
35D6	5,000 ± 10%	.80	11
DISK THERMISTORS .3" Dia.			
15E4	50 ± 10%	.80	11
21E21	100 ± 10%	.85	11
25D5	500 ± 10%	.85	11
31D32	1,000 ± 10%	.80	11
33D10	3,000 ± 10%	.80	11
DISK THERMISTORS .4" Dia.			
13E3	25 ± 10%	.85	11
21E2	100 ± 10%	.85	11
23D18	300 ± 10%	.85	11
31D3	1,000 ± 10%	.85	11
32D12	2,000 ± 10%	.85	11
DISK THERMISTORS .5" Dia.			
12E2	20 ± 10%	.85	11
15E3	50 ± 10%	.85	11
21E22	100 ± 10%	.85	11
25D4	500 ± 10%	.85	11
31D33	1,000 ± 10%	.85	11
DISK THERMISTORS .77" Dia.			
11E2	10 ± 10%	.85	11
13E19	30 ± 10%	.85	11
18D2	75 ± 10%	.85	11
21D2	100 ± 10%	.85	11
23D34	300 ± 10%	.85	11
DISK THERMISTORS 1.0" Dia.			
05E1	5 ± 10%	1.20	11
11E1	10 ± 10%	1.20	11
15D1	50 ± 10%	1.20	11
21D5	100 ± 10%	1.20	11
22D10	200 ± 10%	1.20	11
WASHER THERMISTORS .2" Dia.			
22X1	150 ± 10%	.95	16
31W1	1,100 ± 10%	.95	16
WASHER THERMISTORS .77" Dia.			
11X1	10 ± 10%	1.05	16
12X10	15 ± 10%	1.05	16
21W1	100 ± 10%	1.05	16
22W6	200 ± 10%	1.05	16
32Y3	1,800 ± 10%	1.05	16
MOUNTING ACCESSORIES			
A816	Washer Mtg. Kit	1.25	
A819	Probe Packing Gland	4.00	
A828	Washer Mtg. Kit w/Bracket	1.75	

VECO VARISTORS – FIG. 17

VECO Number	Exponent n	V ± 30% @ 5 ma, D.C.	Net Price
023L9	3	6V	1.00
063L9	3	10V	1.00
114L2	4	15V	1.00
124L1	4	25V	1.00
124L2	4	35V	1.00
134L1	4	50V	1.00
155L3	5	75V	1.00
175L1	5	100V	1.00
195L1	5	120V	1.00

VECO TECHNICAL LITERATURE

V42	VECO Thermistor-Varistor Data Book	$1.00
V1133	VECO Hand Book of Thermistor Applications	2.00
V1166	Theory of VECO Thermistor Hypsometers	1.00

For descriptive list of free VECO technical literature ask you jobber for VECO Literature Catalog SB53-1.

IMPORTANT — PLEASE NOTE

The listing on this page represents only a small part of the wide variety of VECO thermistors and varistors available, both as discrete components and in ready-to-mount sensor assemblies and in specialized instrumentation. See your jobber for complete information.

Prices subject to change without notice.

THERMISTORS

THERMAL CONDUCTIVITY CELLS • COMBUSTION ANALYZERS • MATCHED THERMISTORS • THERMISTOR HYPODERMIC NEEDLES

ELECTRONIC CONTROLS • HYPSOMETERS

VARISTORS

CHOPPERETTES • TEMPERATURE SENSING DEVICES

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Amperex Semiconductors

TYPE NO.	(See Notes Below) (1)	(2)	(3)
A130	P	Si	T
A132	P	Si	T
A301	P	Si	T
A306	P	Si	T
A307	P	Si	T
A310	P	Si	T
A311	P	Si	T
A344	P	Si	T
A345	P	Si	T
A346	P	Si	T
A569	PE	Si	T
A570	PE	Si	T
A1379	A	Si	T
A1380	A	Si	T
A1381	P	Si	T
A1383	A	Ge	T
A1390	—	Si	V
AC107	A	Ge	T
AC107M	A	Ge	T
AC172	UL	Ge	T
ASY26	A	Ge	T
ASY27	A	Ge	T
ASY28	A	Ge	T
ASY29	A	Ge	T
BA114	A	Si	D
BCY10	A	Si	T
BCY11	A	Si	T
BCY12	A	Si	T
BCY30	A	Si	T
BCY31	A	Si	T
BCY32	A	Si	T
BCY33	A	Si	T
BCY34	A	Si	T
BCZ10	A	Si	T
BCZ11	A	Si	T
BCZ12	A	Si	T
BY100	DJ	Si	R
BYY10	DD	Si	R
BYY15/16	DD	Si	R
BYY20/21	DD	Si	R
BYY22/23	DD	Si	R
BYY24/25	DD	Si	R
BYY67/68	DD	Si	R
BYY73/74	DD	Si	R
BYY75/76	DD	Si	R
BYY77/78	DD	Si	R
BYY93/94	DD	Si	R
BYY95/96	DD	Si	R
BYZ10/16	DD	Si	R
BYZ11/19	DD	Si	R
BYZ12/18	DD	Si	R
BYZ13/19	DD	Si	R
BYZ14/15	DD	Si	R
BZY56	AJ	Si	Z
BZY57	AJ	Si	Z
BZY58	AJ	Si	Z
BZY59	AJ	Si	Z
BZY60	AJ	Si	Z
BZY61	AJ	Si	Z
BZY62	AJ	Si	Z
BZY63	AJ	Si	Z
BZY64	AJ	Si	Z
BZY65	AJ	Si	Z
BZY66	AJ	Si	Z

TYPE NO.	(See Notes Below) (1)	(2)	(3)
BZY67	AJ	Si	Z
BZY68	AJ	Si	Z
BZY69	AJ	Si	Z
BZZ10	AJ	Si	Z
BZZ11	AJ	Si	Z
BZZ12	AJ	Si	Z
BZZ13	AJ	Si	Z
BZZ14	AJ	Si	Z
BZZ15	AJ	Si	Z
BZZ16	AJ	Si	Z
BZZ17	AJ	Si	Z
BZZ18	AJ	Si	Z
BZZ19	AJ	Si	Z
H4A	—	Si	V
ME209	PE	Si	T
ME213	P	Si	T
ME213A	PE	Si	T
ME214	PE	Si	T
ME216	P	Si	T
ME217	P	Si	T
ME501	P	Si	T
ME503	P	Si	T
ME504	P	Si	T
ME900	P	Si	T
ME900A	P	Si	T
ME901	P	Si	T
ME901A	P	Si	T
OA5	GB	Ge	D
OA7	GB	Ge	D
OA9	GB	Ge	D
OA31	J	Si	R
OA200	A	Si	D
OA202	A	Si	D
OAP12	A	Ge	P
OAZ200	AJ	Si	Z
OAZ201	AJ	Si	Z
OAZ202	AJ	Si	Z
OAZ203	AJ	Si	Z
OAZ204	AJ	Si	Z
OAZ205	AJ	Si	Z
OAZ206	AJ	Si	Z
OAZ207	AJ	Si	Z
OAZ208	AJ	Si	Z
OAZ209	AJ	Si	Z
OAZ210	AJ	Si	Z
OAZ211	AJ	Si	Z
OAZ212	AJ	Si	Z
OAZ213	AJ	Si	Z
OC22	A	Ge	T
OC23	A	Ge	T
OC24	A	Ge	T
OC26	A	Ge	T
OC30	A	Ge	T
OC44	A	Ge	T
OC45	A	Ge	T
OC58	A	Ge	T
OC59	A	Ge	T
OC60	A	Ge	T
OC71N	A	Ge	T
OC74	A	Ge	T
OC75N	A	Ge	T
OC79	A	Ge	T
OC80	A	Ge	T
OCP70	A	Ge	P

TYPE NO.	(See Notes Below) (1)	(2)	(3)
OCP71	A	Ge	P
ORP10	—	—	P
ORP11	—	CS	P
ORP30	—	CS	P
ORP50	—	CS	P
ORP60	—	CS	P
ORP61	—	CS	P
ORP62	—	CS	P
ORP63	—	CS	P
ORP90	—	CS	P
PADT40	AD	Ge	T
PADT50	AD	Ge	T
PADT51	—	Ge	T
PADT60	AD	Ge	T
RPY14	—	CS	P
RPY17	—	CS	P
RPY18	—	CS	P
RPY19	—	CS	P
RPY20	—	CS	P
RPY27	—	CS	P
S100	A	Si	R
S262	PC	Ge	D
1N34	PC	Ge	D
1N34A	PC	Ge	D
1N38	PC	Ge	D
1N38A	PC	Ge	D
1N54	PC	Ge	D
1N54A	PC	Ge	D
1N58	PC	Ge	D
1N58A	PC	Ge	D
1N60	PC	Ge	D
1N63	PC	Ge	D
1N67A	PC	Ge	D
1N68A	PC	Ge	D
1N87	PC	Ge	D
1N87A	PC	Ge	D
1N88	PC	Ge	D
1N89	PC	Ge	D
1N90	PC	Ge	D
1N95	PC	Ge	D
1N99	PC	Ge	D
1N116	PC	Ge	D
1N117	PC	Ge	D
1N119	PC	Ge	D
1N120	PC	Ge	D
1N126	PC	Ge	D
1N126A	PC	Ge	D
1N128	PC	Ge	D
1N191	PC	Ge	D
1N192	PC	Ge	D
1N198	PC	Ge	D
1N270	GB	Ge	D
1N277	GB	Ge	D
1N295	PC	Ge	D
1N456	A	Si	D
1N457	A	Si	D
1N458	A	Si	D
1N459	A	Si	D
1N461	A	Si	D
1N462	A	Si	D
1N463	A	Si	D
1N464	A	Si	D
1N476	PC	Ge	D
1N477	PC	Ge	D

TYPE NO.	(See Notes Below) (1)	(2)	(3)
1N478	PC	Ge	D
1N479	PC	Ge	D
1N541	PC	Ge	D
1N542	PC	Ge	D
1N616	PC	Ge	D
1N617	PC	Ge	D
1N618	PC	Ge	D
1N698	GB	Ge	D
1N3121	GB	Ge	D
1N3122	GB	Ge	D
1N3182	A	Si	D
1N3483	GB	Ge	D
1N3484	GB	Ge	D
1N3944	GB	Ge	D
1N4095	A	Si	Z
2N279	A	Ge	T
2N280	A	Ge	T
2N281	A	Ge	T
2N282	A	Ge	T
2N284	A	Ge	T
2N284A	A	Ge	T
2N404	A	Ge	T
2N404A	A	Ge	T
2N696	P	Si	T
2N696 (JAN)	P	Si	T
2N697	P	Si	T
2N697 (JAN)	P	Si	T
2N698	P	Si	T
2N699	P	Si	T
2N706	PE	Si	T
2N706 (JAN)	PE	Si	T
2N708	PE	Si	T
2N711	PA	Ge	T
2N743	—	Si	T
2N744	—	Si	T
2N753	P	Si	T
2N783	P	Si	T
2N834	P	Si	T
2N835	P	Si	T
2N914	—	Si	T
2N929	P	Si	T
2N930	P	Si	T
2N930A	P	Si	T
2N957	P	Si	T
2N987	PA	Ge	T
2N987 MIL	PA	Ge	T
2N990	PA	Ge	T
2N993	PA	Ge	T
2N1066	PA	Ge	T
2N1224	PA	Ge	T
USA2N1224	PA	Ge	T
2N1225	PA	Ge	T
USA2N1225	PA	Ge	T
2N1226	PA	Ge	—
2N1302	A	Ge	T
2N1303	A	Ge	T
2N1304	A	Ge	T
2N1305	A	Ge	T
2N1306	A	Ge	T
2N1307	A	Ge	T
2N1308	A	Ge	T
2N1309	A	Ge	T
2N1314	A	Ge	T
2N1395	PA	Ge	T

TYPE NO.	(See Notes Below) (1)	(2)	(3)
2N1396	PA	Ge	T
2N1397	PA	Ge	T
2N1420	P	Si	T
2N1515	PA	Ge	T
2N1516	PA	Ge	T
2N1517	PA	Ge	T
2N1613	P	Si	T
2N1613 (USA)	P	Si	T
2N1666/OC28	A	Ge	T
2N1667/OC29	A	Ge	T
2N1668/OC35	A	Ge	T
2N1669/OC36	A	Ge	T
2N1711	P	Si	T
2N1889	P	Si	T
2N1890	P	Si	T
2N1893	P	Si	T
2N1972	P	Si	T
2N1973	P	Si	T
2N1974	P	Si	T
2N1975	P	Si	T
2N1983	P	Si	T
2N1984	P	Si	T
2N1985	P	Si	T
2N1986	P	Si	T
2N1987	P	Si	T
2N1990	P	Si	T
2N2084	PA	Ge	T
USN2N2084	PA	Ge	T
2N2089	PA	Ge	T
2N2092	PA	Ge	T
2N2207	PA	Ge	T
2N2428	UL	Ge	T
2N2429	UL	Ge	T
2N2430	UL	Ge	T
2N2431	UL	Ge	T
2N2431 MP	UL	Ge	T
2N2483	P	Si	T
2N2484	P	Si	T
2N2494	PA	Ge	T
2N2495	PA	Ge	T
2N2496	PA	Ge	T
2N2509	P	Si	T
2N2510	P	Si	T
2N2511	P	Si	T
2N2512	PA	Ge	T
2N2569	PE	Si	T
2N2570	PE	Si	T
2N2586	P	Si	T
2N2617	A	Si	T
2N2654	PA	Ge	T
2N2671	PA	Ge	T
2N2672	PA	Ge	T
2N2706	UL	Ge	T
2N2706 MP	UL	Ge	T
2N2707	UL	Ge	T
2N2786	PA	Ge	T
2N2786A	PA	Ge	T
2N2835	A	Ge	T
2N2836	A	Ge	T
2N3074	PA	Ge	T
2N3075	PA	Ge	T
2N3077	P	Si	T
2N3078	P	Si	T
2N3399	M	Ge	T
61SV	—	PbS	P

Note: (1) A—alloy
P—planar
E—epitaxial
DJ—diffused junction
GB—gold bonded
J—junction
PA—PADT
UL—ULT
M—Mesa
PC—point contact
DD—double diffused

Note: (2) Si—Silicon
Ge—Germanium
CS—Cadmium sulfide
PbS—Lead sulfite

Note: (3) T—transistor
D—diode S—SCR
Z—zener diode
P—photosensitive device
R—rectifier
V—varactor diode

The following is a brief cross-index list of Amperex and other type numbers.

TYPE NO.			(See Notes Above) (1)	(2)	(3)
AC125	see	2N2428	UL	Ge	T
AC126	see	2N2429	UL	Ge	T
AC127	see	2N2430	UL	Ge	T
AC127/132	see	2N2707	UL	Ge	T
AC128	see	2N2431	UL	Ge	T
AC132	see	2N2706	UL	Ge	T
AF102	see	2N2494	PA	Ge	T
AF114	see	2N2089	PA	Ge	T
AF115	see	2N2089	PA	Ge	T
AF116	see	2N2092	PA	Ge	T
AF117	see	2N2092	PA	Ge	T
BCZ11	see	2N2617	A	Si	T
OC26	see	2N1314	A	Ge	T

TYPE NO.			(See Notes Above) (1)	(2)	(3)
OC28	see	2N1666	A	Ge	T
OC29	see	2N1667	A	Ge	T
OC35	see	2N1668	A	Ge	T
OC36	see	2N1669	A	Ge	T
OC70	see	2N279	A	Ge	T
OC71	see	2N280	A	Ge	T
OC72	see	2N281	A	Ge	T
2-OC72	see	2N282	A	Ge	T
OC76	see	2N284	A	Ge	T
OC77	see	2N284A	A	Ge	T
OC169	see	2N1515	PA	Ge	T
OC170	see	2N1516	PA	Ge	T
OC171	see	2N1517	PA	Ge	T
OC201	see	2N2617	A	Si	T

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AMPEREX

INDEX by Type Number

TRANSISTORS

TYPE NO.	AF Small Signal	AF Pwr.	RF	HF	VHF	SW	Fast SW	Diff. Amp.	Chop.	Ge	Si	PAGE No.
A306	X										X	18
A307	X										X	19
A344							X				X	20
A345							X				X	20
A346							X				X	20
A569									X		X	23
A570									X		X	23
A1379 A1380	X										X	19
AC172	X									X		18
ASY26						X				X		20
ASY27						X				X		21
ASY28						X				X		21
ASY29						X				X		21
BCY10		X				X					X	22
BCY11		X				X					X	22
BCY12		X				X					X	22
BCY30	X										X	22
BCY31	X										X	22
BCY32	X										X	22
BCY33	X										X	22
BCY34	X										X	22
BCZ10	X										X	22
BCZ11	X										X	22
BCZ12	X										X	22
BFY44			X								X	17
ME209									X		X	23
ME213	X										X	19
ME213A	X										X	19
ME214									X		X	23
ME216			X								X	19
ME217			X								X	19
ME501								X			X	24
ME503								X			X	24
ME504								X			X	24
ME900	X										X	19
ME901	X										X	19
OCP70	Photo Transistor									X		31
OCP71	Photo Transistor									X		31
OC22		X				X				X		21
OC23		X				X				X		21
OC24		X				X				X		21
OC26		X								X		22
OC30		X								X		22
OC44			X	X						X		15
OC45			X	X						X		15
OC58	X									X		18
OC59	X									X		18
OC60	X									X		18
OC71N	X									X		18
OC74		X								X		22
OC75N	X									X		18
OC79		X								X		23
OC80						X				X		21
PADT28					X					X		16

TYPE NO.	AF Small Signal	AF Pwr.	RF	HF	VHF	SW	Fast SW	Diff. Amp.	Chop.	Ge	Si	PAGE No.
2N281		X								X		23
2N282*		X								X		23
2N284						X				X		21
2N284A						X				X		21
2N404						X				X		21
2N404A						X				X		21
2N696			X				X				X	19
2N696 (JAN)			X				X				X	19
2N697			X				X				X	19
2N697, M (USA), (JAN)			X				X				X	19
2N706							X				X	20
2N706 (JAN) (USA)							X				X	20
2N708							X				X	20
2N743							X			X		20
2N744							X			X		20
2N753							X				X	20
2N783							X				X	20
2N834							X				X	20
2N835							X				X	20
2N914							X				X	20
2N929	X										X	19
2N930	X										X	19
2N987				X						X		15
2N990			X	X						X		16
2N993			X	X						X		15
2N1066				X						X		15
2N1224			X	X						X		15
2N1224 (USA)			X	X						X		15
2N1225			X	X						X		16
2N1225 (USA)			X	X						X		16
2N1226				X						X		15
2N1302						X				X		21
2N1303						X				X		21
2N1304						X				X		21
2N1305						X				X		21
2N1306						X				X		21
2N1307						X				X		21
2N1308						X				X		21
2N1309						X				X		21
2N1395				X						X		15
2N1396				X						X		15
2N1397				X						X		15
2N1420							X				X	20
2N1515			X	X						X		15
2N1516			X	X						X		15
2N1517			X	X						X		16
2N1613		X									X	20
2N1613 (USA)		X									X	20
2N1666		X				X				X		21
2N1667		X				X				X		21
2N1668		X				X				X		21
2N1669		X				X				X		21
2N1711	X										X	20

*Matched pair 2N281

AMP 1

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INDEX by Type Number

TRANSISTORS

TYPE NO.	AF Small Signal	AF Pwr.	RF	HF	VHF	SW	Fast SW	Diff. Amp.	Chop.	Ge	Si	PAGE No.
2N1990	X										X	18
2N2084				X	X					X		16
2N2084 (USN)				X	X					X		16
2N2089			X	X						X		16
2N2092				X						X		15
2N2207	X		X							X		17
2N2428	X									X		18
2N2429	X									X		18
2N2430	X									X		23
2N2431		X								X		23
2N2483	X										X	19
2N2484	X										X	19
2N2494			X		X					X		16
2N2495			X		X					X		16
2N2496			X		X					X		16
2N2512	X		X							X		17
2N2569									X		X	23

TYPE NO.	AF Small Signal	AF Pwr.	RF	HF	VHF	SW	Fast SW	Diff. Amp.	Chop.	Ge	Si	PAGE No.
2N2570									X		X	23
2N2586	X										X	19
2N2654				X						X		16
2N2671			X	X						X		16
2N2672			X	X						X		15
2N2706		X								X		23
2N2707*		X								X		23
2N2786			X							X		17
2N2786A			X							X		17
2N2835		X								X		23
2N2836		X								X		23
2N3074				X	X					X		16
2N3075					X					X		16
2N3077	X										X	19
2N3078	X										X	19
2N3399					UHF					X		17
2N3588				X	X					X		16

*Complementary matched pair (2N2430 & 2N2706)

INDEX

DIODES

TYPE NO.	General Purpose	Detectors	High Conductance	Switching and Computer	Voltage Reference	Rectifier	Ge	Si	Page No.
BA114					X			X	29
BY100						X		X	29
BY118					X			X	29
BYY10						X		X	29
BYY15 and BYY16						X		X	31
BYY20						X		X	30
BYY21						X		X	30
BYY22 to BYY25						X		X	30
BYY67 and BYY68						X		X	30
BYY73 to BYY78						X		X	31
BYY93 to BYY96						X		X	31
BYX10						X		X	29
BYX13 Series						X		X	30, 31
BYZ10 to BYZ19						X		X	30, 31
BZ100					X			X	28
BZY56 to BZY69					X			X	28
BZZ10 to BZZ19					X			X	28
H4A		Varactor						X	27
OA5				X			X		27
OA7				X			X		27
OA9				X			X		27
OA31						X	X		30
OA200	X							X	25
OA202	X							X	25
OAP12		Photo Diode					X		31

TYPE NO.	General Purpose	Detectors	High Conductance	Switching and Computer	Voltage Reference	Rectifier	Ge	Si	Page No.
OAZ200 to OAZ213					X			X	28, 29
S-100						X		X	29
1N34	X						X		24
1N34A	X						X		24
1N38	X						X		24
1N38A	X						X		24
1N54	X						X		24
1N54A	X						X		24
1N58	X						X		24
1N58A	X						X		24
1N60		X					X		25
1N63	X						X		24
1N67A	X						X		24
1N68A	X						X		24
1N87		X					X		26
1N87A		X					X		26
1N88	X						X		24
1N89	X						X		24
1N90	X						X		25
1N95	X						X		25
1N99	X						X		25
1N116	X						X		25
1N117	X						X		25
1N119				X			X		26
1N120				X			X		26

TYPE NO.	General Purpose	Detectors	High Conductance	Switching and Computer	Voltage Reference	Rectifier	Ge	Si	Page No.
1N126	X						X		25
1N126A	X						X		25
1N128	X						X		25
1N191				X			X		26
1N192				X			X		26
1N198	X						X		25
1N270			X				X		26
1N277			X				X		26
1N295		X					X		26
1N456	X							X	25
1N457	X							X	25
1N458	X							X	25
1N459	X							X	25
1N461	X							X	25
1N462	X							X	25
1N463	X							X	25
1N464	X							X	25
1N476				X			X		26

TYPE NO.	General Purpose	Detectors	High Conductance	Switching and Computer	Voltage Reference	Rectifier	Ge	Si	Page No.
1N477				X			X		26
1N478				X			X		26
1N479				X			X		26
1N480				X			X		26
1N490				X			X		26
1N541		X					X		26
1N542*		X					X		26
1N616		X					X		26
1N617	X						X		25
1N618	X						X		25
1N698				X			X		27
1N3121			X				X		26
1N3122			X				X		26
1N3182	Voltage Variable Capacitor							X	27
1N3483				X			X		27
1N3484			X	X			X		27
1N3944				X			X		27
1N4095					X			X	29

Hoffman

MEDIUM VOLTAGE DOUBLE ANODE REGULATORS

Type No.	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts)(1) Min.	Zener Breakdown Voltage V_Z @ I_{ZT} (Volts)(1) Max.	Test Current I_{ZT} (mA)	Maximum Reverse Current: I_R @ 25°C (μA)	Maximum Reverse Current: I_R @ 100°C (μA)	Maximum Reverse Current: V_R (Volts)	Ratings: Temp.	Ratings: Power (@ 25°C)
1N225	M1	7.5	10.0	0.20	0.5	5.0	—6.8	—65°C to +150°C	150mW
1N226	M1	9.0	12.0	0.20	0.5	5.0	—8.2	"	"
1N227	M1	11.0	14.5	0.20	0.5	5.0	—10.0	"	"
1N228	M1	13.5	18.0	0.20	0.5	5.0	—12.0	"	"
1N229	M1	17.0	21.0	0.20	0.5	5.0	—15.0	"	"
1N230	M1	20.0	27.0	0.20	0.1	10.0	—18.0	"	"
1N231	M1	25.0	32.0	0.20	0.1	10.0	—22.0	—65°C to +150°C	"
1N232	M1	30.0	39.0	0.20	0.1	10.0	—27.0	"	"
1N233	M1	37.0	45.0	0.20	0.1	10.0	—33.0	"	"

LOW VOLTAGE REGULATORS

Type No.	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts)(1) Min.	Zener Breakdown Voltage V_Z @ I_{ZT} (Volts)(1) Max.	Test Current I_{ZT} (mA)	Maximum Dynamic Resistance Z_{ZT} @ 10mA (Ohms)(7)	Maximum Reverse Current: I_R @ 25°C (μA)	Maximum Reverse Current: I_R @ 100°C (μA)	Maximum Reverse Current: V_R (Volts)	Ratings: Temp.	Ratings: Power (@ 25°C)
1N465	M1	2.0	3.2	5.0	60.0	75.0	100.0	—1.0	—65°C to +200°C	200mW
1N466	M1	3.0	3.9	5.0	55.0	50.0	100.0	—1.0	"	"
1N467	M1	3.7	4.5	5.0	45.0	5.0	100.0	—1.0	"	"
1N468	M1	4.3	5.4	5.0	35.0	5.0	100.0	—1.5	"	"
1N469	M1	5.2	6.4	5.0	20.0	5.0	100.0	—1.5	"	"
1N470	M1	6.2	8.0	5.0	10.0	5.0	50.0	—3.5	"	"

LOW VOLTAGE DOUBLE ANODE REGULATORS

Type No.	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts)(1) Min.	Zener Breakdown Voltage V_Z @ I_{ZT} (Volts)(1) Max.	Test Current I_{ZT} (mA)	Maximum Dynamic Resistance Z_{ZT} @ 10mA (Ohms)(7)	Maximum Reverse Current: I_R @ 25°C (μA)	Maximum Reverse Current: I_R @ 100°C (μA)	Maximum Reverse Current: V_R (Volts)	Ratings: Temp.	Ratings: Power (@ 25°C)
1N471	M1	3.0	3.9	5.0	65.0	50.0	100.0	—1.0	—65°C to +200°C	250mW
1N472	M1	3.7	4.5	5.0	60.0	5.0	100.0	—1.0	"	"
1N473	M1	4.3	5.4	5.0	50.0	5.0	100.0	—1.5	"	"
1N474	M1	5.2	6.4	5.0	40.0	5.0	100.0	—1.5	"	"
1N475	M1	6.2	8.0	5.0	25.0	5.0	50.0	—3.5	"	"

¼ WATT REGULATORS

Type No.	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts)(1) Min.	Zener Breakdown Voltage V_Z @ I_{ZT} (Volts)(1) Max.	Test Current I_{ZT} (mA)	Maximum Dynamic Resistance Z_{ZT} @ 10mA (Ohms)(7)	Maximum Reverse Current: I_R @ 25°C (μA)	Maximum Reverse Current: I_R @ 100°C (μA)	Maximum Reverse Current: V_R (Volts)	Ratings: Temp.	Ratings: Power (@ 25°C)
1N702	G1	2.0	3.2	5.0	60.0	75.0	100.0	—1.0	—65°C to +175°C	250mW
1N703	G1	3.0	3.9	5.0	55.0	50.0	100.0	—1.0	"	"
1N704	G1	3.7	4.5	5.0	45.0	5.0	100.0	—1.0	"	"
1N705	G1	4.3	5.4	5.0	35.0	5.0	100.0	—1.5	"	"
1N706	G1	5.2	6.4	5.0	20.0	5.0	100.0	—1.5	"	"
1N707	G1	6.2	8.0	5.0	10.0	5.0	50.0	—3.5	"	"

¼ WATT REGULATORS

Type No.	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts) Nom.(2)	Test Current I_{ZT} (mA)	Maximum Dynamic Resistance Z_{ZT} @ I_{ZT} (Ohms)(3)	Ratings: Temp.	Ratings: Power (@ 25°C)
1N708	G1	5.6	25.0	3.6	—65°C to +175°C	250mW
1N709	G1	6.2	25.0	4.1	"	"
1N710	G1	6.8	25.0	4.7	"	"
1N711	G1	7.5	25.0	5.3	"	"
1N712	G1	8.2	25.0	6.0	—65°C to +175°C	"
1N713	G1	9.1	12.0	7.0	"	"
1N714	G1	10.0	12.0	8.0	"	"
1N715	G1	11.0	12.0	9.0	"	"

NOTES: 1. Available in ±5% voltage tolerance denoted by suffix "A." Center voltage must be specified.
2. Basic type ±10% voltage tolerance, suffix "A" denotes ±5% voltage tolerance.
3. $I_{AC} = 10\%\ I_{ZT}$.
7. $I_{AC} = 1mA$.

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¼ WATT REGULATORS

Type No.	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts) Nom.(2)	Test Current I_{ZT} (mA)	Maximum Dynamic Resistance Z_{ZT} @ I_{ZT} (Ohms)(3)	Ratings: Temp.	Ratings: Power (@ 25°C)
1N716	G1	12.0	12.0	10.0	−65°C to +175°C	250mW
1N717	G1	13.0	12.0	11.0	"	"
1N718	G1	15.0	12.0	13.0	"	"
1N719	G1	16.0	12.0	15.0	"	"
1N720	G1	18.0	12.0	17.0	"	"
1N721	G1	20.0	4.0	20.0	"	"
1N722	G1	22.0	4.0	24.0	"	"
1N723	G1	24.0	4.0	28.0	"	"
1N724	G1	27.0	4.0	35.0	"	"
1N725	G1	30.0	4.0	42.0	"	"
1N726	G1	33.0	4.0	50.0	"	"
1N727	G1	36.0	4.0	60.0	"	"
1N728	G1	39.0	4.0	70.0	"	"
1N729	G1	43.0	4.0	84.0	"	"
1N730	G1	47.0	4.0	98.0	"	"
1N731	G1	51.0	4.0	115.0	"	"
1N732	G1	56.0	4.0	140.0	"	"
1N733	G1	62.0	2.0	170.0	"	"
1N734	G1	68.0	2.0	200.0	"	"
1N735	G1	75.0	2.0	240.0	"	"
1N736	G1	82.0	2.0	280.0	"	"
1N737	G1	91.0	1.0	340.0	"	"
1N738	G1	100.0	1.0	400.0	"	"
1N739	G1	110.0	1.0	490.0	"	"
1N740	G1	120.0	1.0	570.0	"	"
1N741	G1	130.0	1.0	650.0	"	"
1N742	G1	150.0	1.0	860.0	"	"
1N743	G1	160.0	1.0	970.0	"	"
1N744	G1	180.0	1.0	1200.0	"	"
1N745	G1	200.0	1.0	1400.0	"	"

400mW REGULATORS

Type No.	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts) Nom.(2)	Test Current I_{ZT} (mA)	Max. Dynamic Resistance Z_{ZT} @ I_{ZT} (Ohms)(3)	Maximum Reverse Current: I_R @ 25°C (μA)	Maximum Reverse Current: I_R @ 150°C (μA)	Maximum Reverse Current: V_R (Volts)	Ratings: Temp.	Ratings: Power (@ 25°C)
1N746	G1	3.3	20.0	28.0	10.0	30.0	−1.0	−65°C to +175°C	400mW
1N747	G1	3.6	20.0	24.0	10.0	30.0	−1.0	"	"
1N748	G1	3.9	20.0	23.0	10.0	30.0	−1.0	"	"
1N749	G1	4.3	20.0	22.0	2.0	30.0	−1.0	"	"
1N750	G1	4.7	20.0	19.0	2.0	30.0	−1.0	"	"
1N751	G1	5.1	20.0	17.0	1.0	20.0	−1.0	"	"
1N752	G1	5.6	20.0	11.0	1.0	20.0	−1.0	"	"
1N753	G1	6.2	20.0	7.0	0.1	20.0	−1.0	"	"
1N754	G1	6.8	20.0	5.0	0.1	20.0	−1.0	"	"
1N755	G1	7.5	20.0	6.0	0.1	20.0	−1.0	"	"
1N756	G1	8.2	20.0	8.0	0.1	20.0	−1.0	"	"
1N757	G1	9.1	20.0	10.0	0.1	20.0	−1.0	"	"
1N758	G1	10.0	20.0	17.0	0.1	20.0	−1.0	"	"
1N759	G1	12.0	20.0	30.0	0.1	20.0	−1.0	"	"

¼ WATT REGULATORS

Type No.	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts)(1) Min.	Zener Breakdown Voltage V_Z @ I_{ZT} (Volts)(1) Max.	Test Current I_{ZT} (mA)	Maximum Dynamic Resistance Z_{ZT} @ I_{ZT} (Ohms)(3)	Ratings: Temp.	Ratings: Power (@ 25°C)
1N761	G1	4.3	5.4	10.0	55.0	−65°C to +175°C	250mW
1N762	G1	5.2	6.4	10.0	20.0	"	"
1N763	G1	6.2	8.0	10.0	8.0	"	"
1N764	G1	7.5	10.0	10.0	15.0	"	"
1N765	G1	9.0	12.0	5.0	50.0	"	"
1N766	G1	11.0	14.5	5.0	70.0	−65°C to +175°C	"
1N767	G1	13.5	18.0	5.0	120.0	"	"
1N768	G1	17.0	21.0	5.0	200.0	"	"
1N769	G1	20.0	27.0	5.0	300.0	"	"

NOTES: 1. Available in ±5% voltage tolerance denoted by suffix "A." Center voltage must be specified.
2. Basic type ±10% voltage tolerance, suffix "A" denotes ±5% voltage tolerance.
3. $I_{AC} = 10\%\ I_{ZT}$.

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400mW REGULATORS

Type No.	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts) Nom.(4)	Test Current I_{ZT} (mA)	Max. Dynamic Resistance Z_{ZT} @ I_{ZT} (Ohms)(3)	Maximum Dynamic Knee Resistance Z_{ZK} @ I_{ZK} (Ohms)	Maximum Dynamic Knee Resistance Z_{ZK} @ I_{ZK} (mA)	Ratings: Maximum Allowable Reverse Surge Current (mA)	Ratings: Temp.	Ratings: Power (@ 25°C)
1N957	G1	6.8	18.5	4.5	700.0	1.0	300.0		400mW
1N958	G1	7.5	16.5	5.5	700.0	0.5	275.0		"
1N959	G1	8.2	15.0	6.5	700.0	0.5	250.0	−65°C	"
1N960	G1	9.1	14.0	7.5	400.0	0.5	225.0	to +175°C	"
1N961	G1	10.0	12.5	8.5	450.0	0.25	200.0		"
1N962	G1	11.0	11.5	9.5	450.0	0.25	175.0		"
1N963	G1	12.0	10.5	11.5	500.0	0.25	160.0		"
1N964	G1	13.0	9.5	13.0	500.0	0.25	150.0		"
1N965	G1	15.0	8.5	16.0	500.0	0.25	130.0	−65°C	"
1N966	G1	16.0	7.8	17.0	500.0	0.25	120.0	to +175°C	"
1N967	G1	18.0	7.0	21.0	500.0	0.25	110.0		"
1N968	G1	20.0	6.2	25.0	550.0	0.25	100.0		"
1N969	G1	22.0	5.6	29.0	550.0	0.25	90.0		"
1N970	G1	24.0	5.2	33.0	600.0	0.25	80.0		"
1N971	G1	27.0	4.6	41.0	600.0	0.25	70.0	−65°C	"
1N972	G1	30.0	4.2	49.0	650.0	0.25	65.0	to +175°C	"
1N973	G1	33.0	3.8	58.0	650.0	0.25	60.0		"
1N974	G1	36.0	3.4	70.0	650.0	0.25	55.0		"
1N975	G1	39.0	3.2	80.0	650.0	0.25	46.0		"
1N976	G1	43.0	3.0	93.0	1000.0	0.25	44.0		"
1N977	G1	47.0	2.7	105.0	1000.0	0.25	40.0	−65°C	"
1N978	G1	51.0	2.5	125.0	1000.0	0.25	37.0	to +175°C	"
1N979	G1	56.0	2.2	150.0	1250.0	0.25	35.0		"
1N980	G1	62.0	2.0	185.0	1250.0	0.25	30.0		"
1N981	G1	68.0	1.8	230.0	1600.0	0.25	28.0		"
1N982	G1	75.0	1.7	270.0	1600.0	0.25	26.0		"
1N983	G1	82.0	1.5	330.0	1600.0	0.25	23.0	−65°C	"
1N984	G1	91.0	1.4	400.0	2000.0	0.25	21.0	to +175°C	"
1N985	G1	100.0	1.3	500.0	3000.0	0.25	18.0		"
1N986	G1	110.0	1.1	750.0	4000.0	0.25	16.0		"
1N987	G1	120.0	1.0	900.0	4500.0	0.25	15.0		"
1N988	G1	130.0	0.95	1100.0	5000.0	0.25	13.0		"
1N989	G1	150.0	0.85	1500.0	6000.0	0.25	12.0	−65°C	"
1N990	G1	160.0	0.80	1700.0	6500.0	0.25	11.0	to +175°C	"
1N991	G1	180.0	0.68	2200.0	7100.0	0.25	10.0		"
1N992	G1	200.0	0.65	2500.0	8000.0	0.25	9.0		"

SINGLE ANODE REGULATORS

Type No.	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts)(1) Min.	Zener Breakdown Voltage V_Z @ I_{ZT} (Volts)(1) Max.	Test Current I_{ZT} (mA)	Maximum Reverse Current I_R @ 25°C (μA)	Maximum Reverse Current I_R @ 100°C (μA)	Maximum Reverse Current V_R (Volts)	Ratings: Temp.	Ratings: Power (@ 25°C)
1N1313	M1	7.5	10.0	.200	0.5	5.0	−6.8		150mW
1N1314	M1	9.0	12.0	.200	0.5	5.0	−8.2		"
1N1315	M1	11.0	14.5	.200	0.5	5.0	−10.0	−65°C	"
1N1316	M1	13.5	18.0	.200	0.5	5.0	−12.0	to +150°C	"
1N1317	M1	17.0	21.0	.200	0.5	5.0	−15.0		"
1N1318	M1	20.0	27.0	.200	0.1	10.0	−18.0		"
1N1319	M1	25.0	32.0	.200	0.1	10.0	−22.0		"
1N1320	M1	30.0	39.0	.200	0.1	10.0	−27.0	−65°C	"
1N1321	M1	37.0	45.0	.200	0.1	10.0	−33.0	to +150°C	"
1N1322	M1	43.0	54.0	.200	0.1	10.0	−39.0		"
1N1323	M1	52.0	64.0	.200	0.1	10.0	−47.0		"
1N1324	M1	62.0	80.0	.200	1.0	50.0	−56.0		"
1N1325	M1	75.0	100.0	.200	1.0	50.0	−68.0	−65°C	"
1N1326	M1	90.0	120.0	.200	1.0	50.0	−82.0	to +150°C	"
1N1327	M1	110.0	145.0	.200	1.0	50.0	−100.0		"

10 WATT REGULATORS

Type No. (6)	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts) Nom. (2)	Test Current I_{ZT} (mA)	Maximum Dynamic Resistance Z_{ZT} @ I_{ZT} (Ohms)(5)	Ratings: Temp.	Ratings: Power (@ 75°C)
1N1351	DO-4	10.0	500.0	2.0		10W
1N1352	DO-4	11.0	500.0	2.0		"
1N1353	DO-4	12.0	500.0	2.0	−65°C	"
1N1354	DO-4	13.0	500.0	2.0	to +175°C	"
1N1355	DO-4	15.0	500.0	2.0		"
1N1356	DO-4	16.0	500.0	3.0		"

NOTES:
1. Available in ±5% voltage tolerance denoted by suffix "A." Center voltage must be specified.
2. Basic type ±10% voltage tolerance, suffix "A" denotes ±5% voltage tolerance.
3. I_{AC} = 10% I_{ZT}.
4. Basic type ±20% voltage tolerance, suffix "A" denoted ±10% voltage tolerance. "B" suffix denotes ±5% voltage tolerance.
5. I_{AC} = 10mA A.C.
6. Available with reverse polarity denoted by suffix "R."

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10 WATT REGULATORS

Type No. (6)	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts) Nom.(2)	Test Current I_{ZT} (mA)	Maximum Dynamic Resistance Z_{ZT} @ I_{ZT} (Ohms)(5)	Ratings: Temp.	Power (@ 75°C)
1N1357	DO-4	18.0	150.0	3.0	−65°C to +175°C	10W
1N1358	DO-4	20.0	150.0	3.0		"
1N1359	DO-4	22.0	150.0	3.0		"
1N1360	DO-4	24.0	150.0	3.0		"
1N1361	DO-4	27.0	150.0	3.0		"
1N1362	DO-4	30.0	150.0	4.0		"
1N1363	DO-4	33.0	150.0	4.0	−65°C to +175°C	"
1N1364	DO-4	36.0	150.0	5.0		"
1N1365	DO-4	39.0	150.0	5.0		"
1N1366	DO-4	43.0	150.0	6.0		"
1N1367	DO-4	47.0	150.0	7.0		"
1N1368	DO-4	51.0	150.0	8.0		"
1N1369	DO-4	56.0	150.0	9.0	−65°C to +175°C	"
1N1370	DO-4	62.0	50.0	12.0		"
1N1371	DO-4	68.0	50.0	14.0		"
1N1372	DO-4	75.0	50.0	20.0		"
1N1373	DO-4	82.0	50.0	22.0		"
1N1374	DO-4	91.0	50.0	35.0	−65°C to +175°C	"
1N1375	DO-4	100.0	50.0	40.0		"
1N1602	DO-4	6.8	300.0	.28		"
1N1603	DO-4	8.2	250.0	.36		"
1N1604	DO-4	10.0	200.0	.78		"
1N1605	DO-4	12.0	170.0	1.12	−65°C to +175°C	"
1N1606	DO-4	15.0	140.0	1.9		"
1N1607	DO-4	18.0	110.0	2.6		"
1N1608	DO-4	22.0	90.0	3.9		"
1N1609	DO-4	27.0	70.0	6.6		"

1 WATT REGULATORS

Type No.	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts) Nom.(2)	Test Current I_{ZT} (mA)	Maximum Dynamic Resistance Z_{ZT} @ I_{ZT} (Ohms)(3)	Ratings: Temp.	Power (@ 25°C)
1N1766	M1A	6.2	100.0	1.5	−65°C to +175°C	1W
1N1767	M1A	6.8	100.0	1.7		"
1N1768	M1A	7.5	100.0	2.1		"
1N1769	M1A	8.2	100.0	2.4		"
1N1770	M1A	9.1	50.0	3.0		"
1N1771	M1A	10.0	50.0	3.5		"
1N1772	M1A	11.0	50.0	4.2	−65°C to +175°C	"
1N1773	M1A	12.0	50.0	5.0		"
1N1774	M1A	13.0	50.0	5.8		"
1N1775	M1A	15.0	50.0	7.6		"
1N1776	M1A	16.0	50.0	8.6		"
1N1777	M1A	18.0	50.0	11.0		"
1N1778	M1A	20.0	15.0	13.0	−65°C to +175°C	"
1N1779	M1A	22.0	15.0	16.0		"
1N1780	M1A	24.0	15.0	18.0		"
1N1781	M1A	27.0	15.0	23.0		"
1N1782	M1A	30.0	15.0	28.0		"
1N1783	M1A	33.0	15.0	33.0		"
1N1784	M1A	36.0	15.0	39.0	−65°C to +175°C	"
1N1785	M1A	39.0	15.0	45.0		"
1N1786	M1A	43.0	15.0	54.0		"
1N1787	M1A	47.0	15.0	64.0		"
1N1788	M1A	51.0	15.0	74.0		"
1N1789	M1A	56.0	15.0	88.0		"
1N1790	M1A	62.0	5.0	105.0	−65°C to +175°C	"
1N1791	M1A	68.0	5.0	125.0		"
1N1792	M1A	75.0	5.0	150.0		"
1N1793	M1A	82.0	5.0	175.0		"
1N1794	M1A	91.0	5.0	220.0		"
1N1795	M1A	100.0	5.0	260.0		"
1N1796	M1A	110.0	5.0	320.0	−65°C to +175°C	"
1N1797	M1A	120.0	5.0	390.0		"
1N1798	M1A	130.0	5.0	450.0		"
1N1799	M1A	150.0	5.0	600.0		"
1N1800	M1A	160.0	5.0	700.0		"
1N1801	M1A	180.0	5.0	900.0		"
1N1802	M1A	200.0	5.0	1100.0		"

NOTES: 2. Basic type ±10% voltage tolerance, suffix "A" denotes ±5% voltage tolerance.

3. I_{AC} = 10% I_{ZT}.

5. I_{AC} = 10mA A.C.

6. Available with reverse polarity denoted by suffix "R."

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10 WATT REGULATORS

Type No. (6)	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts) Nom.	Test Current I_{ZT} (mA)	Maximum Dynamic Resistance Z_{ZT} @ I_{ZT} (Ohms)(5)	Ratings: Temp.	Ratings: Power (@ 75°C)
1N1804	DO-4	6.2	1000.0	1.0	−65°C to +175°C	10W
1N1805	DO-4	6.8	1000.0	1.0		"
1N1806	DO-4	7.5	1000.0	1.0		"
1N1807	DO-4	8.2	1000.0	1.0		"
1N1808	DO-4	9.1	500.0	1.0		"
1N1809	DO-4	110.0	50.0	47.0		"
1N1810	DO-4	120.0	50.0	56.0	−65°C to +175°C	"
1N1811	DO-4	130.0	50.0	65.0		"
1N1812	DO-4	150.0	50.0	82.0		"
1N1813	DO-4	160.0	50.0	93.0		"
1N1814	DO-4	180.0	50.0	115.0		"
1N1815	DO-4	200.0	50.0	140.0		"

10 WATT REGULATORS

Type No. (6)	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts) Nom.(2)	Test Current (mA)	Maximum Dynamic Resistance Z_{ZT} @ I_{ZT} (Ohms)(5)	Maximum Reverse Current: I_R @ 25°C (μA)	Maximum Reverse Current: V_R (Volts)	Ratings: Temp.	Ratings: Power (@ 25°C)
1N1816	DO-4	13.0	500.0	2.0	25.0	5.0	−65°C to +185°C	10W
1N1817	DO-4	15.0	500.0	2.0	15.0	5.0		"
1N1818	DO-4	16.0	500.0	3.0	10.0	5.0		"
1N1819	DO-4	18.0	500.0	3.0	10.0	5.0		"
1N1820	DO-4	20.0	250.0	3.0	10.0	10.0		"
1N1821	DO-4	22.0	250.0	3.0	10.0	10.0	−65°C to +185°C	"
1N1822	DO-4	24.0	250.0	3.0	10.0	10.0		"
1N1823	DO-4	27.0	250.0	3.0	10.0	10.0		"
1N1824	DO-4	30.0	250.0	4.0	10.0	10.0		"
1N1825	DO-4	33.0	150.0	4.0	10.0	10.0		"
1N1826	DO-4	36.0	150.0	5.0	10.0	10.0	−65°C to +185°C	"
1N1827	DO-4	39.0	150.0	5.0	10.0	10.0		"
1N1828	DO-4	43.0	150.0	6.0	10.0	10.0		"
1N1829	DO-4	47.0	150.0	7.0	10.0	10.0		"
1N1830	DO-4	51.0	150.0	8.0	10.0	10.0		"
1N1831	DO-4	56.0	150.0	9.0	10.0	10.0	−65°C to +175°C	"
1N1832	DO-4	62.0	50.0	12.0	10.0	10.0		"
1N1833	DO-4	68.0	50.0	14.0	10.0	10.0		"
1N1834	DO-4	75.0	50.0	20.0	10.0	10.0		"
1N1835	DO-4	82.0	50.0	22.0	10.0	10.0		"
1N1836	DO-4	91.0	50.0	35.0	10.0	10.0	−65°C to +175°C	"
1N2008	DO-4	100.0	50.0	40.0	10.0	10.0		"
1N2009	DO-4	110.0	50.0	47.0	10.0	10.0		"
1N2010	DO-4	120.0	50.0	56.0	10.0	10.0		"
1N2011	DO-4	130.0	50.0	65.0	10.0	10.0		"
1N2012	DO-4	150.0	50.0	82.0	10.0	10.0		"

10 WATT REGULATORS

Type No.	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts)(1) Min.	Zener Breakdown Voltage V_Z @ I_{ZT} (Volts)(1) Max.	Test Current (mA)	Maximum Dynamic Resistance Z_{ZT} @ I_{ZT} (Ohms)(5)	Ratings: Temp.	Ratings: Power (@ 25°C)
1N2043	DO-4	6.2	8.0	1000.0	0.8	−65°C to +175°C	10W
1N2044	DO-4	7.5	10.0	1000.0	0.8		"
1N2045	DO-4	9.0	12.0	500.0	1.5		"
1N2046	DO-4	11.0	14.5	500.0	2.0		"
1N2047	DO-4	13.5	18.0	500.0	3.0		"
1N2048	DO-4	17.0	21.0	500.0	3.0		"
1N2049	DO-4	20.0	27.0	150.0	8.0		"

10 WATT REGULATORS

Type No.	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts) Nom.(2)	Test Current (mA)	Maximum Dynamic Resistance Z_{ZT} @ I_{ZT} (Ohms)(5)	Maximum Reverse Current: I_R @ 25°C (μA)	Maximum Reverse Current: V_R (Volts)	Ratings: Temp.	Ratings: Power (@ 25°C)
1N2498	DO-4	10.0	500.0	2.0	40.0	5.0	−65°C to +175°C	10W
1N2499	DO-4	11.0	500.0	2.0	30.0	5.0		"
1N2500	DO-4	12.0	500.0	2.0	25.0	5.0		"

NOTES: 1. Available in ±5% voltage tolerance denoted by suffix "A." Center voltage must be specified.
2. Basic type ±10% voltage tolerance, suffix "A" denotes ±5% voltage tolerance.
3. I_{AC} = 10% I_{ZT}.
5. I_{AC} = 10mA A.C.
6. Available with reverse polarity denoted by suffix "R."

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50 WATT REGULATORS

Type No. (6)	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts) Nom.(4)	Test Current (mA)	Maximum Dynamic Resistance Z_{ZT} @ I_{ZT} (Ohms)(3)	Maximum Dynamic Knee Resistance Z_{ZK} @ I_{ZK} (Ohms)	(mA)	Ratings: Temp.	Power (@ 25°C)
1N2804	TO-3	6.8	1850.0	0.2	70.0	5.0		50W
1N2805	TO-3	7.5	1700.0	0.3	70.0	5.0		"
1N2806	TO-3	8.2	1500.0	0.4	70.0	5.0		"
1N2807	TO-3	9.1	1370.0	0.5	70.0	5.0	−65°C to +175°C	"
1N2808	TO-3	10.0	1200.0	0.6	80.0	5.0		"
1N2809	TO-3	11.0	1100.0	0.8	80.0	5.0		"
1N2810	TO-3	12.0	1000.0	1.0	80.0	5.0		"
1N2811	TO-3	13.0	960.0	1.1	80.0	5.0		"
1N2812	TO-3	14.0	890.0	1.2	80.0	5.0		"
1N2813	TO-3	15.0	830.0	1.4	80.0	5.0	−65°C to +175°C	"
1N2814	TO-3	16.0	780.0	1.6	80.0	5.0		"
1N2815	TO-3	17.0	740.0	1.8	80.0	5.0		"
1N2816	TO-3	18.0	700.0	2.0	80.0	5.0		50W
1N2817	TO-3	19.0	660.0	2.2	80.0	5.0		"
1N2818	TO-3	20.0	630.0	2.4	80.0	5.0		"
1N2819	TO-3	22.0	570.0	2.5	80.0	5.0	−65°C to +175°C	"
1N2820	TO-3	24.0	520.0	2.6	80.0	5.0		"
1N2821	TO-3	25.0	500.0	2.7	90.0	5.0		"
1N2822	TO-3	27.0	460.0	2.8	90.0	5.0		"
1N2823	TO-3	30.0	420.0	3.0	90.0	5.0		"
1N2824	TO-3	33.0	380.0	3.2	90.0	5.0		"
1N2825	TO-3	36.0	350.0	3.5	90.0	5.0	−65°C to +175°C	"
1N2826	TO-3	39.0	320.0	4.0	90.0	5.0		"
1N2827	TO-3	43.0	290.0	4.5	90.0	5.0		"
1N2828	TO-3	45.0	280.0	4.5	100.0	5.0		"
1N2829	TO-3	47.0	270.0	5.0	100.0	5.0		"
1N2830	TO-3	50.0	250.0	5.0	100.0	5.0		"
1N2831	TO-3	51.0	245.0	5.2	100.0	5.0	−65°C to +175°C	"
1N2832	TO-3	56.0	220.0	6.0	110.0	5.0		"
1N2833	TO-3	62.0	200.0	7.0	120.0	5.0		"
1N2834	TO-3	68.0	180.0	8.0	140.0	5.0		"
1N2835	TO-3	75.0	170.0	9.0	150.0	5.0		"
1N2836	TO-3	82.0	150.0	11.0	160.0	5.0		"
1N2837	TO-3	91.0	140.0	15.0	180.0	5.0	−65°C to +175°C	"
1N2838	TO-3	100.0	120.0	20.0	200.0	5.0		"
1N2839	TO-3	105.0	120.0	25.0	210.0	5.0		"
1N2840	TO-3	110.0	110.0	30.0	220.0	5.0		"
1N2841	TO-3	120.0	100.0	40.0	240.0	5.0		"
1N2842	TO-3	130.0	95.0	50.0	275.0	5.0		"
1N2843	TO-3	150.0	85.0	75.0	400.0	5.0	−65°C to +175°C	"
1N2844	TO-3	160.0	80.0	80.0	450.0	5.0		"
1N2845	TO-3	180.0	68.0	90.0	525.0	5.0		"
1N2846	TO-3	200.0	65.0	100.0	600.0	5.0		"

10 WATT REGULATORS

Type No. (6)	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts) Nom.(4)	Test Current (mA)	Maximum Dynamic Resistance Z_{ZT} @ I_{ZT} (Ohms)(3)	Maximum Dynamic Knee Resistance Z_{ZK} @ I_{ZK} (Ohms)	(mA)	Ratings: Temp.	Power (@ 25°C)
1N2970	DO-4	6.8	370.0	1.2	500.0	1.0		10W
1N2971	DO-4	7.5	335.0	1.3	250.0	1.0		"
1N2972	DO-4	8.2	305.0	1.5	250.0	1.0		"
1N2973	DO-4	9.1	275.0	2.0	250.0	1.0	−65°C to +175°C	"
1N2974	DO-4	10.0	250.0	3.0	250.0	1.0		"
1N2975	DO-4	11.0	230.0	3.0	250.0	1.0		"
1N2976	DO-4	12.0	210.0	3.0	250.0	1.0		"
1N2977	DO-4	13.0	190.0	3.0	250.0	1.0		"
1N2979	DO-4	15.0	170.0	3.0	250.0	1.0		"
1N2980	DO-4	16.0	155.0	4.0	250.0	1.0	−65°C to +175°C	"
1N2982	DO-4	18.0	140.0	4.0	250.0	1.0		"
1N2984	DO-4	20.0	125.0	4.0	250.0	1.0		"
1N2985	DO-4	22.0	115.0	5.0	250.0	1.0		"
1N2986	DO-4	24.0	105.0	5.0	250.0	1.0		"
1N2988	DO-4	27.0	95.0	7.0	250.0	1.0	−65°C to +175°C	"
1N2989	DO-4	30.0	85.0	8.0	300.0	1.0		"
1N2990	DO-4	33.0	75.0	9.0	300.0	1.0		"
1N2991	DO-4	36.0	70.0	10.0	300.0	1.0		"
1N2992	DO-4	39.0	65.0	11.0	300.0	1.0		"
1N2993	DO-4	43.0	60.0	12.0	400.0	1.0	−65°C to +175°C	"
1N2995	DO-4	47.0	55.0	14.0	400.0	1.0		"

NOTES: 3. $I_{AC} = 10\%\ I_{ZT}$.

4. Basic type ±20% voltage tolerance, suffix "A" denoted ±10% voltage tolerance. "B" suffix denotes ±5% voltage tolerance.

6. Available with reverse polarity denoted by suffix "R."

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10 WATT REGULATORS

Type No. (6)	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts) Nom.(4)	Test Current (mA)	Maximum Dynamic Resistance Z_{ZT} @ I_{ZT} (Ohms)(3)	Maximum Dynamic Knee Resistance Z_{ZK} @ I_{ZK} (Ohms)	(mA)	Ratings: Temp.	Power (@ 25°C)
1N2997	DO-4	51.0	50.0	15.0	500.0	1.0		10W
1N2999	DO-4	56.0	45.0	16.0	500.0	1.0		"
1N3000	DO-4	62.0	40.0	17.0	600.0	1.0	−65°C	"
1N3001	DO-4	68.0	37.0	18.0	600.0	1.0	to +175°C	"
1N3002	DO-4	75.0	33.0	22.0	600.0	1.0		"
1N3003	DO-4	82.0	30.0	25.0	700.0	1.0		"
1N3004	DO-4	91.0	28.0	35.0	800.0	1.0		"
1N3005	DO-4	100.0	25.0	40.0	900.0	1.0	−65°C	"
1N3007	DO-4	110.0	23.0	55.0	1100.0	1.0	to +175°C	"
1N3008	DO-4	120.0	20.0	75.0	1200.0	1.0		"
1N3009	DO-4	130.0	19.0	100.0	1300.0	1.0		"
1N3011	DO-4	150.0	17.0	175.0	1500.0	1.0		"
1N3012	DO-4	160.0	16.0	200.0	1600.0	1.0	−65°C	"
1N3014	DO-4	180.0	14.0	260.0	1850.0	1.0	to +175°C	"
1N3015	DO-4	200.0	12.0	300.0	2000.0	1.0		"

1 WATT REGULATORS

Type No.	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts) Nom. (4)	Test Current (mA)	Maximum Dynamic Resistance Z_{ZT} @ I_{ZT} (Ohms)(3)	Maximum Dynamic Knee Resistance Z_{ZK} @ I_{ZK} (Ohms)	(mA)	Ratings: Temp.	Power (@ 25°C)
1N3016	DO-13	6.8	37.0	3.5	700.0	1.0		1W
1N3017	DO-13	7.5	34.0	4.0	700.0	0.5		"
1N3018	DO-13	8.2	31.0	4.5	700.0	0.5	−65°C	"
1N3019	DO-13	9.1	28.0	5.0	700.0	0.5	to +175°C	"
1N3020	DO-13	10.0	25.0	7.0	700.0	0.25		"
1N3021	DO-13	11.0	23.0	8.0	700.0	0.25		"
1N3022	DO-13	12.0	21.0	9.0	700.0	0.25		"
1N3023	DO-13	13.0	19.0	10.0	700.0	0.25		"
1N3024	DO-13	15.0	17.0	14.0	700.0	0.25	−65°C	"
1N3025	DO-13	16.0	15.5	16.0	700.0	0.25	to +175°C	"
1N3026	DO-13	18.0	14.0	20.0	750.0	0.25		"
1N3027	DO-13	20.0	12.5	22.0	750.0	0.25		"
1N3028	DO-13	22.0	11.5	23.0	750.0	0.25		"
1N3029	DO-13	24.0	10.5	25.0	750.0	0.25		"
1N3030	DO-13	27.0	9.5	35.0	750.0	0.25	−65°C	"
1N3031	DO-13	30.0	8.5	40.0	1000.0	0.25	to +175°C	"
1N3032	DO-13	33.0	7.5	45.0	1000.0	0.25		"
1N3033	DO-13	36.0	7.0	50.0	1000.0	0.25		"
1N3034	DO-13	39.0	6.5	60.0	1000.0	0.25		"
1N3035	DO-13	43.0	6.0	70.0	1500.0	0.25		"
1N3036	DO-13	47.0	5.5	80.0	1500.0	0.25	−65°C	"
1N3037	DO-13	51.0	5.0	95.0	1500.0	0.25	to +175°C	"
1N3038	DO-13	56.0	4.5	110.0	2000.0	0.25		"
1N3039	DO-13	62.0	4.0	125.0	2000.0	0.25		"
1N3040	DO-13	68.0	3.7	150.0	2000.0	0.25		"
1N3041	DO-13	75.0	3.3	175.0	2000.0	0.25		"
1N3042	DO-13	82.0	3.0	200.0	3000.0	0.25	−65°C	"
1N3043	DO-13	91.0	2.8	250.0	3000.0	0.25	to +175°C	"
1N3044	DO-13	100.0	2.5	350.0	3000.0	0.25		"
1N3045	DO-13	110.0	2.3	450.0	4000.0	0.25		"
1N3046	DO-13	120.0	2.0	550.0	4500.0	0.25		"
1N3047	DO-13	130.0	1.9	700.0	5000.0	0.25		"
1N3048	DO-13	150.0	1.7	1000.0	6000.0	0.25	−65°C	"
1N3049	DO-13	160.0	1.6	1100.0	6500.0	0.25	to +175°C	"
1N3050	DO-13	180.0	1.4	1200.0	7000.0	0.25		"
1N3051	DO-13	200.0	1.2	1500.0	8000.0	0.25		"

400mW LOW VOLTAGE REGULATORS

Type No.	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts) Nom.(4)	Test Current I_{ZT} (mA)	Maximum Dynamic Resistance Z_{ZT} @ I_{ZT} (Ohms)(3)	Maximum Reverse Current: I_R @ 25°C (μA)	I_R @ 150°C (μA)	V_R (Volts)	Ratings: Temp.	Power (@ 50°C)
1N4370	G1	2.4	20.0	30.0	100.0	200.0	1.0	−65°C	400mW
1N4371	G1	2.7	20.0	30.0	75.0	150.0	1.0	to +175°C	"
1N4372	G1	3.0	20.0	30.0	50.0	100.0	1.0		"

NOTES: 3. $I_{AC} = 10\%\ I_{ZT}$.

4. Basic type ±20% voltage tolerance, suffix "A" denoted ±10% voltage tolerance. "B" suffix denotes ±5% voltage tolerance.

6. Available with reverse polarity denoted by suffix "R."

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1½ WATT MICROMINIATURE REGULATORS

Type No.	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts) Nom.	Test Current I_{ZT} (mA)	Maximum Dynamic Resistance Z_{ZT} @ I_{ZT} (Ohms)(3)	Maximum Reverse Current: I_R @ V_R (μA)	Maximum Reverse Current: V_R (Volts)	Voltage Regulation $\triangle V_Z$ (Volts)	Max. Dynamic Knee Resistance Z_{ZK} @ I_{ZK}: (Ohms)	Max. Dynamic Knee Resistance Z_{ZK} @ I_{ZK}: (mA)	Ratings: Temp.	Ratings: Power (@ 30°C)
1N4460	G2	6.2	40.0	4.0	20.0	3.72	0.35	200.0	1.0		1.5W
1N4461	G2	6.8	37.0	2.5	5.0	4.08	0.30	200.0	1.0		"
1N4462	G2	7.5	34.0	2.5	1.0	4.50	0.35	400.0	0.5		"
1N4463	G2	8.2	31.0	3.0	0.5	4.92	0.40	400.0	0.5	−65°C to +175°C	"
1N4464	G2	9.1	28.0	4.0	0.3	5.46	0.45	500.0	0.5		"
1N4465	G2	10.0	25.0	5.0	0.5	8.0	0.50	500.0	0.25		"
1N4466	G2	11.0	23.0	6.0	0.3	8.8	0.55	550.0	0.25		"
1N4467	G2	12.0	21.0	7.0	0.2	9.6	0.60	550.0	0.25		"
1N4468	G2	13.0	19.0	8.0	0.1	10.4	0.65	550.0	0.25	−65°C	"
1N4469	G2	15.0	17.0	9.0	0.05	12.0	0.75	600.0	0.25	to +175°C	"
1N4470	G2	16.0	15.5	10.0	0.05	12.8	0.80	600.0	0.25		"
1N4471	G2	18.0	14.0	11.0	0.05	14.4	0.83	650.0	0.25		"
1N4472	G2	20.0	12.5	12.0	0.05	16.0	0.95	650.0	0.25		"
1N4473	G2	22.0	11.5	14.0	0.05	17.6	1.0	650.0	0.25		"
1N4474	G2	24.0	10.5	16.0	0.05	19.2	1.1	700.0	0.25	−65°C	"
1N4475	G2	27.0	9.5	18.0	0.05	21.6	1.3	700.0	0.25	to +175°C	"
1N4476	G2	30.0	8.5	20.0	0.05	24.0	1.4	750.0	0.25		"
1N4477	G2	33.0	7.5	25.0	0.05	26.4	1.5	800.0	0.25		"
1N4478	G2	36.0	7.0	27.0	0.05	28.8	1.7	850.0	0.25		"
1N4479	G2	39.0	6.5	30.0	0.05	31.2	1.8	900.0	0.25		"
1N4480	G2	43.0	6.0	40.0	0.05	34.4	1.9	950.0	0.25	−65°C	"
1N4481	G2	47.0	5.5	50.0	0.05	37.6	2.1	1000.0	0.25	to +175°C	"
1N4482	G2	51.0	5.0	60.0	0.05	40.8	2.3	1100.0	0.25		"
1N4483	G2	56.0	4.5	70.0	0.05	44.8	2.5	1300.0	0.25		"
1N4484	G2	62.0	4.0	80.0	0.05	49.6	2.7	1500.0	0.25		"
1N4485	G2	68.0	3.7	100.0	0.05	54.4	3.0	1700.0	0.25		"
1N4486	G2	75.0	3.3	130.0	0.05	60.0	3.3	2000.0	0.25	−65°C	"
1N4487	G2	82.0	3.0	160.0	0.05	65.6	3.6	2500.0	0.25	to +175°C	"
1N4488	G2	91.0	2.8	200.0	0.05	72.8	4.0	3000.0	0.25		"
1N4489	G2	100.0	2.5	250.0	0.05	80.0	4.4	3100.0	0.25		"
1N4490	G2	110.0	2.3	300.0	0.05	88.0	5.0	4000.0	0.25		"
1N4491	G2	120.0	2.0	400.0	0.05	96.0	5.5	4500.0	0.25		"
1N4492	G2	130.0	1.9	500.0	0.05	104.0	6.0	5000.0	0.25		"
1N4493	G2	150.0	1.7	700.0	0.05	120.0	7.0	6000.0	0.25	−65°C	"
1N4494	G2	160.0	1.6	1000.0	0.05	128.0	8.0	6500.0	0.25	to +175°C	"
1N4495	G2	180.0	1.4	1300.0	0.05	144.0	10.0	7000.0	0.25		"
1N4496	G2	200.0	1.2	1500.0	0.05	160.0	12.0	8000.0	0.25		"

¼ WATT REGULATORS

Type No.	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts) Nom. ±5%	Test Current I_{ZT} (mA)	Maximum Dynamic Resistance Z_{ZT} @ 10mA (Ohms) (3)	Maximum Reverse Current: I_R @ 25°C (μA)	Maximum Reverse Current: I_R @ 100°C (μA)	Maximum Reverse Current: V_R (Volts)	Ratings: Temp.	Ratings: Power (@ 25°C)
HR2.3	G1	2.3	5.0	60.0	75.0	100.0	−1.0		400mW
HR2.8	G1	2.8	5.0	60.0	75.0	100.0	−1.0	−65°C	"
HR3.8	G1	3.8	5.0	55.0	50.0	100.0	−1.0	to +175°C	"
HR4.4	G1	4.4	5.0	45.0	50.0	100.0	−1.5		"
HR5.4	G1	5.4	5.0	20.0	5.0	100.0	−1.5		"
HR6.5	G1	6.5	5.0	10.0	5.0	50.0	−3.5	−65°C	"
HR9.0	G1	9.0	5.0	20.0	5.0	50.0	−3.5	to +175°C	"
HR11.0	G1	11.0	5.0	30.0	5.0	50.0	−3.5		"

LOW VOLTAGE REGULATORS

Type No.	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts) Nom. ±5%	Test Current I_{ZT} (mA)	Maximum Dynamic Resistance Z_{ZT} @ I_{ZT} (Ohms)(7)	Maximum Reverse Current: I_R @ 25°C (μA)	Maximum Reverse Current: V_R (Volts)	Ratings: Power Rating Derate Linearly to 0 @ 150°C	Ratings: Typical Temp. Coefficient %/°C
HS-6	G1	0.74	20.0	3.0	20.0	0.35	0.5	0.25
HS-7	E1A	1.40	20.0	5.0	20.0	0.7	1.0	0.25
HS-8	E1A	1.55	20.0	6.0	20.0	0.7	1.0	0.20
HS-9	E2A	1.70	20.0	10.0	20.0	0.7	0.4	0.19
HS-10	E2A	2.10	20.0	7.5	20.0	1.0	1.4	0.25
HS-11	E2A	2.35	20.0	9.0	20.0	1.0	1.4	0.20
HS-12	E3A	2.55	20.0	15.0	20.0	1.0	0.6	0.19
HS-13	E2A	2.80	20.0	10.0	20.0	1.4	1.75	0.25
HS-14	E2A	3.10	20.0	12.0	20.0	1.4	1.75	0.20

NOTES: 3. I_{AC} = 10% I_{ZT}.

7. I_{AC} = 1mA A.C.

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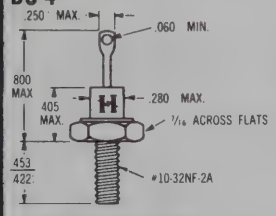
1 WATT MICROMINIATURE REGULATORS

Type No.	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts) Nom. (4)	Test Current I_{ZT} (mA)	Maximum Dynamic Resistance Z_{ZT} @ I_{ZT} (Ohms) (3)	Ratings: Temp.	Ratings: Power (@ 25°C)
HW6.8	G2	6.8	37.0	3.5	−65°C to +175°C	1W
HW7.5	G2	7.5	34.0	4.0		"
HW8.2	G2	8.2	31.0	4.5		"
HW9.1	G2	9.1	28.0	5.0		"
HW10.0	G2	10.0	25.0	7.0		"
HW11.0	G2	11.0	23.0	8.0		"
HW12.0	G2	12.0	21.0	9.0		"
HW13.0	G2	13.0	19.0	10.0		"
HW15.0	G2	15.0	17.0	14.0		"
HW16.0	G2	16.0	15.5	16.0		"
HW18.0	G2	18.0	14.0	20.0		"
HW20.0	G2	20.0	12.5	22.0		"
HW22.0	G2	22.0	11.5	23.0		"
HW24.0	G2	24.0	10.5	25.0		"
HW27.0	G2	27.0	9.5	35.0		"
HW30.0	G2	30.0	8.5	40.0		"
HW33.0	G2	33.0	7.5	45.0		"
HW36.0	G2	36.0	7.0	50.0		"
HW39.0	G2	39.0	6.5	60.0		"
HW43.0	G2	43.0	6.0	70.0		"
HW47.0	G2	47.0	5.5	80.0		"
HW51.0	G2	51.0	5.0	95.0		"
HW56.0	G2	56.0	4.5	110.0		"
HW62.0	G2	62.0	4.0	125.0		"
HW68.0	G2	68.0	3.7	150.0		"
HW75.0	G2	75.0	3.3	175.0		"
HW82.0	G2	82.0	3.0	200.0		"
HW91.0	G2	91.0	2.8	250.0		"

GENERAL PURPOSE REGULATORS

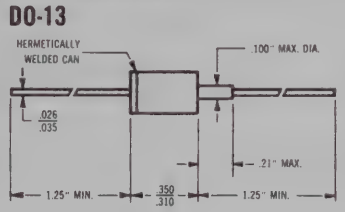
Type No.	Case Type	Electrical Specifications @ 25°C: Zener Breakdown Voltage V_Z @ I_{ZT} (Volts) Min.	Zener Breakdown Voltage V_Z @ I_{ZT} (Volts) Max.	Test Current I_{ZT} (mA)	Maximum Dynamic Resistance Z_{ZT} @ I_{ZT} (Ohms) (3)	Typical Temp. Coefficient %/°C
RS-6	M1	5.0	7.0	10.0	15.0	0.05
RT-6	M1	5.0	7.0	10.0	20.0	0.03

DO-4

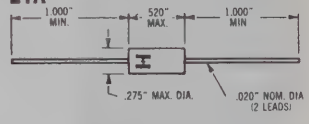


MOUNTING HARDWARE INCLUDED

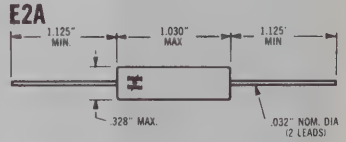
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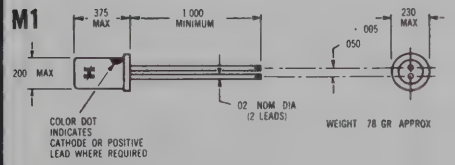
E1A



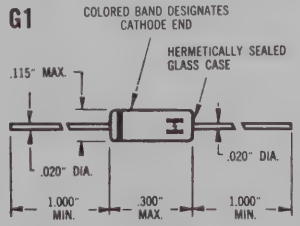
E2A



M1

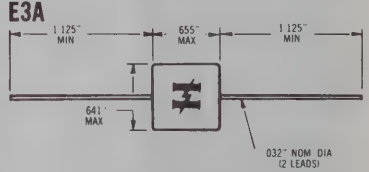


G1

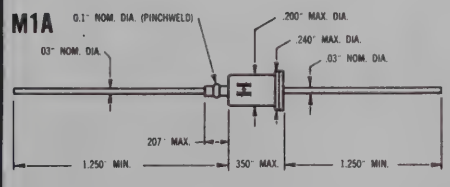


WEIGHT: 0.22 GR. MAX.

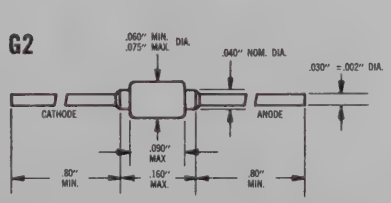
E3A



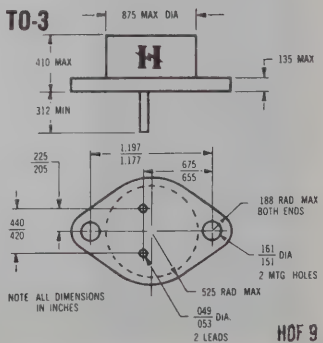
M1A



G2



TO-3



NOTES: 3. $I_{AC} = 10\%\ I_{ZT}$.

4. Basic type ±20% voltage tolerance, suffix "A" denoted ±10% voltage tolerance. "B" suffix denotes ±5% voltage tolerance.

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TUNNEL DIODES

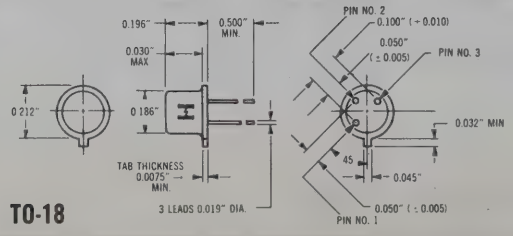
Type No.	Case Type	Electrical Specifications @ 25°C: Peak Point Current I_p mA Min.	Peak Point Current I_p mA Max.	Maximum Valley Point Current I_v mA	Maximum Peak Point Voltage V_p mV	Maximum Valley Point Voltage V_v mV	Forward Voltage @ Applied Current V_f @ I_f mV Min.	Forward Voltage mV Max.	Forward Voltage @ Applied Current mA	Dynamic Characteristics: Total Series Resistance R_s Ohms	Valley Point Terminal Capacitance Freq. = 5 mc. C (pf) Typ.
1N2927	TO-18	.09	.11	.035	75	475	600	1000	.11	10.0	40
1N2927A	TO-18	.098	.102	.030	70	450	650	1000	.102	10.0	40
1N2928	TO-18	.42	.52	.170	80	490	670	1000	.52	3.0	50
1N2928A	TO-18	.46	.48	.145	74	470	710	1000	.48	3.0	50
1N2929	TO-18	.90	1.10	.350	80	500	700	1000	1.10	2.0	75
1N2929A	TO-18	.98	1.02	.300	75	475	730	1000	1.02	2.0	75
1N2930	TO-18	4.23	5.17	1.70	85	520	740	1000	5.17	1.0	125
1N2930A	TO-18	4.61	4.79	1.45	79	495	750	1000	4.79	1.0	125
1N2931	TO-18	9.0	11.0	3.50	85	530	740	1000	11.0	1.0	200
1N2931A	TO-18	9.8	10.2	3.0	80	500	750	1000	10.2	1.0	200
1N2932	TO-18	19.8	24.2	8.0	90	530	740	1000	24.2	0.8	600
1N2932A	TO-18	21.56	22.44	6.5	82	500	750	1000	22.44	0.8	600
1N2933	TO-18	42.3	51.7	17.0	90	530	740	1000	51.7	0.6	900
1N2933A	TO-18	46.06	47.94	14.5	83	500	750	1000	47.94	0.6	900
1N2934	TO-18	90.0	110.0	35.0	90	530	720	1000	110.0	0.5	1200
1N2934A	TO-18	98.0	102.0	30.0	85	500	730	1000	102.0	0.5	1200

UNI-TUNNEL® DIODES (BACKWARD DIODES)

Type No. (A)	Case Type	Electrical Specifications @ 25°C: Reverse Operating Voltage V_r @ I_r (mV) Min.	(mV) Max.	(mA)	Maximum Reverse Voltage V_r (max) @ I_r (max) (mV)	(mA)	Minimum Forward Voltage V_f @ I_f (mV)	(mA)	Minimum Forward Peak Point Voltage V_{fp} @ I_{fp} (max) (mV)	(mA)	Dynamic Characteristics: Maximum Terminal Capacitance C (pf)
1N3539	TO-18	150	250	.47	350	1.25	600	.047	475	.0047	20 Typ.
1N3539A	TO-18	150	250	.47	350	1.25	700	.047	500	.0047	10
1N3540	TO-18	150	250	1.0	350	2.50	600	.10	475	.010	40 Typ.
1N3540A	TO-18	150	250	1.0	350	2.50	700	.10	500	.010	20
1N3541	TO-18	150	250	2.2	400	6.25	600	.22	475	.022	80 Typ.
1N3541A	TO-18	150	250	2.2	400	6.25	700	.22	500	.022	50
1N3542	TO-18	150	250	4.7	400	12.5	600	.47	475	.047	100 Typ.
1N3542A	TO-18	150	250	4.7	400	12.5	700	.47	500	.047	70
1N3543	TO-18	150	250	10.0	400	25.0	600	1.0	475	.100	130 Typ.
1N3543A	TO-18	150	250	10.0	400	25.0	700	1.0	500	.100	100

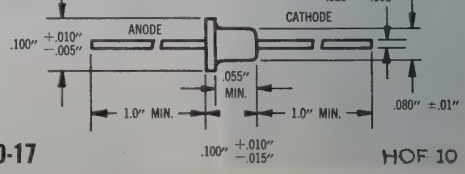
TUNNEL DIODES (AXIAL LEADED)

Type No.	Case Type	Electrical Specifications @ 25°C: Peak Point Current I_p (mA) Min.	Peak Point Current I_p (mA) Max.	Maximum Valley Point Current I_v (mA)	Maximum Peak Point Voltage V_p (mV)	Maximum Valley Point Voltage V_v (mV)	Forward Voltage @ Applied Current V_f (mV) Min.	Forward Voltage (mV) Max.	Forward Voltage @ Applied Current I_f (mA)	Dynamic Characteristics: Total Series Resistance R_s (Ohms)	Valley Point Terminal Capacitance Freq. = 5 mc. C (pf) Typ.
1N4393	DO-17	.09	.11	.035	75	475	650	1000	.11	10.0	40
1N4393A	DO-17	.095	.105	.030	70	450	670	1000	.105	10.0	40
1N4393B	DO-17	.098	.102	.028	65	425	700	1000	.102	10.0	40
1N4394	DO-17	.20	.24	.080	80	480	660	1000	.24	7.0	45
1N4394A	DO-17	.209	.231	.065	72	460	680	1000	.231	7.0	45
1N4394B	DO-17	.216	.224	.060	67	440	710	1000	.224	7.0	45
1N4395	DO-17	.42	.52	.170	80	490	670	1000	.52	3.0	50
1N4395A	DO-17	.45	.49	.145	74	470	690	1000	.49	3.0	50
1N4395B	DO-17	.46	.48	.130	69	460	720	1000	.48	3.0	50
1N4396	DO-17	.90	1.10	.350	80	500	680	1000	1.10	2.0	75
1N4396A	DO-17	.95	1.05	.300	75	475	700	1000	1.05	2.0	75
1N4396B	DO-17	.98	1.02	.280	70	475	730	1000	1.02	2.0	75
1N4397	DO-17	1.98	2.42	.800	80	510	690	1000	2.42	2.0	100
1N4397A	DO-17	2.09	2.31	.650	77	485	710	1000	2.31	2.0	100
1N4397B	DO-17	2.16	2.24	.600	73	485	740	1000	2.24	2.0	100
1N4398	DO-17	4.23	5.17	1.70	85	520	700	1000	5.17	1.0	125
1N4398A	DO-17	4.46	4.94	1.45	79	495	720	1000	4.95	1.0	125
1N4398B	DO-17	4.61	4.79	1.30	74	495	750	1000	4.79	1.0	125
1N4399	DO-17	9.0	11.0	3.50	85	530	700	1000	11.0	1.0	200
1N4399A	DO-17	9.5	10.5	3.00	80	500	720	1000	10.5	1.0	200
1N4399B	DO-17	9.8	10.2	2.80	75	500	750	1000	10.2	1.0	200



TO-18

NOTES: (A) Hoffman Types U1001 through U1012 available with same electrical parameters as JEDEC Types 1N3539 through 1N3543A except in DO-17 axial leaded package configuration.



DO-17

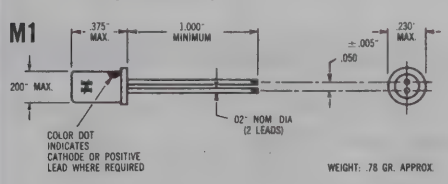
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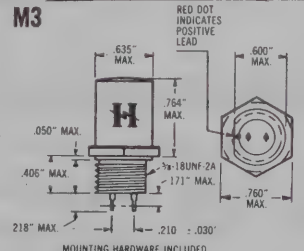
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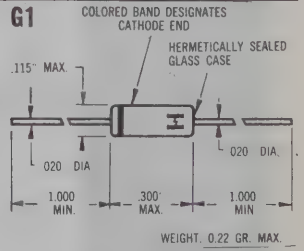
TEMPERATURE COMPENSATED REFERENCE DEVICES

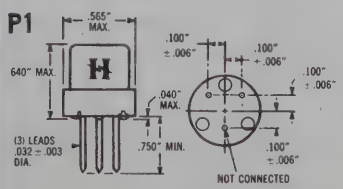
	Type No.	Case Type	Electrical Specifications: Zener Voltage V_Z @ I_{ZT} Nominal ±5%	Test Current I_{ZT}	Maximum Dynamic Resistance Z_Z @ I_{ZT}	Maximum Temperature Coefficient TC	Operating Temperature Range
			(Volts)	(mA)	(Ohms)	±%/°C	°C
2 & 4 VOLTS	Z3433	E2A	2.0 ±10%	10.0	65(7)	.01	0 → +65
	Z3434	E2A	4.0 ±10%	10.0	130	.01	0 → +65
6.2 VOLTS	1N429	M1	6.2	7.5	20(7)	.01	−55 → 25 → +100
	USAF 1N429	M1	6.2	7.5	20	.01	−55 → 25 → +100
8.4 VOLTS	1N430	M3	8.4	10.0	15(7)	.002	−55 → 25 → +100
	USN1N430	M3	8.4	10.0	15	.002	−55 → 25 → +100
	1N430A	M3	8.4	10.0	15	.001	−55 → 25 → +100
	1N430B	M3	8.4	10.0	15	.001	−55 → 25 → +150
6.2 VOLTS	1N821	G1	6.2	7.5	15(3)	.01	−55 → 25 → +100
	1N821A	G1	6.2	7.5	10	.01	−55 → 25 → +100
	1N822	G1	±6.2	7.5	15	.01	−55 → 25 → +100
	1N823	G1	6.2	7.5	15	.005	−55 → 25 → +100
	1N823A	G1	6.2	7.5	10	.005	−55 → 25 → +100
	1N824	G1	±6.2	7.5	15	.005	−55 → 25 → +100
	1N825	G1	6.2	7.5	15	.002	−55 → 25 → +100
	1N827	G1	6.2	7.5	15	.001	−55 → 25 → +100
9.0 VOLTS	1N935	G1	9.0	7.5	20 (3)	.01	0 → +75
	1N935A	G1	9.0	7.5	20	.01	−55 → +100
	1N935B	G1	9.0	7.5	20	.01	−55 → +150
	1N936	G1	9.0	7.5	20	.005	0 → +75
	1N936A	G1	9.0	7.5	20	.005	−55 → +100
	1N936B	G1	9.0	7.5	20	.005	−55 → +150
	1N937	G1	9.0	7.5	20	.002	0 → +75
	1N937A	G1	9.0	7.5	20	.002	−55 → +100
	1N937B	G1	9.0	7.5	20	.002	−55 → +150
	1N938	G1	9.0	7.5	20	.001	0 → +75
	1N938A	G1	9.0	7.5	20	.001	−55 → +100
	1N938B	G1	9.0	7.5	20	.001	−55 → +150
	1N939	G1	9.0	7.5	20	.0005	0 → +75
	1N939A	G1	9.0	7.5	20	.0005	−55 → +100
	1N939B	G1	9.0	7.5	20	.0005	−55 → +150
8.4 VOLTS	1N1530	P1	8.4	10.0	15(7)	.002	−55 → 25 → +100
	1N1530A	P1	8.4	10.0	15	.001	−55 → 25 → +100
6.2 VOLTS THROUGH 49.6 VOLTS	1N1735	E1A	6.2	7.5	20(7)	.01	−55 → 25 → +100
	1N1736	E2A	12.4	7.5	40	.01	−55 → 25 → +100
	1N1736A	E2A	12.4	7.5	40	.005	−55 → 25 → +100
	1N1737	E3A	18.6	7.5	60	.01	−55 → 25 → +100
	1N1737A	E3A	18.6	7.5	60	.005	−55 → 25 → +100
	1N1738	E3A	24.8	7.5	80	.01	−55 → 25 → +100
	1N1738A	E3A	24.8	7.5	80	.005	−55 → 25 → +100
	1N1739	E4A	31.0	7.5	100	.01	−55 → 25 → +100
	1N1739A	E4A	31.0	7.5	100	.005	−55 → 25 → +100
	1N1740	E4A	37.2	7.5	120	.01	−55 → 25 → +100
	1N1740A	E4A	37.2	7.5	120	.005	−55 → 25 → +100
	1N1741	E4A	43.4	7.5	140	.01	−55 → 25 → +100
	1N1741A	E4A	43.4	7.5	140	.005	−55 → 25 → +100
	1N1742	E4A	49.6	7.5	160	.01	−55 → 25 → +100
	1N1742A	E4A	49.6	7.5	160	.005	−55 → 25 → +100
8.4 VOLTS	1N3199	E5A	8.4	10.0	15(7)	.005	−55 → +100
	1N3200	E5A	8.4	10.0	15	.003	−55 → +100
	1N3201	E5A	8.4	10.0	15	.002	−55 → +100
	1N3202	E5A	8.4	10.0	15	.001	−55 → +100

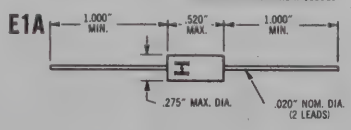
NOTES: 3. I_{AC} = 10% I_{ZT}.
7. I_{AC} = 1mA A.C.

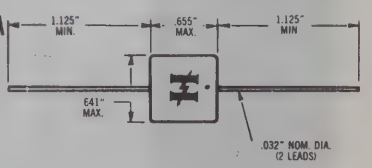


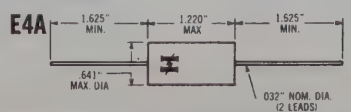


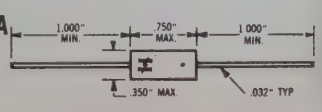












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GENERAL PURPOSE DIODES

Type No.	Case Type	Electrical Specifications @ 25°C: Peak Reverse Voltage PRV	Zener Breakdown Voltage B_V @ I_Z: Min.	Zener Breakdown Voltage B_V @ I_Z: Max.	Zener Breakdown Voltage B_V @ I_Z: (mA)	Minimum Forward Current I_f @ V_f: (mA)	Minimum Forward Current I_f @ V_f: (Volts)	Maximum Reverse Current @ PRV I_r: 25°C (μA)	Maximum Reverse Current @ PRV I_r: 100°C (μA)	Maximum Ratings: Forward Current: Half Wave Peak I_F	Maximum Ratings: Forward Current: Steady State dc or rms I_F	Maximum Ratings: Forward Current: Avg. Rect. Current I_O
		(Volts)	(Volts)	(Volts)	(mA)	(mA)	(Volts)	25°C (μA)	100°C (μA)	(mA)	(mA)	(mA)
1N137A	M1	36	40	70	0.2	3	1.0	.03 @ 20V	None	70	30	21
1N138A	M1	18	20	43	0.2	5	1.0	.01 @ 10V	Specified	110	50	35
1N200	M1	6.8	7.5	NO MAXIMUM SPECIFIED	0.2	50	1.0	0.5	5	260	130	85
1N201	M1	8.2	9		0.2	35	1.0	0.5	5	230	115	77
1N202	M1	10	11		0.2	30	1.0	0.5	5	210	105	70
1N203	M1	12	13.5		0.2	23	1.0	0.5	5	190	95	63
1N204	M1	15	17		0.2	17	1.0	0.5	5	170	85	56
1N205	M1	18	20		0.2	12	1.0	0.1	10	150	75	50
1N206	M1	22	25		0.2	9	1.0	0.1	10	135	67	45
1N207	M1	27	30		0.2	7	1.0	0.1	10	120	60	40
1N208	M1	33	37		0.2	5.5	1.0	0.1	10	105	52	35
1N209	M1	39	43		0.2	4.5	1.0	0.1	10	95	45	30
1N210	M1	47	52		0.2	3.5	1.0	0.1	10	85	42	27
1N211	M1	56	62		0.2	2.7	1.0	1.0	50	72	36	23
1N212	M1	68	75		0.2	2.0	1.0	1.0	50	60	30	19
1N213	M1	82	90		0.2	1.5	1.0	1.0	50	50	25	16
1N214	M1	100	110		0.2	1.2	1.0	1.0	50	40	20	12.5
1N215	M1	120	135		0.2	0.9	1.0	1.0	50	35	17	11
1N216	M1	150	170		0.2	0.7	1.0	5.0	100	30	15	9.5
1N217	M1	180	200		0.1	6.5	4.0	5.0	100	28	14	9
1N218	M1	220	250		0.1	6	4.0	5.0	100	26	13	8
1N219	M1	270	300		0.1	3	4.0	5.0	100	24	12	7.5
1N220	M1	330	370		0.1	2.2	4.0	5.0	100	22	11	7
1N221	M1	390	430		0.1	2	4.0	5.0	100	20	10	6
1N222	M1	470	520		0.1	1.5	4.0	5.0	100	18	9	5.5
1N431	M1	68	75		0.2			0.1 @ 15V (80°C)	1.0 @ 68V (80°C)	35	17	10

CONTROLLED AVALANCHE RECTIFIERS

Type No.	Case Type	Electrical Specifications @ 25°C: Peak Reverse Voltage PRV	Breakdown Voltage B_V @ I_Z: Min. @ I_Z	I_Z	Breakdown Voltage B_V @ I_Z: Max. @ I_Z	I_Z	Maximum Reverse Current I_r @ PRV: 25°C	100°C	Maximum Forward Voltage Drop @ 1 Amp V_F	Maximum Ratings: Average Rectified Current I_O @ 75°C	Maximum Ratings: Surge Current I_{FM}
		(Volts)	(Volts)	(μA)	(Volts)	(μA)	(μA)	(μA)	(Volts)	(Amps)	Amps
HAR-10	G3	100	125	50	250	500	.5	15	1.0	1.0	30
HAR-15	G3	150	175	50	350	500	.5	15	1.0	1.0	30
HAR-20	G3	200	250	50	500	500	.5	15	1.0	1.0	30

ECONOMY GENERAL PURPOSE RECTIFIERS

Type No.	Case Type	Electrical Specifications @ 25°C: Peak Reverse Voltage PRV	Breakdown Voltage B_V @ I_Z: Min.	I_Z	Maximum Reverse Current I_r @ 25°C: (mA)	(Volts)	Minimum Forward Current I_f @ V_f = 1 Volt	Maximum Ratings: Average Rectified Current I_O @ 75°C
		(Volts)	(Volts)	(μA)	(mA)	(Volts)	(mA)	(Amps)
HB-1	M1	6.8	7.5	200	.005	3.5	17.0	.056
HB-2	M1	18	20	200	.005	10	5.0	.033
HB-3	M1	36	40	200	.01	20	2.7	.019

FAST RECOVERY RECTIFIERS

Type No.	Case Type	Electrical Specifications @ 25°C: Peak Reverse Voltage PRV	Breakdown Voltage B_V @ I_Z: Min.	I_Z	Maximum Reverse Current I_r @ PRV: 25°C	100°C	Maximum Forward Voltage Drop @ 1 Amp V_F	Maximum Recovery Time t_{rr}	Typical Junction Capacitance @ —1 Volt C_J	Maximum Ratings: Average Rectified Current I_O @ 75°C
		(Volts)	(Volts)	(μA)	(μA)	(μA)	(Volts)	(μsec)	(pf)	(Amps)
HFR-5	G3	50	60	100	1.3	200	1.2	80	100	1.0
HFR-10	G3	100	120	100	1.3	200	1.2	80	75	1.0
HFR-15	G3	150	180	100	1.3	200	1.2	80	60	1.0
HFR-20	G3	200	240	100	1.3	200	1.2	80	60	1.0

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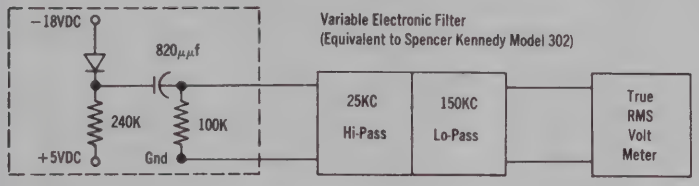
GENERAL PURPOSE RECTIFIERS

Type No.	Case Type	Electrical Specifications @ 25°C				Maximum Ratings	
		Peak Reverse Voltage PRV	Maximum Reverse Current I_r @ PRV		Maximum Forward Voltage Drop @ 1 Amp V_F	Average Rectified Current I_O @ 75°C	Surge Current I_{FM}
			25°C	100°C			
		(Volts)	(μA)	(μA)	(Volts)	(Amps)	(Amps)
HGR-1	G3	50	10	50	1.1	1.0	30
HGR-2	G3	100	10	50	1.1	1.0	30
HGR-3	G3	200	10	50	1.1	1.0	30
HGR-4	G3	300	10	50	1.1	1.0	30

SPECIAL DEVICES

NOISE GENERATING DIODE

Type No.	Case Type	Electrical Specifications @ 25°C unless otherwise specified					
		Zener Voltage V_Z @ 200 μA (Volts)		Maximum Reverse Current I_r @ −12 Volts (μA)		Diode Capacitance C @ −6 Volts (pf)	Minimum RMS Noise Voltage (mV)
		Min.	Max.	25°C	100°C		
HND-1	G1	15.0	19.0	0.5	5.0	150	70



Variable Electronic Filter
(Equivalent to Spencer Kennedy Model 302)

NOTE: Tested in circuit shown, typical center frequency 60,000 cps.

TD/SCR SWITCHING SYSTEM

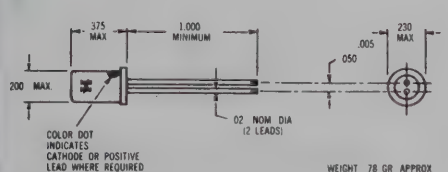
TUNNEL DIODE TRIGGER

Type No.	Case Type	Electrical Specifications			
		Switching Current I_p	Maximum Continuous I_f @ I_r	Peak Voltage at Peak Current V_P @ I_P	Dynamic Resistance at Zero Bias
		(mA)	(mA)	(Volts)	(Ohms)
HT-1077	DO-17	0.47 ± 20%	1.0	.067 Typ.	60 Typ.

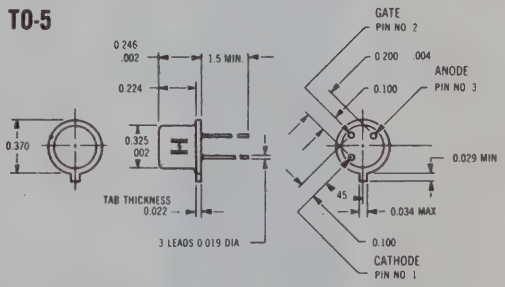
SILICON CONTROLLED RECTIFIER (HT-1077 Trigger Diode connected cathode to gate)

Type No.	Case Type	Maximum Ratings		Electrical Specifications @ 25°C unless otherwise specified						
		Forward Breakover and Peak Reverse Voltage V_{BO} & PRV	Forward Current RMS I_f @ 100°C	Maximum Gate Firing Signal		Maximum Holding Current I_H	Maximum Forward and Reverse Leakage at PRV		Turn Off Time T_{off}	Critical Rate of Rise of Anode Voltage at 100°C
				V_{GF}	I_{GF}		25°C	100°C		
		(Volts)	(Amps)	(Volts)	(mA)	(mA)	(μA)	(μA)	(μsec.)	(V/μsec.)
K1038	TO-5	50	1.0	2.7	.57	3.0	10	100	20 Typ.	50 Typ.
K1039	TO-5	100	1.0	2.7	.57	3.0	10	100	20 Typ.	50 Typ.
K1040	TO-5	200	1.0	2.7	.57	3.0	10	100	20 Typ.	50 Typ.

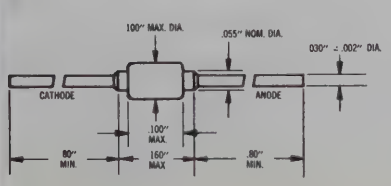
M1



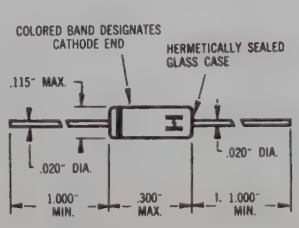
TO-5



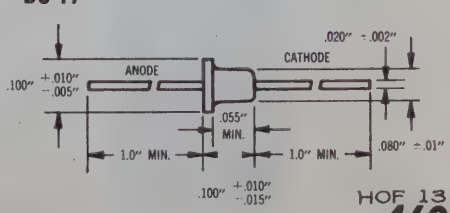
G3



G1



DO-17



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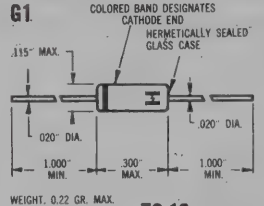
SILICON CONTROLLED RECTIFIERS

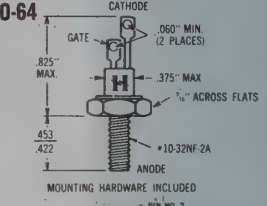
	Type No.	Case Type	Maximum Ratings: Forward Blocking Voltage and Peak Reverse Voltage V_{BO} and PRV	Maximum Ratings: Forward Current RMS I_F		Electrical Specifications: Maximum Forward Voltage Drop V_F @ I_F	Electrical Specifications: Maximum Gate Firing Signal @ 25°C V_{GF}	Electrical Specifications: Maximum Gate Firing Signal @ 25°C I_{GF}	Electrical Specifications: Maximum Holding Current I_H
			(Volts)	(Amps)	(°C)	(Volts)	(Volts)	(mA)	(mA)
.2 AMP	2N876	TO-18	15	0.2	75 Amb.	1.5	0.8	0.2	5.0
	2N877	TO-18	30	0.2	75 Amb.	1.5	0.8	0.2	5.0
	2N878	TO-18	60	0.2	75 Amb.	1.5	0.8	0.2	5.0
	2N879	TO-18	100	0.2	75 Amb.	1.5	0.8	0.2	5.0
	2N880	TO-18	150	0.2	75 Amb.	1.5	0.8	0.2	5.0
	2N881	TO-18	200	0.2	75 Amb.	1.5	0.8	0.2	5.0
.2 AMP	2N884	TO-18	15	0.2	75 Amb.	1.5	0.6	0.02	1.0
	2N885	TO-18	30	0.2	75 Amb.	1.5	0.6	0.02	1.0
	2N886	TO-18	60	0.2	75 Amb.	1.5	0.6	0.02	1.0
	2N887	TO-18	100	0.2	75 Amb.	1.5	0.6	0.02	1.0
	2N888	TO-18	150	0.2	75 Amb.	1.5	0.6	0.02	1.0
	2N889	TO-18	200	0.2	75 Amb.	1.5	0.6	0.02	1.0
1 AMP	2N1595	TO-5	50	1.0	80 Case	2.0	3.0	10.0	25.0
	2N1596	TO-5	100	1.0	80 Case	2.0	3.0	10.0	25.0
	2N1597	TO-5	200	1.0	80 Case	2.0	3.0	10.0	25.0
	2N1598	TO-5	300	1.0	80 Case	2.0	3.0	10.0	25.0
	2N1599	TO-5	400	1.0	80 Case	2.0	3.0	10.0	25.0
7 AMP	2N1770	TO-64	25	7.0	60 Stud	1.85 @ 15A	2.0	15.0	8.0 Typ.
	2N1771	TO-64	50	7.0	60 Stud	1.85 @ 15A	2.0	15.0	8.0 Typ.
	2N1772	TO-64	100	7.0	60 Stud	1.85 @ 15A	2.0	15.0	8.0 Typ.
	2N1773	TO-64	150	7.0	60 Stud	1.85 @ 15A	2.0	15.0	8.0 Typ.
	2N1774	TO-64	200	7.0	60 Stud	1.85 @ 15A	2.0	15.0	8.0 Typ.
	2N1775	TO-64	250	7.0	60 Stud	1.85 @ 15A	2.0	15.0	8.0 Typ.
	2N1776	TO-64	300	7.0	60 Stud	1.85 @ 15A	2.0	15.0	8.0 Typ.
	2N1777	TO-64	400	7.0	60 Stud	1.85 @ 15A	2.0	15.0	8.0 Typ.
1 AMP	2N1881	TO-5	30	1.0	100 Case	2.0	2.0	2.0	10.0
	2N1882	TO-5	60	1.0	100 Case	2.0	2.0	2.0	10.0
	2N1883	TO-5	100	1.0	100 Case	2.0	2.0	2.0	10.0
	2N1884	TO-5	150	1.0	100 Case	2.0	2.0	2.0	10.0
	2N1885	TO-5	200	1.0	100 Case	2.0	2.0	2.0	10.0
1 AMP	2N2009	TO-5	25	1.0	80 Case	2.0	1.0	0.2	5.0
	2N2010	TO-5	50	1.0	80 Case	2.0	1.0	0.2	5.0
	2N2011	TO-5	100	1.0	80 Case	2.0	1.0	0.2	5.0
	2N2012	TO-5	200	1.0	80 Case	2.0	1.0	0.2	5.0
	2N2013	TO-5	300	1.0	80 Case	2.0	1.0	0.2	5.0
	2N2014	TO-5	400	1.0	80 Case	2.0	1.0	0.2	5.0
1.6 AMP	2N2322	TO-5	25	1.6	87 Case	2.2 @ 4A Pulse	0.8	0.2	2.0
	2N2323	TO-5	50	1.6	87 Case	2.2 @ 4A Pulse	0.8	0.2	2.0
	2N2324	TO-5	100	1.6	87 Case	2.2 @ 4A Pulse	0.8	0.2	2.0
	2N2325	TO-5	150	1.6	87 Case	2.2 @ 4A Pulse	0.8	0.2	2.0
	2N2326	TO-5	200	1.6	87 Case	2.2 @ 4A Pulse	0.8	0.2	2.0
	2N2327	TO-5	250	1.6	87 Case	2.2 @ 4A Pulse	0.8	0.2	2.0
	2N2328	TO-5	300	1.6	87 Case	2.2 @ 4A Pulse	0.8	0.2	2.0
	2N2329	TO-5	400	1.6	87 Case	2.2 @ 4A Pulse	0.8	0.2	2.0
1.6 AMP	2N2344	TO-5	25	1.6	58 Case	2.2 @ 4A Pulse	0.8	0.02	1.0
	2N2345	TO-5	50	1.6	58 Case	2.2 @ 4A Pulse	0.8	0.02	1.0
	2N2346	TO-5	100	1.6	58 Case	2.2 @ 4A Pulse	0.8	0.02	1.0
	2N2347	TO-5	150	1.6	58 Case	2.2 @ 4A Pulse	0.8	0.02	1.0
	2N2348	TO-5	200	1.6	58 Case	2.2 @ 4A Pulse	0.8	0.02	1.0

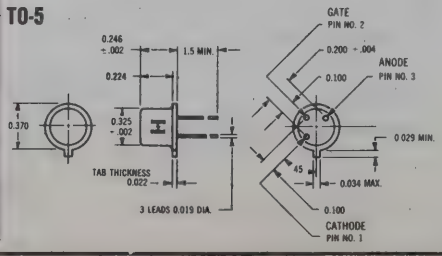
SILICON CONTROLLED RECTIFIERS
LIGHT ACTIVATED

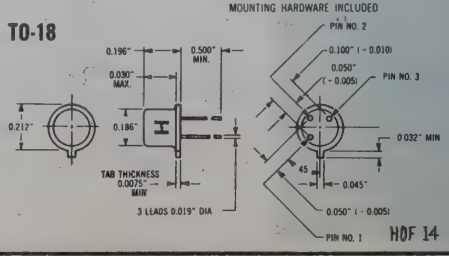
Type No.	Case Type	Electrical Specifications: PRV/V_{BO}(9) (Volts Min.)	L_T(10-11) (Ft. Cd.) (Max.)	I_H(9-10) (mA Max.)	I_{GT}(10) (μA Max.)	V_{GT}(9-10) (Volts Max.)	I_F(10) (mA DC Max.)	V_F (Volts Max.)
HLS-25	TO-5	25	300	2.0	50	0.8	500	1.5
HLS-50	TO-5	50	300	2.0	50	0.8	500	1.5
HLS-100	TO-5	100	300	2.0	50	0.8	500	1.5
HLS-150	TO-5	150	300	2.0	50	0.8	500	1.5
HLS-200	TO-5	200	300	2.0	50	0.8	500	1.5
HLS-300	TO-5	300	300	2.0	50	0.8	500	1.5
HLS-1-25	TO-18	25	300	2.0	50	0.8	200	1.5
HLS-1-50	TO-18	50	300	2.0	50	0.8	200	1.5
HLS-1-100	TO-18	100	300	2.0	50	0.8	200	1.5
HLS-1-150	TO-18	150	300	2.0	50	0.8	200	1.5
HLS-1-200	TO-18	200	300	2.0	50	0.8	200	1.5
HLS-1-300	TO-18	300	300	2.0	50	0.8	200	1.5
HLS-2-25	G-1	25	300	2.0			200	1.5
HLS-2-50	G-1	50	300	2.0			200	1.5
HLS-2-100	G-1	100	300	2.0	Not Specified	Not Specified	200	1.5
HLS-2-150	G-1	150	300	2.0			200	1.5
HLS-2-200	G-1	200	300	2.0			200	1.5
HLS-2-300	G-1	300	300	2.0			200	1.5

NOTES: 9. Values are for units with no light on window.
10. Values are at 25°C ambient.
11. Values are under tungsten radiation @ 2800°K
All measurements with R_{GK} = 1K ohms.









HOF 14

Hoffman

PHOTOVOLTAIC COMPONENTS

SOLAR CELLS N/P

Type No.	Electrical Specifications — Load Output at Standard Test Conditions		
	Voltage (mV)	Current (mA min.)	Power (mW min.)
N120CG-8	430	45.5	19.6
N120CG-9	430	51.1	22.0
N120CG-10	430	56.9	24.5
N120CG-11	430	62.7	27.0
N120CG-12	430	68.2	29.4
N210CG-8	430	46.9	20.2
N210CG-9	430	53.0	22.8
N210CG-10	430	58.8	25.3
N210CG-11	430	64.6	27.8
N210CG-12	430	70.6	30.4

Type No.	Electrical Specifications — Load Output at Standard Test Conditions		
	Voltage (mV)	Current (mA min.)	Power (mW min.)
N220CG-8	430	95.0	40.8
N220CG-9	430	106.8	45.9
N220CG-10	430	118.7	51.0
N220CG-11	430	130.5	56.0
N220CG-12	430	142.0	61.0
N230CG-8	430	142.0	61.0
N230CG-9	430	160.0	68.7
N230CG-10	430	176.5	76.4
N230CG-11	430	195.5	84.0
N230CG-12	430	213.0	91.5

STANDARD TEST CONDITIONS

Light Source: A Solar Simulator with a spectral distribution that closely approximates the spectral distribution of space sunlight as determined by F. S. Johnson of NRL with an intensity equivalent to 140mW/cm² earth orbit sunlight (Air Mass Zero, AMO).

Test Temperature: 28°C ±2°C.

NOTE: Sintered Contacts are Standard on all N/P Solar Cells.

SOLAR CELLS GENERAL PURPOSE P/N

Type No.	Nominal Overall Dimensions		Active Area		Typical Output at Standard Test Conditions (1) — Load Output			Short Circuit Current	Open Circuit Voltage
	(cm.)	(inches)	(square cm.)	(square inches)	Voltage (mV)	Current (mA)	Power (mW)	(mA)	(mV)
2A	2.86 dia.	1.125 dia.	4.8	0.79	400	100.0	40.0	130	550
110C	1.0 x 1.0	0.4 x 0.4	0.9	0.14	400	17.0	6.8	20	550
52C	0.5 x 2.0	0.2 x 0.8	0.8	0.12	400	15.0	6.0	20	550
51C	0.5 x 1.0	0.2 x 0.4	0.4	0.06	400	7.5	3.0	10	550
55C	0.5 x 0.5	0.2 x 0.2	0.2	0.03	400	3.8	1.5	5	550
58C	0.5 x 0.25	0.2 x 0.1	0.1	0.014	400	1.8	0.72	3	550

NOTES: (1) Tungsten light source with a color temperature of 2800°K at a light level which corresponds to 100mW/cm² of sunlight as correlated by means of a standard solar cell. Cell temperature at test is 28°C.

Standard cells are available with 6 inch, #32 Polyvinyl insulated, color coded lead wires at additional cost. Add suffix "L" to Type number. For example: 110CL.

All cells with leads, such as 110CL, can be supplied with epoxy coating at additional cost. Add suffix "-VC" to cell type number when ordering. For example: 110CL-VC.

Specially selected or matched cells are available at additional cost. Requirements must be specified. For example: Two 110C cells, output current at 0.4V, equal to 15mA ± 1mA, under standard test conditions (Note 1, above).

SPEED OF RESPONSE: 20 microseconds or less, depending on load resistance.

SPECTRAL RESPONSE: Range, 0.4 to 1.15 microns; Peak, 0.85 microns.

N/P Types optional.

PHOTOVOLTAIC DEVICES

EA7

Type No.	Maximum Overall Dimensions (Excluding 2" Min. Leads)	Active Area	Output (1)		Dark Reverse Current (2)
	(inches)	(inches)	(mV)	(μA)	(μA max.)
EA7E1	0.5 x .08	.130 x .050	300	300	5
EA7E2	0.5 x .08	.130 x .050	300	300	10
EA7E3	0.5 x .08	.130 x .050	250	250	10

NOTES: (1) Measured at 1250 foot-candles, 2800°K, 55°C, 1 K Load.
(2) Measured at —1V, 55°C, 1 foot-candle max.

SPEED OF RESPONSE: 20 microseconds or less, depending on load resistance.

SPECTRAL RESPONSE: Range, 0.4 to 1.15 microns; Peak, 0.85 microns.

HLSN-221

The Product

The Hoffman two-element null indicator is silicon diffused-junction construction. Indicator is packaged in a nylon case. Clear varnish is applied to prevent degradation of junction through handling and to minimize reflection losses. Plated contacts assure electrical reliability.

Electrical Characteristics

Voltage across 10,000 ohms, minimum output: 250mV

Imbalance Between Sensitive Elements, maximum output: 50mV

NOTE: Tungsten lamp is illumination source operating at a filament color temperature of 2800°K yielding an intensity of 280 foot-candles.

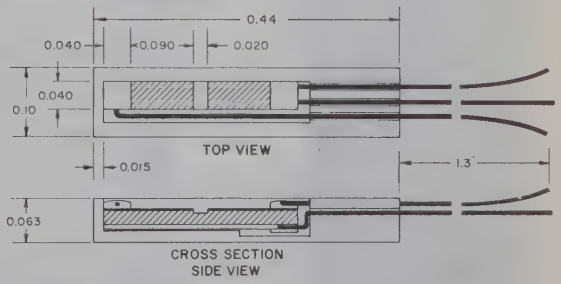
Maximum Ratings

Output: 200-300mV

Operating Temperature Range: —55° to 115°C

Reverse Bias Voltage: 2V

Physical Characteristics



PHOTOVOLTAIC INDUSTRIAL POWER DEVICES

HSB SOLAR RADIO BATTERY

DESCRIPTION

Use of the HSB solar battery requires no circuit changes in transistor radio. The HSB is a replacement for dry batteries. It will power any personal portable transistor radio when exposed to sunlight or incandescent light. When radio is operated in darkness, dry batteries may be substituted.

OUTPUT SPECIFICATIONS

Intensity: 100mW/cm² sunlight or tungsten equivalent.

Operating Temperature: 28°C (82°F) do not exceed 100°C (212°F).

Module Orientation: Normal to radiant energy source.

Output: 4.5 volts — 25mA 6.0 volts — 25mA 9.0 volts — 15mA

1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625

Hoffman

HSSP-2-40

Type No.	Electrical Characteristics			
	Current at Two Volts		Power	
	Min.	Typical	Min.	Typical
HSSP-2-40	36mA	42mA	72mW	84mW

NOTE: Current and power output are for 100mW/cm² (average bright sunlight) solar illumination at the earth's surface at 25°C.

Dimensions: 2½" long x 1" wide (approx. overall)

READOUTS (Multi-Segment)

HPC

Type No.	READOUT POSITIONS		Active Area	Output (1)	Dark Reverse Current (2)
	Total Number	Center-to-Center Spacing			
		(inches)	(inches)	(μA nom.)	(μA max.)
HPC	3 thru 10	.100	.160 x .080	205-345	20

*N/P Types optional.

NOTES: (1) Per segment. Measured at 500 foot-candles, 2800°K, 25°C, 1 K Load.
(2) Per segment. Measured at —0.5V, 25°C, 1 foot-candle max.

SPEED OF RESPONSE: 10 microseconds or less, depending on load resistance.
SPECTRAL RESPONSE: Range, 0.4 to 1.15 microns; Peak, 0.85 microns.

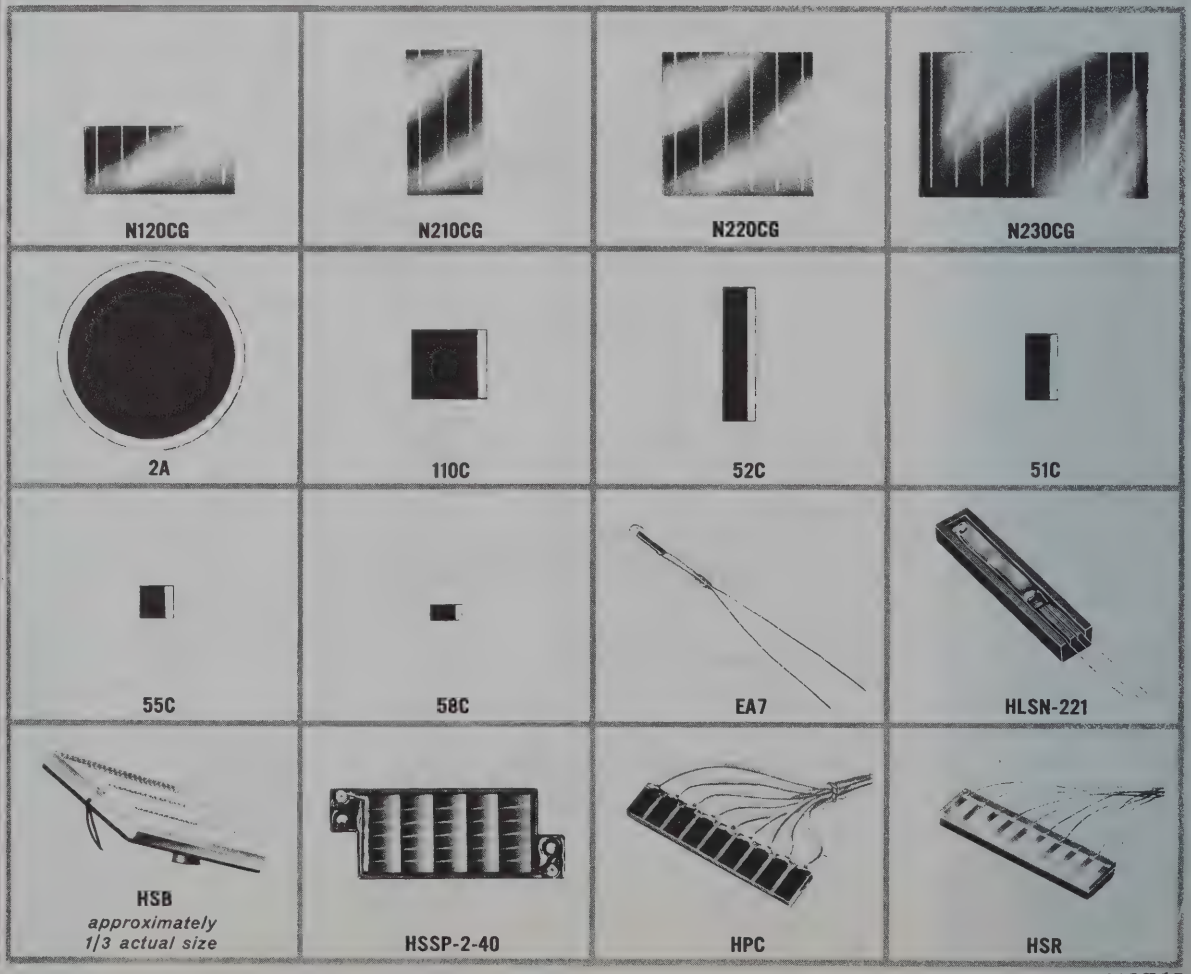
HSR

Type No.	READOUT POSITIONS		Active Area	Output (1)	Dark Reverse Current (2)
	Total Number	Center-to-Center Spacing			
		(inches)	(inches)	(μA nom.)	(μA max.)
HSR	3 thru 10	.087	.125 x .030	100-140	10

*N/P Types optional.

NOTES: (1) Per segment. Measured at 500 foot-candles, 2800°K, 25°C, 1 K Load.
(2) Per segment. Measured at —0.5V, 25°C, 1 foot-candle max.

SPEED OF RESPONSE: 10 microseconds or less, depending on load resistance.
SPECTRAL RESPONSE: Range, 0.4 to 1.15 microns; Peak, 0.85 microns.



SILICON TRANSISTORS


Pkg. No. 1


Pkg. No. 2

ECONOMY NPN Planar (See Outline Drawing No. 1)

Small Signal Amplifiers — Audio to 30mc (16A Product Line)

Type	h_{FE} V_{CE}=4.5v I_C=2 ma	h_{fe} V_{CE}=10v I_C=2 ma F=1 kc	V_{CEO} I_C=1 ma Volts	P_T milliwatts	C_{OB} Typical V_{CE}=10v pfd	f_t Typical mc	Comments
2N2711	30-90	—	18	200	7	120	RF Converter, IF, Audio Driver & Output for AM & CB Radio.
2N2712	75-225	—					
2N2715(16D)	30-90	—	18	200	4	120	RF Converter, IF for AM & CB Radio.
2N2716(16D)	75-225	—					
2N2921	—	35-70	25	200	7	120	Higher Collector Voltage and 2 to 1 AC Beta (h_{fe}) Spread for Consumer and Industrial Applications.
2N2922	—	55-110					
2N2923	—	90-180					
2N2924	—	150-300					
2N2925	—	235-470					
2N2926	—	35-470	18	200	7	120	Low Cost Spread Type.
2N3390	400-800	—	25	200	7	120	Optimized Types for Ultra High Beta, Low Noise, 2 to 1 DC Beta (h_{FE}) Spreads, High Collector Voltage For Consumer & Industrial Applications.
2N3391	250-500	—					
2N3391A	250-500	—					
2N3392	150-300	—					
2N3393	90-180	—					
2N3394	55-110	—					
2N3395	150-500	—					Combines 2N3391 and 2N3392
2N3396	90-500	—					Combines 2N3391, 2N3392 and 2N3393.
2N3397	55-500	—					Combines 2N3391, 2, 3, 4.
2N3398	55-800	—					Combines 2N3390, 1, 2, 3, 4.
2N3721	—	60-660	18	200	7	120	Low Cost Spread Type.

High Frequency Amplifiers and Oscillators — 10 mc to 950 mc Epitaxial (16G Product Line)

2N3662	20 Min	—	12	200	1.3	1200	TV & FM Tuner, IF and UHF Oscillators.
2N3663	20 Min	—					

High Frequency Amplifier — 10 mc-250 mc, for Forward AGC (16K Product Line)

16K1,2,3	60 Typ. @ I_C = 4 ma.	—	30	200	1.35	560	Forward AGC, VHF RF and IF Amplifiers (TV & FM).

High Frequency Amplifiers and Oscillators — 262.5 kc to 100 mc Epitaxial (16L, 16M, 16E Product Lines)

2N3854(16L)	35-70	—	18	200	2.5	250	General Purpose Types for FM and TV.
2N3855(16L)	60-120	—				300	
2N3856(16L)	100-200	—				350	
2N3854A(16L)	35-70	—	30	200	2.5	250	High Frequency Applications in FM and TV.
2N3855A(16L)	60-120	—				300	
2N3856A(16L)	100-200	—				350	
2N3843A(16M)	20-40	—	30	200	2.5	135	Very Low 2 mc Noise for AM RF Stages.
2N3844A(16M)	35-70	—					
2N3845A(16M)	60-120	—					
2N3858(16E)	60-120	—	30	200	2.5	135	Low 2 mc Noise for AM Converter Stages.
2N3859(16E)	100-200	—					High H_{FE} for IF Stages.
2N3860(16E)	150-300	—					

Large Signal Amplifiers and Medium Speed Switch — Epitaxial (16N Product Line)

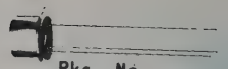
2N2713(16B)	30-90	—	18	200	7.0	120	Medium Power & Voltage, Low V_{SAT}, h_{FE} Hold-up to 200 ma.
2N2714(16B)	75-225	—					
2N3402	75-225	—	25	900 (Attached Heatsink See Dwg. No. 2)	8.0	120	High Power, Medium, Voltage Low V_{SAT}, h_{FE} Hold-up to 800 ma.
2N3403	180-540	—					
2N3404	75-225	—	50		8.0	120	High Power, High Voltage, Low V_{SAT}, h_{FE} Hold-up to 800 ma.
2N3405	180-540	—					
2N3414	75-225	—	25	360	8.0	120	Medium Power, Medium Voltage, Low V_{SAT}, h_{FE} Hold-up to 500 ma.
2N3415	180-540	—					
2N3416	75-225	—	50	360	8.0	120	Medium Power, High Voltage, Low V_{SAT}, h_{FE} Hold-up to 800 ma.
2N3417	180-540	—					

High Speed Switch — Low Storage Time, Typical ≅20 nsec. Epitaxial, Gold Doped (16J Product Line)

2N3605 2N3606 2N3607	30 Min I_C = 10ma V_{CE} = 10	—	14	200	4	350	Possible substitute for: 2N914, 2N706, 2N708, 2N753, 2N834.

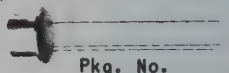
GROWN DIFFUSED — NPN Passivated

(See Outline Drawing No. 3)



Type	h_{fe} V_{CB}=5 v I_E=1 ma f=1 kc	h_{FE} TYPICAL V_{CE}=5 v I_C=1 ma	BV_{CBO} MINIMUM I_{CBO}= 50 μa I_E=0 volts	I_{CBO} MAXIMUM V_{CB}=30 v I_E=0 T_A=25°C μa	C_{OB} TYPICAL V_{CB}=20v I_E=−1 ma f=1 mc. pf	P_T MAXIMUM Power Diss. mw	Comments
2N332	9-22	14	45	1.0	4	150	
2N332A	9-22	14	45	.5	4	500	
2N333[12]	18-44	27	45	1.0	4	150	
2N333A	18-44	27	45	.5	4	500	
2N334	18-90	36	45	1.0	4	150	
2N334A	18-90	36	45	.5	4	500	
2N335[12]	37-90	45	45	1.0	4	150	
2N335A	37-90	45	45	.5	4	500	
2N335B	37-90	45[12]	60	.5	4	500	
2N336[12]	76-333	75	45	1.0	4	150	
2N336A	76-333	75	45	.5	4	500	
2N337[12]	55[1]	20-55[11]	45	1.0[6]	2	125	
2N337A	55[1]	20-55[11]	45	.5	2	500	
2N338[12]	99[1]	45-150[11]	45	1.0[6]	2	125	
2N338A	99[1]	45-150[11]	45	.5	2	500	

POWER — NPN Passivated Mesa[5]



Type	Dwg. No.	h_{FE}[9] V_{CE}=10v I_C=200 ma	MINIMUM V_{CEO} I_C=250μa Volts	MINIMUM V_{EBO} I_E=250μa Volts	MAXIMUM I_{CBO} V_{CB}=30v T_J=150°C μa	MAXIMUM Power Dissipation P_T Free Air @25°C Watts	MAXIMUM Power Dissipation P_T Case Temp @25°C Watts	MAXIMUM $V_{CE\ (SAT)}$[9] I_C=200 ma I_B=40 ma Volts	Comments
2N497[6]	5	12-36	60	8	250	0.8	4	5	Audio Amplifiers Blocking Oscillators DC to AC Inverters Linear Amplifiers Magnetic Tape Bias and Erase Oscillators Power Oscillators Power Switching Pulse Amplifiers Regulated Power Supplies Servo Amplifiers Servo Drivers Solenoid Drivers High Voltage Series Regulator
2N497A	5	12-36	60	8	250	1.0	5	2	
2N498[6]	5	12-36	100	8	250	0.8	4	5	
2N498A	5	12-36	100	8	250	1.0	5	2	
2N656[6]	5	30-90	60	8	250	0.8	4	5	
2N656A	5	30-90	60	8	250	1.0	5	2	
2N657[6]	5	30-90	100	8	250	0.8	4	5	
2N657A	5	30-90	100	8	250	1.0	5	2	
2N2017	5	50-200	60	8	250	1.0	5	2	
2N2106	5	12-36	60[1]	8	200[2]	1.0	5	5	
2N2107	5	30-90	60[1]	8	200[2]	1.0	5	2	
2N2108	5	75-200	60[1]	8	200[2]	1.0	5	2[3]	
2N2726	5	30-90	200[12]	10	100	1.0	5	2	
2N2727	5	75-150	200[12]	10	100	1.0	5	2	
7A30	5	12-36	40	8	10[7]	1.0	5	1.0 Typ.	
7A31	5	30-90	30	8	10[7]	1.0	5	1.0 Typ.	
7A32	5	75-200	30	8	10[7]	1.0	5	1.0 Typ.	
7A35	5	50-200	40[1]	15[13]	10[7]	1.0	5	2[3]	
				V_{CEX} I_C=250 ma V_{BE}=−1.5v T_J=150°C			Case Temp.[4] @100°C		
2N2196	8	30-90	60[1]	80	250	2.0	10	2	
2N2197	8	75-200	60[1]	80	250	2.0	10	2[3]	
2N2201	8	30-90	100	120	200	2.0	10	1.7	
2N2202	12	30-90	100	120	200	1.0	10	1.7	
2N2203	13	30-90	100	120	200	1.0	10	1.7	
2N2204	14	30-90	100	120	200	1.0	10	1.7	
2N2239	8	30-200	50[16]	8[17]	250	1.0	10	3	
2N2995	13	30-90	100	120	200	1.5	10	1.7	


Pkg. No. 14


Pkg. No. 15


Pkg. No. 5


Pkg. No. 16

POWER — NPN Passivated Mesa[5] (Continued)

Triple-Diffused NPN Passivated

Type	Dwg. No.	h_{FE} V_{CE}=15v I_C=2 amp.	h_{FE} V_{CE}=5v I_C=500 ma	MINIMUM V_{CEO} Volts	MINIMUM I_{CES} @150°C ma	MAXIMUM I_C Amps	MAXIMUM Power P_T Free Air @25°C Watts	MAXIMUM Dissipation P_T Case Temp @100°C Watts	MAXIMUM $V_{CE\ (SAT)}$ I_C=2 amps I_B=250 ma Volts	MAXIMUM $V_{CE\ (SAT)}$ I_C=1 amp I_B=100 ma Volts
2N1616	14	15 min.	—	60	10@60[1]	5	3	60	—	—
2N1617	14	15-75	—	80	10@80[1]	5	3	60	—	—
2N1618	14	15-75	—	100	10@80[1]	5	3	60	2	—
2N1724	14	20-90	—	80	2@60V	5	3	50	1	—
2N1724A	14	50-150	—	120	2@100V	5	3	50	.6	—
2N1725	14	30-90	—	80	2@60V	5	3	50	1	—
2N2150	15	—	20-60	80	.1@120V	2	2	30	—	1.25
2N2151	15	—	40-120	80	.1@120V	2	2	30	—	1.25
2N3220	15	—	20-60	80	.1@100	2	2	30	—	1.25
2N3221	15	—	40-120	80	.1@100	2	2	30	—	1.25
2N3222	15	—	20-60	60	.1@80	2	2	30	—	1.25
2N3223	15	—	40-120	60	.1@80	2	2	30	—	1.25

NOTES: (1) I_{CBO}.

AMPLIFIERS NPN Planar, Typical $f_t \cong$ 130 mc

(See Outline Drawing No. 5)

Type[2]	h_{FE} I_C=150 ma V_{CE}=10v	Min. V_{CER} R_{BE}≤10Ω I_C=100 ma Volts	Max. $V_{CE\ (SAT)}$ I_C=150 ma I_B=15 ma Volts	Max. $V_{BE\ (SAT)}$ I_C=150 ma I_B=15 ma Volts	h_{fe} f=1 kc I_C=1 ma V_{CE}=5v Min.	h_{fe} Max.	MAXIMUM I_{CBO} T_J=150°C V_{CB} Volts	I_{CBO} T_J=150°C µa	V_{EBO} I_E=100 µa Volts	POWER DISS. P_T Free Air @25°C Watts	POWER DISS. P_T Case Temp. @100°C Watts	MINIMUM h_{FE} I_C=10 ma V_{CE}=10v	MINIMUM h_{FE} I_C=10 ma V_{CE}=10v T_J=−55°C	MINIMUM h_{FE} I_C=0.1 ma V_{CE}=10v	MINIMUM h_{FE} I_C=500 ma V_{CE}=10v	MINIMUM h_{FE} I_C=1000 ma V_{CE}=10v	Comments
2N1889	40-120	80	5.0	1.3	30-100		*75*	15	7	0.8	1.7	35	20	20	—	—	High Voltage 2N1613.
2N1890	100-300	80	5.0	1.3	50-200		—	—	7	0.8	1.7	—	—	—	—	—	Higher voltage 2N1711.
2N1972	—	30	2[7]	1.1[7]	40		*30*	100	5	0.6	1.0	70	40	—	—	—	
2N1973	75 Min.[6]	80	1.2[7]	0.9[7]	76-200		*75*	15	7	0.8	1.7	—	—	—	—	—	
2N1974	35 Min.[6]	80	1.2[7]	0.9[7]	36-90		*75*	15	7	0.8	1.7	—	—	—	—	—	
2N1975	15 Min.[6]	80	1.2[7]	0.9[7]	18-50		*75*	15	7	0.8	1.7	—	—	—	—	—	
2N1983	—	30	0.25[5]	—	70-210		*30*	200	5	0.6	1.0	—	—	—	—	—	High beta for high gain, low noise amplifiers.
2N1984	—	30	0.25[5]	—	35-100		*30*	200	5	0.6	1.0	—	—	—	—	—	Amplifier Circuits.
2N1985	—	30	0.25[5]	—	15-45		*30*	200	5	0.6	1.0	—	—	—	—	—	Amplifier Circuits.
2N2049	—	50	0.4[4]	0.8[4]	75		*60*	10	7	0.8	1.7	—	—	60	—	—	High beta for high gain, low noise amplifiers NF=3db.

Industrial Types

(See Outline Drawing No. 16)

2N870	40-120	80	5.0	1.3	30-100		*75*	15	7	.5	1.0	35	20	20	—	—	TO-18 Version of 2N1889.
2N871	100-300	80	5.0	1.3	50-200		—	—	7	.4	.75	—	—	—	—	—	TO-18 Version of 2N1890.
2N910	75 Min.[6]	80	1.2[7]	0.9[7]	76-200		*75*	15	7	.4	.75	—	—	—	—	—	TO-18 Version of 2N1973.
2N911	35 Min.[6]	80	1.2[7]	0.9[7]	36-90		*75*	15	7	.4	.75	—	—	—	—	—	TO-18 Version of 2N1974.
2N912	15 Min.[6]	80	1.2[7]	0.9[7]	18-50		*75*	15	7	.4	.75	—	—	—	—	—	TO-18 Version of 2N1975.

Typical $f_t \cong$ 180 mc (See Outline Drawing No. 16)

Type	h_{FE} Min. @I_C ma	h_{FE} Max. @V_{CE} Volts	MINIMUM h_{fe} V_{CE}=10v I_C=4 ma f=100 mc	MINIMUM V_{CEO} Volts @I_C ma	MINIMUM V_{EBO} Volts @I_E µa	MAXIMUM $V_{BE\ (SAT)}$ I_C=10 ma I_B=1 ma Volts	MAXIMUM $V_{CE\ (SAT)}$ I_C=10 ma I_B=1 ma Volts	MAXIMUM I_{CBO} T_J=150°C @V_{CB} Volts	I_{CBO} na	MAXIMUM V_{BE} (SAT) V_{CE} (SAT) I_C=3 ma I_B=1.5	C_{ob} @ V_{CB} pf	Volts	Comments
2N929	.01	5.0	—	10	100	0.6-1[2]	1.0[2]	45	10	— —	5[TYP]		These devices are intended for applications requiring high gain at low current.
	40-120			45	5								
2N930	.01	5.0	—	10	100	0.6-1[2]	1.0[2]	45	10	— —	5[TYP]		
	100-300			45	5								
2N2483	.01	5.0	—	10	10	—	.35[3]	45	10	— —	5[TYP]		
	40-120			60	6								
2N2484	.01	5.0	—	10	10	—	.35[3]	45	10	— —	5[TYP]		
	100-500			60	6								



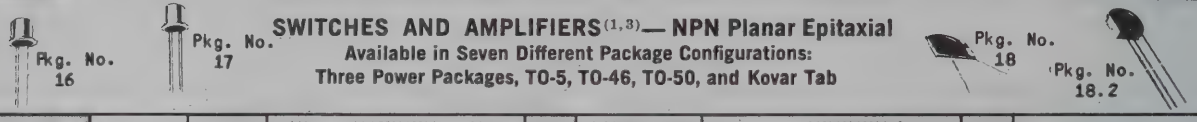
AMPLIFIERS NPN Planar (Continued)

Pkg. No. 4 | Pkg. No. 5 | Pkg. No. 8 | Pkg. No. 12 | Typical $f_t \cong 300$ mc (See Outline Drawing No. 16) | Pkg. No. 18 | Pkg. No. 18.2 | Pkg. No. 19 | Pkg. No. 20 | Pkg. No. 21

Type	h_{FE} Min. @I_C ma	h_{FE} Max. @V_{CE} Volts	MINIMUM h_{fe} V_{CE}=10v I_C=4 ma f=100 mc.	MINIMUM V_{CEO} Volts @I_C ma	MINIMUM V_{EBO} Volts @I_E μa	MAXIMUM V_{BE} (SAT) I_C=10 ma I_B=1 ma Volts	MAXIMUM V_{CE} (SAT) I_C=10 ma I_B=1 ma Volts	MAXIMUM I_{CBO} T_J=150°C @V_{CB} Volts	MAXIMUM I_{CBO} T_J=150°C @V_{CB} na	V_{BE} (SAT) I_C=3 ma I_b=1.5	V_{CE} (SAT) I_C=3 ma I_b=1.5	C_{ob} @ V_{CB} pf	C_{ob} @ V_{CB} Volts	Comments
2N759	1.0 36-90	5.0	—	1.0 45	100 8	—	1.0	30	200	—	—	8	5	These devices are well suited for applications where the 2N335 and 2N336 have been used and higher frequency devices or smaller packages are required.
2N760	1.0 76-333	5.0	—	1.0 45	100 8	—	1.0	30	200	—	—	8	5	
2N915	10 40-160	5.0	—	10 50	100 5	0.9	1.0	60	30	—	—	3.5	10	These devices are intended for non-saturating switching circuits, amplifier and oscillator circuits.
2N916	10 50-200	1.0	—	30 25	10 5	0.9	0.5	15	10	—	—	6	5	
2N2387	.01 40-120	5.0	—	10 45	100 5	.6-1(2)	1.0(2)	45	10	—	—	5(TYP)		TO-50 version of 2N929.
2N2388	.01 100-300	5.0	—	10 45	100 5	.6-1(2)	1.0(2)	45	10	—	—	5(TYP)		TO-50 version of 2N930.

NPN Planar Epitaxial Typical $f_t \cong 900$ mc (See Outline Drawing No. 17)

2N917	3 20	1	5	3 15	10 3	—	—	15	1	.87	.5	1.7	10	These devices are intended for use in ultra-high frequency amplifiers and oscillators, and in non-saturated switching.
2N918	3 20	1	6	3 15	10 3	—	—	15	10	1.0	.4	1.7	10	



Pkg. No. 16 | Pkg. No. 17

SWITCHES AND AMPLIFIERS(1,3) — NPN Planar Epitaxial

Available in Seven Different Package Configurations:
Three Power Packages, TO-5, TO-46, TO-50, and Kovar Tab

Pkg. No. 18 | Pkg. No. 18.2

Type	Dwg. No.	h_{FE} I_C=150 ma V_{CE}=10v	MAXIMUM Min. V_{CER} R_{BE}=10Ω I_C=100 ma Volts	MAXIMUM V_{CE} (SAT) I_B=15 ma I_C=150 ma Volts	MAXIMUM Max. V_{EB} (SAT) I_C=150 ma I_B=15 ma Volts	MAXIMUM Max. I_{CBO} T_J=150°C V_{EB} Volts	MAXIMUM Max. I_{CBO} T_J=150°C μa	V_{EBO} I_E=100 μa Volts	POWER DISS. P_T Free Air @25°C Watts	POWER DISS. P_T Case Temp @25°C Watts	MINIMUM h_{FE} I_C=10 ma V_{CE}=10v	MINIMUM h_{FE} I_C=10 ma V_{CE}=10v T_J=−55°C	MINIMUM h_{FE} I_C=0.1 ma V_{CE}=10v	MINIMUM h_{FE} I_C=500 ma V_{CE}=10v	I_C=1000 ma V_{CE}=10v	Comments
2N2192 2N2350 11C702	5 4 19	100-300	40(2)	0.35	1.3	30	15	5	0.8 0.4 0.3	2.8 5.0 1.0	75	35	15	35	15	Similar to 2N1711, but lower $V_{CE(SAT)}$.
2N2192A 2N2350A 11C1B1 11C1F1 11C201B20	5 4 8 12 20	100-300	40(2)	0.25	1.3	30	15	5	0.8 0.4 1.5 1.15 1.0	2.8 5.0 5.0 3.1 5.0	75	35	15	35	15	Similar to 2N1711, but lower $V_{CE(SAT)}$.
2N2193 2N2351 11C704	5 4 19	40-120	50(2)	0.35	1.3	60	25	8	0.8 0.4 0.3	2.8 5.0 1.0	30	20	15	20	15	Similar to 2N1613, but lower $V_{CE(SAT)}$.
2N2193A 2N2351A 11C3B1 11C3F1 11C203B20	5 4 8 12 20	40-120	50(2)	0.25	1.3	60	25	8	0.8 0.4 1.5 1.15 1.0	2.8 5.0 5.0 3.1 5.0	30	20	15	20	15	Similar to 2N1613, but lower $V_{CE(SAT)}$.
2N2194 2N2352	5 4	20-60	40(2)	0.35	1.3	30	25	5	0.8 0.4	2.8 5.0	15	—	—	12	—	Similar to 2N696, but lower $V_{CE(SAT)}$.
2N2194A 2N2352A 11C5B1 11C5F1 11C205B20	5 4 8 12 20	20-60	40(2)	0.25	1.3	30	25	5	0.8 0.4 1.5 1.15 1.0	2.8 5.0 5.0 3.1 5.0	15	—	—	12	—	Similar to 2N696, but lower $V_{CE(SAT)}$.
2N2195 2N2353	5 4	20 min.	25(2)	0.35	1.3	30	50	5	0.6 .35	2.8 3.0	—	—	—	—	—	Industrial Types.
2N2195A 2N2353A 11C7B1 11C7F1 11C207B20	5 4 8 12 20	20 min.	25(2)	0.25	1.3	30	50	5	0.6 .35 1.5 1.15	2.8 3.0 5.0 3.1	—	—	—	—	—	Industrial Types.
2N2243 2N2364	5 4	40-120	80	.35	1.3	60	15	7	.8 .4	2.8 5.0	30	20	15	20	—	Similar to 2N1893 but lower $V_{CE(SAT)}$.
2N2243A 2N2364A 11C710 11C10B1 11C10F1 11C210B20	5 4 19 8 12 20	40-120	80	.25	1.3	60	15	7	.8 .4 .3 1.5 1.15 1.0	2.8 5.0 1.0 5.0 3.1 5.0	30	20	15	20	—	Similar to 2N1893 but lower $V_{CE(SAT)}$.
2N2868 2N2909 11C11B1 11C11F1 11C211B20	5 4 8 12 20	40-120	40(2)	.25	1.3	30	15	5	.8 .4 1.5 1.15 1.0	2.8 5.0 5.0 3.1 5.0	30	20	—	20	—	—
11C1536	5	40-120	30(2)	.3	1.3	30	25	6	0.8	2.8	—	—	—	15	—	—
4JD12X043	21	Two 2N2193 transistors in a six lead TO-5 package.														
4JD12X047	21	Two 2N2195 transistors in a six lead TO-5 package.														


Pkg. No. 5


Pkg. No. 16

SWITCHES AND AMPLIFIERS (Continued)

NPN Planar Passivated[1,3] (See Outline Drawing No. 5)


Pkg. No. 18


Pkg. No. 18.2

Type[3]	h_{FE} I_C=150 ma V_{CE}=10v	Min. V_{CER} R_{BE}≤10Ω I_C=100 ma Volts	Max. V_{CE} (SAT) I_C=150 ma I_B=15 ma Volts	Max. V_{BE} (SAT) I_C=150 ma I_B=15 ma Volts	h_{fe} f=1 kc I_C=1 ma V_{CE}=5v Min.	h_{fe} f=1 kc I_C=1 ma V_{CE}=5v Max.	MAXIMUM I_{CBO} T_J=150°C V_{CB} Volts	MAXIMUM I_{CBO} T_J=150°C µa	V_{EBO} I_B=100 µa Volts	POWER DISS. P_T Free Air @25°C Watts	POWER DISS. P_T Case Temp. @100°C Watts	MINIMUM h_{FE} I_C=10 ma V_{CE}=10v	MINIMUM h_{FE} I_C=10 ma V_{CE}=10v T_J=−55°C	MINIMUM h_{FE} I_C=0.1 ma V_{CE}=10v	MINIMUM h_{FE} I_C=500 ma V_{CE}=10v	MINIMUM h_{FE} I_C=1000 ma V_{CE}=10v	Comments
2N696[4]	20-60	40	1.5	1.3	—		*30*	100	5	0.6	1.0	—	—	—	—	—	
2N697[4]	40-120	40	1.5	1.3	—		*30*	100	5	0.6	1.0	—	—	—	—	—	
2N698	20-60	80	5.0	1.3	15		*75*	15	7	0.8	1.7	—	—	—	—	—	High Voltage 2N696.
2N699	40-120	80	5.0	1.3	35-100		*60*	200	5	0.6	1.0	—	—	—	—	—	High Voltage 2N697.
2N1613	40-120	50	1.5	1.3	30-100		*60*	10	7	0.8	1.7	35	20	20	20	—	Lower leakage 2N697.
2N1711	100-300	50	1.5	1.3	50-200		*60*	10	7	0.8	1.7	75	35	35	40	—	High beta 2N1613.
2N1837	40-120	50	.8	1.3	—		*30*	50	8	0.6	1.0	—	—	—	—	—	
2N1893	40-120	100	5.0	1.3	30-100		*90*	15	7	0.8	1.7	35	20	20	—	—	High voltage 2N1613.

(See Outline Drawing No. 16)

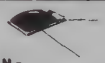
2N717	20-60	40	1.5	1.3	—		*30*	100	5	.4	.75	—	—	—	—	—	TO-18 Version of 2N696.
2N718	40-120	40	1.5	1.3	—		*30*	100	5	.4	.75	—	—	—	—	—	TO-18 Version of 2N697.
2N718A	40-120	50	1.5	1.3	30-100		*60*	10	7	0.8	1.7	—	—	—	—	—	TO-18 Version of 2N1613.
2N719	40-120	80	5.0	1.3	35-100		*60*	200	5	.5	1.0	—	—	—	—	—	TO-18 Version of 2N698.
2N719A	20-60	80	5.0	1.3	15		*75*	15	7	.4	.75	—	—	—	—	—	TO-18 Version of 2N698.
2N720	40-120	80	5.0	1.3	35-100		*60*	200	5	.5	1.0	—	—	—	—	—	TO-18 Version of 2N699.
2N720A	40-120	100	5.0	1.3	30-100		*90*	15	7	.4	.75	35	20	20	—	—	TO-18 Version of 2N1893.
2N956	100-300	50	1.5	1.3	50-200		*60*	10	7	.5	1.0	75	35	35	40	—	TO-18 Version of 2N1711.

NOTES: Test Conditions in Italics.
(1) Typical f_t for all types ≈ 130 Mc.
(2) Storage temperature on all types is −65° to +300°C. Operating junction temperature on all types is −65° to +200°C.
(3) For switching and amplifier applications.
(4) Also available in military types. (5) h_{FE} = I_C = 10 ma; V_{CE} = 10V. (6) I_C = 50 ma, I_B = 5 ma.

HIGH SPEED SWITCHES[1,3] — NPN Planar Epitaxial (See Outline Drawing No. 16)

Type	h_{FE} Min. @I_C ma	h_{FE} Max. @V_{CE} Volts	MINIMUM V_{CER} Volts @I_C ma	@R_{BE} ohms	MINIMUM V_{CEO} Volts @I_C ma	MINIMUM V_{EBO} Volts @I_E µa	MAXIMUM V_{BE} (SAT) I_C=10 ma I_B=1 ma Volts	MAXIMUM V_{CE} (SAT) I_C=10 ma I_B=1 ma Volts	MAXIMUM I_{CBO} T_J=150°C @V_{CB} Volts	µa	t_{on} nsec	t_{off} nsec	C_{ob} @ V_{CB} pf	Volts	Comments
2N706	*10* 20 Min.	*1.0*	*30* 20	*10*	—	*100* 3	0.9	0.6	*15*	30	—	—	6	10	Economy Units.
2N706A	*10* 20-60	*1.0*	*10* 20	*10* 15	*10* 5		0.9	0.6	*15*	30	40	75	5	5	Economy units. High speed.
2N708	*10* 30-120	*1.0*	*30* 20	*10* 15	*30* 5		0.8	0.4	*20*	15	40	70	6	10	Low leakage current. High speed.
2N709	*10* 20-120	*0.5*	—	—	*10* 6	*10* 4	0.85[6]	0.3[6]	*5*	5[7]	15	15	3	5	Very high speed switch.
2N753	*10* 40-120	*1.0*	*10* 20	*10* 15	*10* 5		0.9	0.6	*15*	30	40	75	5	5	High beta. High speed.


Pkg. No. 16


Pkg. No. 18

HIGH SPEED SWITCHES (Continued)


Pkg. No. 18.2


Pkg. No. 22

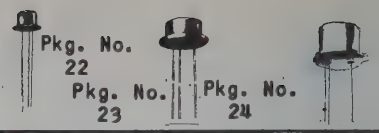
Type	h_{FE} Min. @I_C ma	h_{FE} Max. @V_{CE} Volts	MINIMUM V_{CER} Volts @I_C ma	@R_{BE} ohms	MINIMUM V_{CEO} Volts @I_C ma	MINIMUM V_{EBO} Volts @I_E µa	MAXIMUM V_{BE} (SAT) I_C=10 ma I_B=1 ma Volts	MAXIMUM V_{CE} (SAT) I_C=10 ma I_B=1 ma Volts	MAXIMUM I_{CBO} T_J=150°C @V_{CB} Volts	µa	t_{on} nsec	t_{off} nsec	C_{ob} @ V_{CB} pf	Volts	Comments
2N834	*10* 25 Min.	*1.0*	*10µa* 30[1]	*0*	—	*10* 5	0.9	0.25	*20*	30	35	75	4	10	Low saturation voltage.
2N914	*10* 30-120	*1.0*	*30* 20	*10* 15	*30* 5		0.8	0.25	*20*	15	40	40	6	10	High speed. Low saturation voltage.
2N2368	*10* 20-60	*1.0*	*10* 40	*10* 15	*10* 4.5		0.85	0.25	*20*	30	12	18	4	5	Ultra high speed switching.
2N2369	*10* 40-120	*1.0*	*10* 40	*10* 15	*10* 4.5		0.85	0.25	*20*	30	12	18	4	5	High speed switching.
2N2481	*10* 40-120	*1.0*	*1µa* 30[2]	*0*	*30* 15	*100* 5	0.82	0.25	*20*	15	40	45	5	5	U.S. Navy Specification.
2N3052	*10* 25-130	*1.0*	*30* 20	*10*	*10* 15	*10* 5	0.9	.25	*20*	25	40	75	8	5	Network package—dual 2N706's.

NOTES: Test Conditions in Italics.
(1) Typical f_t for all types ≈ 130 Mc.
(2) Storage temperature on all types is −65° to +300°C. Operating junction temperature on all types is −65° to +200°C.
(3) For switching and amplifier applications. (4) Storage temperature −55° C to +200° C. Operating temperature −55° C to + 125°C.
(5) T_J = 125°C. (6) I_C = 3 ma, I_B = .15 ma.

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GERMANIUM TRANSISTORS

NPN RATE GROWN (See Outline Drawing No. 22)



Type	h_{FE} V_{CE}=1 v I_C=1 ma	MINIMUM BV_{CEO} I_C=300 μa volts	MAXIMUM I_{CBO} I_E=0 V_{CB}=15 v μa	Power Gain @ 455 kc db	MAXIMUM P_T Power Dissipation mw	TYPICAL $f_{\alpha b}$ mc	Comments
2N78	45-135	15	3	26.0-31.0	65	9	Preamplifier switch. Lamp driver. Schmitt trigger. Waveform restoration. DC level detection.
2N78A(7)	45-135	20	3	26.0-31.0	65	9	Applications same as 2N78.
2N167A(7)	17-90(1)	30	1.5	—	75	9	Trigger circuits. Gate circuits. Logic circuits.
2N169	34-200	15(3)	5	23.5	65	9	Reflex circuits. IF amplifiers. DC coupled audio amplifiers.
2N169A	34-200	25(3)	5	23.5	65	9	General purpose low level switch(4).
2N292	8-51	15(3)	5	21.0-26.0	65	5	IF amplifiers.
2N293	8-51	15(3)	5	23.5-28.0	65	8	IF amplifiers.
2N1086	17-200	9(3)	3(5)	23.0-29.0(6)	65	9	Autodyne Converter. Mixer-oscillator.
2N1086A	17-200	9(3)	3(5)	23.0-27.0(6)	65	9	Autodyne Converter. Mixer-oscillator.
2N1087	17-200	9(3)	3(5)	25.0-29.0(6)	65	9	Autodyne Converter. Mixer-oscillator.
2N1694	15-45(2)	20	1.5	—	75	9	Decade counter. Low level switch. Amplifiers.

NOTES: (1) I_C=8 ma., V_{CE}=1 V. (2) I_C=2 ma., V_{CE}=1 V. (3) BV_{CER}, R=10K. (4) Max $V_{CE(SAT)}$=0.4 V. (5) V_{CB}=5 V. (6) Conversion Gain @ 1600 kc. (7) See 2N78, MIL-S-19500/90; 2N167A to MIL-S-19500/11B.

PNP ALLOY

Types	Dwg. No.	h_{FE} V_{CE}=1v I_C=20 ma	TYPICAL $f_{\alpha b}$ mc	MINIMUM BV_{CER} @ I_C=600 μa R_{BE}=10K Volts	MAXIMUM I_{CBO} @ V_{CB} μa	Volts	P_T Power Dissipation mw	Comments
2N43A(10)	23	34-65	1.3	30	16	45	240	See 2N525.
2N44A(10)	23	18-43	1.0	30	16	45	240	See 2N524.
2N123(10)	23	30-50(2)	8.0	15(5)	6	20	150	Not recommended for new designs.
2N186A	23	19-31	0.8	25	16	25	200	
2N187A	23	25-42	1.0	25	16	25	200	
2N188A	23	34-65	1.2	25	16	25	200	See 2N508, 2N1175 and 2N1413 series.
2N189	23	25-42	0.8	25	16	25	200	
2N190	23	34-65	1.0	25	16	25	200	
2N191	23	53-121	1.2	25	16	25	200	
2N192	23	72-176	1.5	25	16	25	200	
2N241A	23	50-125	1.3	25	16	25	200	
2N319	24	25-42	2.0	20	16	25	225	Audio driver and audio output.
2N320	24	34-65	2.5	20	16	25	225	
2N321	24	53-121	3.0	20	16	25	225	
2N322	24	34-65	3.0	16	16	16	200	
2N323	24	53-121	3.5	16	16	16	200	
2N324	24	72-198	4.0	16	16	16	200	
2N394	24	20-150(2)	7.0	15	6	10	150	Medium speed switch.
2N395	24	20-150(2)	6.0	15	6	15	200	Medium speed switch.
2N396	24	30-150(2)	8.0	20	6	20	200	Industrial/Military-medium beta, medium speed switch.
2N396A(10)	24	30-150(2)	8.0	20(5)	6	20	200	Same as 2N396. Mil-S-19500/64B.
2N397	24	40-150(2)	12.0	15	6	15	200	Industrial/Military-medium speed switch.
2N404	24	—	8.0	24(6)	5	12	150	Medium speed switch—wide beta spread. MIL-T-19500/20.
2N404A	24	—	8.0	35(6)	5	20	150	Same as 2N404.
2N413	24	20-100(2)	6.0	18(5)	5	12	150	General purpose medium speed switch.
2N414	24	30-120(2)	7.0	15(5)	5	12	150	Same as 2N413.
2N461(10)	24	32-199(4)	4.0	35(9)	15	45	200	General purpose.
2N508	24	100-200	4.5	16	7	16	200	High gain, low noise preamplifiers.
2N508A	24	100-200	4.5	25	7	25	200	
2N524	24	25-42	2.5	30	10	30	225	Military/industrial.—Audio amplifier and medium speed switch. Specified h_{FE} hold-up, high temperature Ico, and low temperature h_{FE}. Guaranteed reliability index. MIL-T-19500/60B.
2N525	24	34-65	3.0	30	10	30	225	
2N526(10)	24	53-90	3.5	30	10	30	225	
2N527	24	72-121	4.0	30	10	30	225	
2N1057	23	34-90	1.3	30(7)	16	45	240	See 2N1924 series. Not recommended for new designs.
2N1097	24	34-90	3.0	16	16	16	200	Audio driver and audio output.
2N1098	24	25-90	3.0	16	16	16	200	

GERMANIUM TRANSISTORS (Continued)
PNP ALLOY

2N1144	23	34-90	1.3	16	16	*16*	175	See 2N1097, 2N1098, or 2N1413 series. Not recommended for new designs.
2N1145	23	25-90	1.3	16	16	*16*	175	
2N1175	24	70-140	4.0	25	12	*30*	200	General purpose industrial and consumer preamplifier.
2N1175A	24	70-140	4.0	25	12	*30*	200	General purpose industrial and consumer, high gain, low noise preamplifiers. Guaranteed noise figure.
2N1303(10)	24	20 Min.(2)	7.0	25(6)	6	*25*	150	Medium speed switch. MIL-S-19500/126A.
2N1305(10)	24	40-200(2)	8.0	20(6)	6	*25*	150	
2N1307(10)	24	60-300(2)	12.0	15(6)	6	*25*	150	
2N1413	24	25-42	3.2	25	12	*30*	200	General purpose industrial and consumer audio amplifier and medium speed switch.
2N1414	24	34-65	3.6	25	12	*30*	200	
2N1415	24	53-90	4.0	25	12	*30*	200	
2N1614	23	18-43	1.3	40(8)	25	*65*	240	See 2N1924 series. Not recommended for new designs.
2N1924	24	34-65	3.0	40	10	*45*	225	Military/industrial audio amplifier and medium speed switch. High voltage, specified h_{FE} hold-up, low temperature h_{FE}, and high temperature I_{CO}. Guaranteed reliability index.
2N1925	24	53-90	3.5	40	10	*45*	225	
2N1926	24	72-121	4.0	40	10	*45*	225	

NOTES: Test conditions in Italics.
(1) All specs. at 25°C unless noted otherwise
(2) V_{CE}=1V, I_C=10 Ma.
(3) V_{CE}=.25V, I_B=1 Ma.
(4) V_{CB}=5V, I_E=1 ma, f=1 Kc,
(5) BV_{CEO}.
(6) V_{RT}.
(7) V_{RT}=45V.
(8) V_{RT}=60 V.
(9) R=1 K.
(10) Also available as military types; 2N43A per MIL-T-19500/18; 2N44A per MIL-T-19500/6; 2N123 per MIL-T-19500/30; 2N461 per MIL-T-19500/45.


Pkg. No. 26


Pkg. No. 27

SPECIAL SILICON PRODUCTS

REFERENCE AMPLIFIERS (See Outline Drawing No. 26)

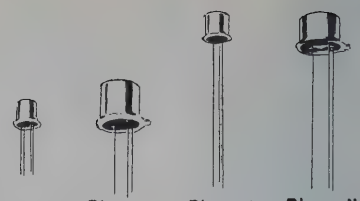
Type	CIRCUIT CHARACTERISTICS: K_T Max. Temperature Coefficient	Temperature Range	V_{ref} Reference Voltage	GMC Min. Trans-Conductance	TRANSISTOR CHARACTERISTICS: h_{FE}	I_{CBO} Max. μa	BV_{CEO} Min. Volts	Zener Characteristics: R_Z Max. Ohms
	TEST CONDITIONS: V_{CB}=3v @ I_C=.5 ma @ R_B=1 K @ I_Z=0				V_{CE}=3v I_C=.5 ma	V_{CB}=30v	I_C=1 ma	I_Z=.5 ma
RA1 RA1A RA1B RA1C	.02%/°C .005%/°C .002%/°C .001%/°C	0°C to +70°C	7.0V ±10%	3000 μmho	10 Minimum 120 Maximum	1.0	45	200
RA2 RA2A RA2B	.02%/°C .005%/°C .002%/°C	−55°C to +150°C	7.0V ±5%	6000 μmho	40 Minimum 120 Maximum	0.1	45	200
	TEST CONDITIONS: V_{CB}=3v @ I_C=.1 ma @ R_B=1 K @ I_Z=5 ma				V_{CE}=3v I_C=.1 ma	V_{CB}=45v	I_C=1 ma	I_Z=5 ma
RA3 RA3A RA3B	.02%/°C .005%/°C .002%/°C	−55°C to +150°C	7.0V ±5%	2000 μmho	30 Minimum 90 Maximum	0.1	60	65

SILICON CONTROLLED SWITCHES (SCS)(4)
Grown Diffused (See Outline Drawing No. 27)

Type	Anode Blocking Voltage	Continuous DC Forward Current 100°C Ambient	Peak Recurrent Forward Current 100 μsec 100°C	Peak Gate Current	Dissipation(5)	MAX. ANODE RATINGS: I_B	I_R	V_F	I_H	MAX. GATE RATINGS: I_{GC}	I_{GA}	GATE INPUT TO FIRE: Max. I_{GFA}	V_{GFA}	Max. I_{GFC}	V_{GFC}
						V_{AC}=+40v, R_{GC}=10K, 150°C	V_{AC}=−40v R_{GC}=10K, 150°C	I_A=50 ma	V_{AC}=40v, R_{GC}=10K	V_{GC}=−2.5v	V_{GA}=40v	V_{AC}=40v, R_{GC}=0, R_L=800 ohms	V_{AC}=40v, R_{GC}=0, R_L=800 ohms	V_{AC}=40v, R_L=800 ohms	V_{AC}=40v, R_L=800 ohms
	Volts	ma	amp	ma	mw	μa	μa	Volts	ma	μa	μa	ma	Volts	μa	Volts
3N58(1)	40	100	0.5	50	150	20	20	1.5	1.5	20				1.0	0.4 to 0.65
3N59(2)	40	100	0.5	50	150	20		1.5	1.5		20 (150°C)	1.5	−0.6 to −1.2		
3N60(3)	40	100	0.5	50	150	20	20	1.5	1.5	20	0.2 (25°C)	1.5	−0.6 to −1.2	1.0	0.4 to 0.65

NOTES: (1) For this characterization G_A is electrically open. This corresponds to the conventional SCR configuration.
(2) For this characterization, Gc is connected to C. This corresponds to the complementary SCR configuration.
(3) This characterization is for SCR, complementary SCR(6), and Binistor circuit configurations. The 3N60 meets all specifications for the 3N58 and 3N59.
(4) See Chapter 16, G-E 7th Edition *Transistor Manual*,
(5) Derate at 2.4 mw per °C.
(6) See General Electric *Silicon Controlled Rectifier Manual*.

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SPECIAL SILICON PRODUCTS (Continued)
SILICON CONTROLLED SWITCHES (SCS)
Planar (See Outline Drawing No. 28)

Type	Anode Blocking Voltage	Continuous DC Forward Current	Peak Recurrent Forward Current 100μsec	Peak Cathode Gate Current	Dissipation	CUTOFF CHARACTERISTICS I_B @ V_{AC}	CUTOFF CHARACTERISTICS I_B R_{GC}=10 K, 150°C	CONDUCTING CHARACTERISTICS @ I_F	CONDUCTING CHARACTERISTICS V_F Maximum	CONDUCTING CHARACTERISTICS I_H	MAXIMUM GATE RATINGS V_{GC}	MAXIMUM GATE RATINGS V_{GA}	GATE TRIGGERING CHARACTERISTICS I_{GTC}	GATE TRIGGERING CHARACTERISTICS V_{GTC}	GATE TRIGGERING CHARACTERISTICS I_{GTA}	GATE TRIGGERING CHARACTERISTICS V_{GTC}
											I_{GC}=20μa	I_{GA}=1 μa	V_{AC}=40v R_L=800Ω R_{GA}=∞		V_{AC}=40v R_L=800Ω R_{GC}=10K	
	Volts	ma	amp	ma	mw	Volts	μa	ma	Volts	ma	Volts	Volts	μa	Volts	ma	Volts
3N81	65	200	1.0	500	400	65	20	200	2.0	1.5	5	65	1.0	.4 to .65	1.5	−.4 to −.8
3N82	100	200	1.0	500	400	100	20	200	2.0	1.5	5	100	1.0	.4 to .65	1.5	−.4 to −.8
3N83	70	50	0.1	50	200	70	20*	50	1.4	4.0†	5	70	150†	.4 to .80	—	—
3N84	40	175	0.5	100	320	40	20*	175	1.9	2.0	5	40	10	.4 to .65	—	—
3N85	100	175	0.5	100	320	100	20*	175	1.9	2.0	5	100	10	.4 to .65	—	—
3N86	65	200	1.0	500	400	65	20	200	2.0	0.2	5	65	1.0	.4 to .65	0.1	−.4 to −.8

NOTES: *Measured @125°C.
†Measured in special test circuit (See specification sheet).

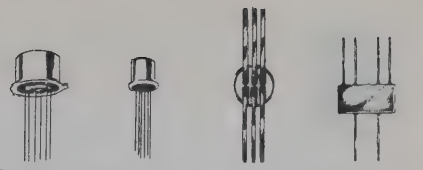
UNIJUNCTION TRANSISTORS

TYPES: Cube Structure Dwg. No. 29	TYPES: Bar Structure Dwg. No. 30	TYPES: Bar Structure Dwg. No. 31	R_{BB} Interbase Resistance V_{BB}=3v I_E=0 Kohms	η Intrinsic Standoff Ratio V_{BB}=10v	I_V Min. Valley Current ma	I_P Max. Peak Point Emitter Current μa	I_{EO} Max Emitter Reverse Current μa	I_{EO} Max Emitter Reverse Current T_J=25°C @V_{B2E}	V_{OB1} Min. Base One Peak Pulse Voltage Volts	Comments
—	2N2417 2N2417A 2N2417B	2N489(1) 2N489A 2N489B	4.7-6.8	.51-.62	8	12 12 6	2 2 0.2	60 60 30	— 3 3	"A" versions are guaranteed in recommended circuit to trigger G.E. SCR's over range T_A = −55°C to 125°C
—	2N2418 2N2418A 2N2418B	2N490(1) 2N490A 2N490B	6.2-9.1	.51-.62	8	12 12 6	2 2 0.2	60 60 30	— 3 3	
—	2N2419 2N2419A 2N2419B	2N491(1) 2N491A 2N491B	4.7-6.8	.56-.68	8	12 12 6	2 2 0.2	60 60 30	— 3 3	
—	2N2420 2N2420A 2N2420B	2N492(1) 2N492A 2N492B	6.2-9.1	.56-.68	8	12 12 6	2 2 0.2	60 60 30	— 3 3	
—	2N2421 2N2421A 2N2421B	2N493(1) 2N493A 2N493B	4.7-6.8	.62-.75	8	12 12 6	2 2 0.2	60 60 30	— 3 3	"B" versions in addition to SCR triggering guarantees lower I_{EO} and I_P for long timing periods with a smaller capacitor.
	2N2422 2N2422A 2N2422B —	2N494 2N494A 2N494B 2N494C	6.2-9.1	.62-.75	8	12 12 6 2	2 2 0.2 .02	60 60 30 30	— 3 3 3	
—	5G514 5G515 5G516	2N1671 2N1671A 2N1671B	4.7-9.1	.47-.62	8	25 25 6	12 12 0.2	30 30 30	— 3 3	Ind Types
—	—	2N2160	4.0-12.0	.47-.80	8	25	12	30	3	Low cost UJT.
2N2646	—	—	4.7-9.1	.56-.75	4	5	12	30	3	Low cost UJT.
2N2647	—	—	4.7-9.1	.68-.82	8	2	0.2	30	6	For long timing periods and trigger high current SCR'S.
5E35	—	—	4.7-9.1	.62-.82	Frequency 360-440		12	30	Duty Cycle 45-55	Multivibrators—guaranteed performance at 25°C.
5E36	—	—	4.7-9.1	.62-.82	380-420		1.0	30	47-53	See specification sheet for details
Cube Structure Dwg. No. 29	Bar Structure Dwg. No. 30	Bar Structure Dwg. No. 31	R_{BB} V_{BB}=1.5V I_E=0 Kohms	V_P V_{BB}=1.5V Volts	I_V V_{BB}=1.5V ma	I_P Max. V_{BB}=1.5V μa	I_{EO} Max. V_{B2E}=30V I_{B1}=0 μa		Min. Base One Peak Pulse Voltage Volts	
2N2840	—	—	4.7-9.1	1.3-1.5	.2-7	10	1	—	—	Low voltage applications.

NOTES: (1) Available as USAF TYPES MIL-T-19500/75.

GE8

ACTIVE FUNCTIONAL DEVICES



Pkg. No. 21 | Pkg. No. 34 | Pkg. No. 35 | Pkg. No. 36

DIFFERENTIAL AMPLIFIERS — NPN Six-terminal Packages Containing Two Isolated Pellets

TYPE				V_{CEO} Min.	h_{FE}@100 μa		h_{FE1}/h_{FE2} @I_C=100 μa	h_{FE}@1 ma		h_{FE1}/h_{FE2} I_C=1 ma	Δ V_{BE}		MAXIMUM I_{CBO}@V_{CB}	
Dwg. No. 21	Dwg. No. 34	Dwg. No. 35	Dwg. No. 36	volts	Min.	Max.		Min.	Max.		10 μa	1 ma	na	volts
12E109	—	—	—	30	80(1)	—	0.9-1.0	150	600	0.9-1.0	3	5	5	50
2N2060	—	—	—	60(1)	30	—	0.9-1.0	30	—	—	—	5	2	80
2N2223	—	—	—	60	25	—	0.8-1.0	—	—	—	—	15(3)	10	80
2N2480	—	—	—	40	20	—	0.8-1.0	30	250	0.8-1.0	—	10	50	60
2N2480A	2N3513	2N3514	2N3515	40	35	—	0.8-1.0	50	200	0.8-1.0	—	5	20	60
2N2652	—	—	—	60	35	—	.85-1.0	50	200	0.85-1.0	—	3	10	60
2N2652A	2N3516	2N3517	2N3518	60	35	—	0.9-1.0	50	200	0.9-1.0	—	3	2	60
12A8	—	—	—	30	30	—	0.6-1.0	—	—	—	—	15(3)	25	30
2N2453	—	2N3519	2N3520	30	80(1)	—	—	150	600	0.9-1.0	3	5	5	30
2N2910	—	—	—	25	70	—	0.8-1.0	80	—	0.8-1.0	10	10	—	—
2N2913	—	—	—	45	100	—	—	150	—	—	—	—	10	45
2N2914	—	—	—	45	225	—	—	300	—	—	—	—	10	45
2N2915	—	—	—	45	100	—	0.9-1.0	150	—	—	5	5	10	45
2N2916	—	—	—	45	225	—	0.9-1.0	300	—	—	5	5	10	45
2N2917	—	—	—	45	100	—	0.8-1.0	150	—	—	10	10	10	45
2N2918	—	—	—	45	225	—	0.8-1.0	300	—	—	10	10	10	45
2N2919	—	—	—	60	100	—	0.9-1.0	150	—	—	5	5	2	45
2N2920	—	—	—	60	225	—	0.9-1.0	300	—	—	5	5	2	45
2N3521	2N3522	2N3523	2N3524	45	100(1)	300	0.8-1.0(1)	200	600(2)	0.8-1.0	5	10	10	45
4JD12X084A	See outline drawing No. 36			Network package (Matched 2N914 pellets @ I_C=1 ma. & 10 ma. h_{FE} ± 20%, V_{BE} ± 5mv.)										

NOTES: (1) At I_C=10 μa. (2) At I_C=10 ma. (3) At 0.1 ma.

CHOPPERS — NPN Five-terminal Packages Containing Two Matched Pellets

Type	Dwg. No.	MAXIMUM V_O (Offset Voltage) I_{B1}=I_{B2}=1 ma I_{E1}=I_{E2}=0 μ volts	MINIMUM V_{EEO} I_{E1E2}=1 ma I_{B1}=I_{B2} volts	MAXIMUM r_s I_{B1}=1 ma I_{EE}=0.1 ma ohms	MAXIMUM I_{CBO} or I_{CBO2} V_{CB1} or V_{CB2}=25v na
2N2356	32	(1) 300 @ −55°C to +125°C	20	40	10
2N2356A	32	(1) 50 @ −55°C to +125°C	20	40	10
2N3082	33	(2) 350 @ −55°C to +125°C	20	40	10
2N3083	33	(2) 75 @ −55°C to +125°C	20	40	10
4JD12X013	Special	Dual (Four transistor) version of 2N2356			
4JD12X070	Special	Dual (Four transistor) version of 2N2356A			

NOTES: (1) I_{B1} = I_{B2} = 1ma (2) I_{B1} = I_{B2} = 0.25ma

DARLINGTONS — NPN Four-terminal Package Containing Two Pellets Connected in Darlington Configuration

(See Outline Drawing No. 34A)

Types	V_{CEO} MINIMUM	h_{FE} MIN.	h_{FE} MAX.	h_{FE} MIN.	h_{FE} MAX.	h_{FE} MINIMUM	I_{CBO}@PV_{CB} MAXIMUM	
	I_C=30 ma volts	I_C=100 ma		I_C=10 ma		I_C=1 ma	na	volts
2N997	40	7000	70,000	4000	—	—	10	60
2N998	60(1)	2000	—	1600	8000	800	10	90
2N999	60	7000	70,000	4000	—	—	10	60
2N2785	40(1)	2000	20,000	1200	—	600	50	30

NOTES: (1) V_{CEO} at 20 ma.

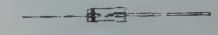
SILICON DIODES

SIGNAL DIODES — Planar Epitaxial

Type	Dwg. No.	MAXIMUM Forward Voltage V_F @ Indicated Fwd. Current Volts	MAXIMUM Reverse Current @ Indicated Voltage I_R 25°C μa	100°C μa	125°C μa	150°C μa	Min. SAT. Voltage or Min. Breakdown Voltage V @ Indicated Reverse Current Volts	Total Capacitance @ Indicated Voltage pf	Reverse Recovery Time t_{rr} @ Noted Condition nsec	MAXIMUM Power Dissipation @ 25°C. mw	MAXIMUM Forward Current Steady State DC ma
1N251	37	1.0, 5 ma	0.2,-10V 20.0,-20V	10.0,-10V	—	—	40	—	150(5)	150	—
1N252	37	1.0, 10 ma	0.1,-5V 20.0,-12V	—	10.0,-5V	—	30	—	150(6)	150	—
1N625	37	1.0, 4 ma	1,-20V	30.0,-20V	—	—	30	—	1000(1)	200	20
1N626	37	1.0, 4 ma	1,-35V	30.0,-35V	—	—	50	—	1000(1)	200	20
1N659	37	1.0, 6 ma	5,-50V	25.0,-50V	—	—	50	2.7,-10V	300(4)	250	100
1N659A	37	1.0, 10 ma	0.025,-50V	—	—	5.0,-50V	75	2.7,-10V	300(4)	250	100
1N789	37	1.0, 10 ma	1,-20V	30,-20V	—	—	30	—	500(2)	500	180
1N790	37	1.0, 10 ma	5,-20V	30,-20V	—	—	30	—	250(2)	500	180
1N791	37	1.0, 50 ma	5,-20V	30,-20V	—	—	30	—	500(2)	500	250
1N793	37	1.0, 10 ma	1,-50V	30,-50V	—	—	60	—	500(2)	500	180
1N794	37	1.0, 10 ma	5,-50V	30,-50V	—	—	60	—	250(2)	500	180
1N795	37	1.0, 50 ma	5,-50V	30,-50V	—	—	60	—	500(2)	500	250
1N811	37	1.0, 1 ma	1.0,-10V 20.0,-15V	—	10.0,-10V	—	30	—	250(5)	150	40
1N812	37	1.0, 2 ma	0.1,-10V 20.0,-20V	—	10.0,-10V	—	40	—	250(5)	150	60
1N813	37	1.0, 5 ma	0.5,-5V 20.0,-10V	—	10.0,-5V	—	20	—	250(5)	150	75
1N814	37	1.0, 2 ma	0.1,-20V 20.0,-30V	—	10.0,-20V	—	50	—	250(5)	150	60
1N815	37	1.5, 100 ma	0.5,-5V 20.0,-10V	—	10.0,-5V	—	20	—	250(5)	150	120
1N891	37	1.0, 50 ma	0.1,-50V	25.0,-50V	—	—	60	—	300(3)	200	—
1N903	37	1.0, 10 ma	0.1,-40V	10.0,-40V	—	—	40	1.0,-6V	4.0(8)	250	110
1N903A	37	1.0, 20 ma	0.1,-40V	10.0,-40V	—	—	40	1.0,-6V	4.0(8)	250	75
1N904	37	1.0, 10 ma	0.1,-30V	10.0,-30V	—	—	30	1.0,-6V	4.0(8)	250	110
1N904A	37	1.0, 20 ma	0.1,-30V	10.0,-30V	—	—	30	1.0,-6V	4.0(8)	250	110
1N905	37	1.1, 10 ma	0.1,-20V	10.0,-20V	—	—	20	1.0,-6V	4.0(8)	250	110
1N905A	37	1.0, 20 ma	0.1,-20V	10.0,-20V	—	—	20	1.0,-6V	4.0(8)	250	110
1N906	37	1.0, 10 ma	0.1,-20V	10.0,-20V	—	—	20	2.5,-6V	4.0(8)	250	110
1N906A	37	1.0, 20 ma	0.1,-20V	10.0,-20V	—	—	20	2.5,-6V	4.0(8)	250	110
1N907	37	1.0, 10 ma	0.1,-30V	10.0,-30V	—	—	30	2.5,-6V	4.0(8)	250	110
1N907A	37	1.0, 20 ma	0.1,-30V	10.0,-30V	—	—	30	2.5,-6V	4.0(8)	250	110
1N908	37	1.0, 10 ma	0.1,-40V	10.0,-40V	—	—	40	2.5,-6V	4.0(8)	250	110
1N908A	37	1.0, 20 ma	0.1,-40V	10.0,-40V	—	—	40	2.5,-6V	4.0(8)	250	110
1N914	37	1.0, 10 ma	0.025,-20V	—	—	50.0,-20V	100	4.0,-0V	4.0(9)	250	110
1N4148 1N4531	38 39	1.0, 10 ma	0.025,-20V	—	—	50.0,-20V	100	4.0,-0V	4.0(9)	500	110
FHD914 MSD914 1N914A	39.1 40 37	1.0, 10 ma	0.025,-20V	5.0,-20V	—	50.0,-20V	100	4.0,-0V	4.0(9)	250	110
1N4446	38	1.0, 20 ma	0.025,-20V	5.0,-20V	—	50.0,-20V	100	4.0,-0V	4.0(9)	250	110
1N914B	37	1.0, 100 ma	0.025,-20V	—	—	50.0,-20V	100	4.0,-0V	4.0(9)	250	110
1N4448	38	1.0, 100 ma	0.025,-20V	—	—	50.0,-20V	100	4.0,-0V	4.0(9)	250	110
1N915	37	1.0, 50 ma	0.025,-10V	—	—	—	75	4.0,-0V	10.0(11)	250	—
1N916 1N4149	37 38	1.0, 10 ma	0.025,-20V	—	—	50.0,-20V	100	2.0,-0V	4.0(9)	250 500	110
1N916A 1N4447	37 38	1.0, 20 ma	0.025,-20V	—	—	50.0,-20V	100	2.0,-0V	4.0(9)	250	110
1N916B 1N4449	37 38	1.0, 30 ma	0.025,-20V	3.0,-20V	—	50.0,-20V	100	2.0,-0V	4.0(9)	250	110
1N917	37	1.0, 10 ma	0.05,-10V	25.0,-20V	—	—	50	2.5,-0V	3.0(11)	250	—
1N925	37	1.0, 5 ma	1.0,-10V	20.0,-10V	—	—	40	4.0,-0V	150(5)	500	180
1N926	37	1.0, 5 ma	0.1,-10V	10.0,-10V	—	—	40	4.0,-0V	150(5)	500	180
1N927	37	1.0, 10 ma	0.1,-10V 5.0,-50V	10.0,-10V 25.0,-50V	—	—	65	4.0,-0V	150(5)	500	180
1N997	37	1.0, 10 ma	0.025,-12V	—	—	—	40	—	150(5)	150	—
1N3062	37	1.0, 20 ma	0.1,-50V	—	—	—	75, 5μa	1.0,-0V	2.0(9)	250	—
1N3063 1N4305	37 38	0.85,10ma(cc)	0.1,-50V	—	—	100,-50V	75, 5μa	2.0,-0V	2.0(9)	250 500	—
1N3064 1N4454 1N4532 FHD3064 MSD3064	37 38 39 39.1 40	1.0 ,10ma(cc)	0.1,-50V	—	—	100,-50V	75, 5μa	2.0,-0V	4.0(11)	250 500 500 250 250	—
1N3065	37	1.0, 20ma(cc)	0.1,-50V	—	—	100,-50V	75, 5μa	1.5,-0V	2.0(9)	250	—
1N3066	37	1.0, 10 ma	0.1,-50V	—	—	100,-50V	75, 5μa	1.0,-0V	2.0(9)	250	—
1N3067	37	1.0, 5 ma	0.1,-20V	—	—	100,-20V	30, 5μa	4.0,-0V	2.0(9)	250	—

PACKAGE PHOTOS

Pkg. No. 37



Conventional DO-7

Pkg. No. 38 41 42



Double Heatsink Diode (DHD)

Pkg. No. 39



Mini Heatsink Diode (MHD)

Pkg. No. 39.1



Flatleaded Heatsink Diode (FHD)

Pkg. No. 40

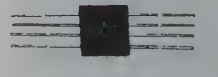


Micro Silicon Diode (MSD)

Pkg. No. 43

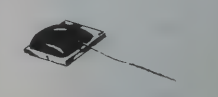


Matched Pair



Matched Quad

Pkg. No. 44



Kovar Tab

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SILICON DIODES (Continued)

Type	Dwg. No.	MAXIMUM Forward Voltage V_F @ Indicated Fwd, Current Volts	MAXIMUM Reverse Current @ Indicated Voltage I_R 25°C μa	100°C μa	125°C μa	150°C μa	Min. SAT. Voltage or Min. Breakdown Voltage V @ Indicated Reverse Current Volts	Total Capacitance @ Indicated Voltage pf	Reverse Recovery Time t_{rr} @ Noted Condition nsec	MAXIMUM Power Dissipation @ 25°C. mw	MAXIMUM Forward Current Steady State DC ma	Comments
1N3068	37	1.0, 5 ma	0.1,-20V	—	—	100,-20V	30, 5μa	6.0,-0V	50.0(10)	250	—	
1N3124	37	1.0, 20 ma	0.1,-40V	10.0,-40V	—	—	40	2.0,-6V	4.0(8)	125	50	
1N3600 1N4150	37 38	1.0,200ma(cc)	0.1,-50V	—	—	100,-50V	50	2.5,-0V	6.0(12)	500	—	
1N3604 1N4151	37 38	1.0, 50 ma	0.05,-50V	—	—	50,-50V	75, 5μa	2.0,-0V	2.0(9)	250 500	115	Very high speed, high conductance, computer diode. Subminiature package.
1N3605 1N4152 1N4533 FHD3605	37 38 39 39.1	See Table 1 1.0, 20ma(cc)	0.05,-30V 0.1,-50V	— —	— —	50,-30V 100,-50V	40, 5μa 75, 5μa	2.0,-0V 1.5,-0V	2.0(9) 2.0(9)	250 500 500 250	115 —	Controlled conductance, very high speed, low capacitance computer diode.
1N3606 1N4153 1N4534 FHD3606	37 38 39 39.1	See Table 1	0.05,-50V	—	—	50,-50V	75, 5μa	0.0,-0V	2.0(9)	250 500 500 250	115	Controlled conductance, very high speed, low capacitance computer diode.
1N3607	40	1.0, 50 ma	0.05,-50V	—	—	50,-50V	75, 5μa	2.0,-0V	2.0(9)	150	115	Very high speed, high conductance diode in microminiature package.
1N3608	40	See Table 1	0.05,-30V	—	—	50,-30V	40, 5μa	2.0,-0V	2.0(9)	150	115	
1N3609	40	See Table 1	0.05,-50V	—	—	50,-50V	75, 5μa	2.0,-0V	2.0(9)	150	115	Controlled conductance, very very high speed diode in microminiature package.
1N3873 1N3873/HR	37 37	0.85,20ma(cc)	0.1,-50V	—	—	40,-50V	50	4.0,-0V	4.0(11)	250	200	Very high speed, electrically identical to the Polaris G-321 high reliability diode.
1N4009 1N4154 1N4536 1N4548 1N4043	37 38 39 39.1 40	1.0, 30 ma	0.1,-25V	—	—	100,-25V	35, 5μa	4.0,-0V	2.0(9)	250 500 500 500	115	High speed computer and general purpose economy switching diode.
1N4306 1N4307	43 43	1.0, 30 ma	0.1,-25V	—	—	100,-25V	35, 5μa	4.0,-0V	2.0(9)	150	115	These types appear under seetion "Matched Pairs and Quads."
1N4442	38	1.0 @ 100 ma (cc)	.001,-30V	—	—	2,-30V	40, 5μa	3,-0V	1000(3)	500	250	Very low leakage with controlled conductance Subminiature Package.
1N4443	38	1.0 @ 100 ma (cc)	.002,-50V	—	—	4,-50V	70, 5μa	3,-0V	600(3)	500	250	Very low leakage with controlled conductance Subminiature Package.
1N4444	38	1.0 @ 100 ma (cc)	.05,-50V	—	—	50,-50V	70, 5μa	2,-0V	7(11)	500	250	High voltage controlled conductance with high switching speed.
1N4445	38	1.0 @ 100 ma (cc)	.05,-80V	—	—	50,-80V	125, 100μa	1, 0V	4(9)	500	250	High voltage controlled conductance, low capacitance, very high switch speed.
1N4450	38	1.0 @ 200 ma (cc)	.05,-30V	—	—	50,-30V	40, 5μa	4,-0V	4(11)	500	250	High conductance, low capacitance, high switching speed, core driver diode.
1N4451	38	1.0 @ 300 ma (cc)	.05,-30V	—	—	50,-30V	40, 5μa	6,-0V	10(11)	500	250	High conductance, low capacitance, high switching speed, core driver diode.
1N4452	38	1.20 @ 1A (cc)	.05,-30V	—	—	50,-30V	40, 5μa	15,-10V	20(11)	500	250	Very high controlled conductance, subminiature package, hammer driver diode.
1N4606	38	1.1 @ 250 ma (cc)	.1,-50V	25,-50V	—	—	85, 100μa	2.5, 0V	4(11)	500	250	High voltage conductance, very fast switching time. Low capacitance, core, driver diode.
1N4607	38	1.1 @ 400 ma (cc)	.1,-50V	25,-50V	—	—	85, 100μa	4, 0V	10(11)	500	250	High voltage conductance, fast switching speed, core driver diode.
1N4608	38	1.1 @ 500 ma (cc)	.1,-50V	25,-50V	—	—	85, 100μa	4, 0V	10(11)	500	250	High voltage conductance, fast switching speed hammer driver diode.
1N4726	37	.85 @ 10ma	.1,-20V	10,-20V	—	—	30, 5μa	4, 0V	See Comment	500	225	High speed diode stored charge of 40PC Max @ I_F = 10 ma.
1N4727	38	.85 @ 10 ma	.1,-20V	10,-20V	—	—	30, 5μa	4,-0V	See Comment	250	175	Very high speed diode stored charge of 40PC Max @ I_F = 10 ma.

continued next page

SILICON DIODES (Continued)

Kovar Tab

Type	Dwg. No.	MAXIMUM Forward Voltage V_F @ Indicated Fwd. Current Volts	MAXIMUM Reverse Current @ Indicated Voltage I_R 25°C μa	100°C μa	125°C μa	150°C μa	Min. SAT. Voltage or Min. Breakdown Voltage V @ Indicated Reverse Current Volts	Total Capacitance @ Indicated Voltage pf	Reverse Recovery Time t_{rr} @ Noted Condition nsec	MAXIMUM Power Dissipation @ 25°C. mw	MAXIMUM Forward Current Steady State DC ma	Comments
KSD101-1 KSD101-2	44	1 @ 30 ma	0.1,-25V	—	—	50-25V	35	4	2(9)	—	—	Kovar Tab version of 1N4009.

Stabistors (1, 2, or 3 diode pellets in a series)

1N4156	42	See Table 2	0.05,-20V	—	—	50,-20V	30, 5μa	25.0,-0V	—	400	—	DHD Stabistor with controlled conductance and stored charge of 50 pc Min. @ I_F = 1 ma.
1N4157	41	See Table 3	0.05,-20V	—	—	50,-20V	30, 5μa	20.0,-0V	—	400	—	
1N4453	38	See Table 4	0.05,-20V	—	—	50,-20V	30, 5μa	30.0,-0V	—	400	—	
1N4828	38	See Table 5	0.1,-20V	25,-20V	—	—	30 100μa	35.0 -0V	—	400	—	DHD Economy Stabistor with controlled conductance.
1N4829	42	See Table 6	0.1,-20V	25,-20V	—	—	30, 100μa	25.0,-0V	—	400	—	
1N4830	41	Sel Table 7	0.1,-20V	25,-20V	—	—.	30, 100μa	20.0,-0V	—	400	—	

NOTES: (cc) Controlled Conductance.

(1) Recovery to 400K, switching from 30 ma forward to −35 volts. IBM Y circuit.
(2) Recovery to 200K, switching from 5 ma forward to −40 volts. JAN 256 circut.
(3) Recovery to 80K, switching from 5 ma forward to −40 volts. JAN 256 circuit.
(4) Recovery to 400K, switching from 30 ma forward to −35 volts. JAN 256 circuit.
(5) Recovery to 20K, switching from 5 ma forward to −10 volts. JAN 256 circuit.
(6) Recovery to 40K, switching from 5 ma forward to −10 volts. JAN 256 circuit.
(7) Recovery to 40K, switching from 10 ma forward to −10 volts. JAN 256 circuit.
(8) Recovery to 1.0 ma reverse, switching from 10 ma forward to −5.0 volts R_L = 100 ohms.
(9) Recovery to 1.0 ma reverse, switching from 10 ma forward to −6.0 volts. R_L = 100 ohms.
(10) Recovery to 1.0 ma reverse, switching from 30 ma forward to 30 ma reverse. R_L = 150 ohms.
(11) $I_F = I_R$ = 10 ma, recovery to 1 ma.
(12) I_F = 10 ma, I_R = 1 ma, recovery to 0.1 ma.

TABLE 1			TABLE 2			TABLE 3		TABLE 4		TABLE 5			TABLE 6		TABLE 7	
I_F	V_F		I_F	V_F		V_F		V_F		I_F	V_F		V_F		V_F	
ma	Min. mv	Max. mv	ma	Min. mv	Max. mv	Min. mv	Max. mv	Min. mv	Max. mv	ma	Min. mv	Max. mv	Min. mv	Max. mv	Min. mv	Max. mv
0.1	0.490	0.550	0.01	0.74	1.09	1.19	1.54	.430	.550	0.1	.46	.66	.84	1.25	1.35	1.80
0.25	0.530	0.590	0.1	0.97	1.22	1.52	1.77	.510	.630	1.0	.55	.74	.99	1.44	1.63	2.08
1.0	0.590	0.670	1.0	1.21	1.41	1.85	2.05	.600	.710	10.0	.64	.83	1.16	1.61	1.90	2.35
2.0	0.620	0.700	10.0	1.38	1.58	2.12	2.32	.690	.800	100.0	.77	1.10	1.35	1.87	2.15	2.69
10.0	0.700	0.810	100.0	1.54	1.84	2.36	2.66	.800	.920	–	–	–	–	–	–	–
20.0	0.740	0.880	–	–	–	–	–	–	–	–	–	–	–	–	–	–

TUNNEL DIODES — General Purpose



Pkg. No. 46



Pkg. No. 47

Type	Dwg. No.	Peak Point Current I_P ma	MAXIMUM Valley Point Current I_V ma	MAXIMUM Capacitance C pf	Peak Voltage V_P mv	Max. Series Resist. R_S Ohms	Negative Conductance —G mhos × 10^{-3}	Typical Resistive Cutoff Frequency f_{ro} KMC	Comments
1N2939	46	1.0 ± 10%	0.14	15	65 Typ.	4.0	6.6 Typ.	2.2	General purpose switching, oscillator, amplifier and converter circuits. Nominal series inductance, Ls, is 4 nh. TO-18 package.
1N2939A	46	1.0 ± 2.5%	0.14	10	60 ± 10	4.0	6.6 Typ.	2.6	
1N2940	46	1.0 ± 10%	0.22	10	65 Typ.	4.0	6.6 Typ.	2.2	
1N2940A	46	1.0 ± 2.5%	0.22	7	65 ± 10	4.0	6.6 Typ.	2.6	
1N2941	46	4.7 ± 10%	1.04	50	65 Typ.	2.0	30 Typ.	2.6	
1N2941A	46	4.7 ± 2.5%	1.04	30	65 ± 10	2.0	30 Typ.	3.9	
1N2969	46	2.2 ± 10%	0.48	25	65 Typ.	3.0	16 Typ.	2.5	
1N2969A	46	2.2 ± 2.5%	0.48	15	65 ± 10	3.0	16 Typ.	3.3	
1N3149	46	10.0 ± 10%	2.2	90	65 Typ.	1.5	60 Typ.	2.6	
1N3149A	46	10.0 ± 2.5%	2.2	50	65 ± 10	1.5	60 Typ.	3.1	
1N3150	46	22.0 ± 10%	4.8	150	65 Typ.	1.0	100 Typ.	2.2	
1N3712 (TD-1)	47	1.0 ± 10%	0.18	10	65 Typ.	4.0	8 Typ.	2.3	General purpose switching, oscillator, amplifier and converter circuits. Miniature axial package with series inductance, Ls. of 0.5 nh. MIL qualified units available for "A" versions.
1N3713 (TD-1A)	47	1.0 ± 2.5%	0.14	5	65 ± 7	4.0	8.5 ± 1	3.2	
1N3714 (TD-2)	47	2.2 ± 10%	0.48	25	65 Typ.	3.0	18 Typ.	2.2	
1N3715 (TD-2A)	47	2.2 ± 2.5%	0.31	10	65 ± 7	3.0	19 ± 3	3.0	
1N3716 (TD-3)	47	4.7 ± 10%	1.04	50	65 Typ.	2.0	40 Typ.	1.8	
1N3717 (TD-3A)	47	4.7 ± 2.5%	0.60	25	65 ± 7	2.0	41 ± 5	3.4	
1N3718 (TD-4)	47	10.0 ± 10%	2.20	90	65 Typ.	1.5	80 Typ.	1.6	
1N3719 (TD-4A)	47	10.0 ± 2.5%	1.40	50	65 ± 7	1.5	85 ± 10	2.8	
1N3720 (TD-5)	47	22.0 ± 10%	4.80	150	65 Typ.	1.0	180 Typ.	1.6	
1N3721 (TD-5A)	47	22.0 ± 2.5%	3.10	100	65 ± 7	1.0	190 ± 30	2.6	
TD-9	47	0.5 ± 10%	0.10	5	60 Typ.	6.0	4.0 Typ.	1.3	

Back Diodes

Type	Dwg. No.	MAXIMUM Peak Point Current I_P ma	MAXIMUM Total Capacitance C pf	MINIMUM Reverse Voltage V_{R1} (I_R=I_P max) mv	MINIMUM Reverse Voltage V_{R2} (I_R=1 ma) mv	Forward Current I_{F1} (V_{F1}=90 ±10 mv) ma	Typical Forward Voltage V_{F2} (I_{F2}=3 I_{F1}) mv	Comments
BD-1	50	1.0	20	440	440	10.0	120	BD-1 through -7 are general purpose types for use in mixer, detectors and switching circuits housed in miniature axial package. BD-400 series are microwave versions featuring low capacitance and a pill package with a series inductance Ls, of 0.1 nh.
BD-2	50	0.5	10	420	465	5.0	130	
BD-402	49	0.5	3	420	465	5.0	130	
BD-3	50	0.2	10	400	465	2.0	170	
BD-403	49	0.2	1	400	465	2.0	170	
BD-4	50	0.1	10	380	465	1.0	170	
BD-404	49	0.1	1	380	465	1.0	170	
BD-5	50	0.05	10	350	465	0.5	160	
BD-405	49	0.05	1	350	465	0.5	160	
BD-6	50	0.02	10	330	465	0.2	160	
BD-406	49	0.02	2	330	465	0.2	160	
BD-7	50	0.01	10	300	465	0.1	160	
1N4090	48	0.2	1.5	430	500	2.0 (V_{F1} = 100 ± 20 MV)	170	Low noise mixer.

GALLIUM ARSENIDE TUNNEL DIODES (See Outline Drawing No. 50)

Type	Peak Point Current I_P ma	MAXIMUM Valley Point Current I_V ma	MAXIMUM Capacitance C pf	Peak Voltage V_P mv	Forward Voltage (I_F=I_P) V_{FP} mv	Negative Conductance —G mhos × 10^{-3}	Max. Series Resist. R_S ohms	Comments
1N3118	10 ± 10%	1.10	20	160 typ.	900 min.	40	5	Oscillator circuits where wide voltage swing is required. Series inductance, Ls, is 4 nh. TO-18 package.

RECTIFIER CELLS

GERMANIUM LOW CURRENT RECTIFIER CELLS
UP TO 1200 MA UP TO 400 PRV

JEDEC Number	PRV	Max. I_{DC} @ 55°C Amb.	Max. Peak 1 cycle Surge	Max. Rev. Current (full cycle Av.)	Max. Full Load Voltage Drop	Max. Oper. °C	Outline Drwg.	COMMENTS
1N93	300	75 ma	25 A	.6 ma	.18V	95°	114	
USN 1N93	300	75 ma	25 A	.6 ma	.18V	95°	114	
1N315	300	75 ma	25 A	Min. Fwd./Rev. Ratio-700 @ 55°C		85°	114	
USAF 1N315	300	75 ma	25 A	Min. Fwd./Rev. Ratio-700 @ 55°C		85°	114	Industry standard for high reliability units. Feature extremely low forward resistance, high back resistance.
1N368	200	100 ma	25 A	.3 ma @ 150 V.D.C.	.48V	55°	114	
1N92	200	100 ma	25 A	.95 ma	.19V	95°	114	
1N91	100	150 ma	25 A	1.35 ma	.22V	95°	114	
1N153	300	750 ma	25 A	1.0 ma	.33V	95°	116	
1N158	400	1000 ma	25 A	1.0 ma	.33V	95°	116	
1N152	200	1000 ma	25 A	1.0 ma	.33V	95°	116	
1N151	100	1200 ma	25 A	1.0 ma	.33V	95°	116	



Pkg. No. 114

SILICON SUBMINIATURE GLASS RECTIFIER CELLS (Lead Mounted)
UP TO 600 MA UP TO 600 PRV

JEDEC Number	Repetitive PRV	Transient PRV	Max. I_{DC}	Max. Rev. Cur. (Full Cycle Av.)	Max. Full Load Voltage Drop	Max. Oper. °C	Outline Drwg.	COMMENTS
			@ 25°C	@ 100°C	@ 25°C			
1N645	225	275	400 ma	15 μa	1V	175°	113	
1N645A	225	275	400 ma	15 μa	1V	175°	113	
1N646	300	360	400 ma	15 μa	1V	175°	113	
1N647	400	480	400 ma	20 μa	1V	175°	113	
1N648	500	600	400 ma	20 μa	1V	175°	113	
1N649	600	720	400 ma	25 μa	1V	175°	113	
				@ 150°C				
1N676	100	120	200 ma	.2 ma	1V	175°	113	
1N677	100	120	400 ma	.2 ma	1V	175°	113	
1N678	200	240	200 ma	.2 ma	1V	175°	113	
1N679	200	240	400 ma	.2 ma	1V	175°	113	
1N681	300	360	200 ma	.2 ma	1V	175°	113	
1N682	300	360	400 ma	.2 ma	1V	175°	113	
1N683	400	480	200 ma	.2 ma	1V	175°	113	
1N684	400	480	400 ma	.2 ma	1V	175°	113	
1N685	500	600	200 ma	.2 ma	1V	175°	113	
1N686	500	600	400 ma	.2 ma	1V	175°	113	
1N687	600	720	200 ma	.2 ma	1V	175°	113	
1N689	600	720	400 ma	.2 ma	1V	175°	113	
				@ 175°C				
1N3544	100	120	600 ma	75 μa	1V	200°	113	
1N3545	200	240	600 ma	75 μa	1V	200°	113	
1N3546	300	360	600 ma	75 μa	1V	200°	113	
1N3547	400	480	600 ma	75 μa	1V	200°	113	
1N3548	500	600	600 ma	75 μa	1V	200°	113	
1N3549	600	720	600 ma	75 μa	1V	200°	113	

Designed for maximum thermal conductance. Rugged design to meet military requirements.



Pkg. No. 113

SILICON LOW CURRENT RECTIFIER CELLS (Flangeless)
UP TO 1.0 A UP TO 800 PRV

JEDEC Number	PRV	Max. I_{DC} @ 25°C Amb.	Max. Peak 1 cycle Surge	Max. Rev. Cur. (Full cycle Av.)	Max. Full Load Voltage Drop	Max. Oper. °C	Outline Drwg.	COMMENTS
				@ 25°C	@ 25°C			
1N3639	200	750 ma	40 A	10 μa	.6V	100°	118	
1N3640	400	750 ma	40 A	10 μa	.6V	100°	118	
1N3641	600	750 ma	40 A	10 μa	.6V	100°	118	
1N3642	800	500 ma	40 A	10 μa	.6V	100°	118	
				@ 150°C	@ 150°C			
1N2610	100	850 ma	30 A	.3 ma	.5V	175°	118	
1N2611	200	850 ma	30 A	.3 ma	.5V	175°	118	
1N2612	300	850 ma	30 A	.3 ma	.5V	175°	118	
1N2613	400	850 ma	30 A	.3 ma	.5V	175°	118	
1N2614	500	850 ma	30 A	.3 ma	.5V	175°	118	
1N2615	600	850 ma	30 A	.3 ma	.5V	175°	118	
		@ 100°C		@ Rated PRV	@ 25°C			
1N3189	200	1.0 A	J A	.5 ma	1.0V @ 750 mA	175°	118 118	
1N3190	400	1.0 A	30 A	.5 ma	1.0V @ 750 mA	175°	118 118	
1N3191	600	1.0 A	30 A	.5 ma	1.0V @ 750 mA	175°	118 118	Diffused structure offers high current in a flangeless package.

1N2610 and 1N3639 series are also available with clear teflon and polyvinyl sleeves respectively—to order, add suffix "-s" to type number, e.g. 1N2610-s.



Pkg. No. 118

SILICON LOW CURRENT RECTIFIER CELLS (Lead Mounted)

UP TO 1.5 AMPS **UP TO 1000 PRV**

JEDEC or G-E Number	PRV	Max. I_{DC} @ T°C Amb.	Max. Peak 1 cycle Surge	Max. Rev. Cur. (Full cycle Av.)	Max. Full Load Voltage Drop	Max. Oper. °C	Outline Drwg.	COMMENTS
		@ 50°C		@ 25°C	@ 25°C			
1N440	100	300 ma	15 A	.3 μa	1.5V	150°	114	Now with transient PRV ratings up to 800V. Refer also to 1N440B-5B specification sheet.
1N441	200	300 ma	15 A	.75 μa	1.5V	150°	114	
1N442	300	300 ma	15 A	1.0 μa	1.5V	150°	114	
1N443	400	300 ma	15 A	1.5 μa	1.5V	150°	114	
1N444	500	300 ma	15 A	1.75 μa	1.5V	150°	114	
1N445	600	300 ma	15 A	2.0 μa	1.5V	150°	114	
		@ 25°C			@ 200°C			
1N599	50	600 ma	10 A	1.0 μa	1.5V	150°	114	Now with transient PRV ratings up to 800V. Refer also to 1N440B-5B specification sheet.
1N599A	50	600 ma	10 A	1.0 μa	1.5V	150°	114	
1N600	100	600 ma	10 A	1.0 μa	1.5V	150°	114	
1N600A	100	600 ma	10 A	1.0 μa	1.5V	150°	114	
1N601	150	600 ma	10 A	1.0 μa	1.5V	150°	114	
1N601A	150	600 ma	10 A	1.0 μa	1.5V	150°	114	
1N602	200	600 ma	10 A	1.0 μa	1.5V	150°	114	
1N602A	200	600 ma	10 A	1.0 μa	1.5V	150°	114	
1N603	300	600 ma	10 A	1.0 μa	1.5V	150°	114	
1N603A	300	600 ma	10 A	1.0 μa	1.5V	150°	114	
1N604	400	600 ma	10 A	1.5 μa	1.5V	150°	114	
1N604A	400	600 ma	10 A	1.5 μa	1.5V	150°	114	
1N605	500	600 ma	10 A	2.0 μa	1.5V	150°	114	
1N605A	500	600 ma	10 A	2.0 μa	1.5V	150°	114	
1N606	600	600 ma	10 A	2.5 μa	1.5V	150°	114	
1N606A	600	600 ma	10 A	2.5 μa	1.5V	150°	114	
		@ 30°C		@ 150°C	@ 150°C			
1N560	800	600 ma	15 A	.3 ma	0.5V	150°	114	Now with transient PRV ratings up to 1200V.
1N561	1000	600 ma	15 A	.3 ma	0.5V	150°	114	
		@ 50°C		@ 100°C	@ 100°C			
1N1692	100	600 ma	20 A	.5 ma	0.6V	115°	114	Similar to 1N536-47 series except for lower temp. and current operation. Lowest priced series.
1N1693	200	600 ma	20 A	.5 ma	0.6V	115°	114	
1N1694	300	600 ma	20 A	.5 ma	0.6V	115°	114	
1N1695	400	600 ma	20 A	.5 ma	0.6V	115°	114	
1N1696	500	600 ma	20 A	.5 ma	0.6V	115°	114	
1N1697	600	600 ma	20 A	.5 ma	0.6V	115°	114	
				@ 25°C	@ 25°C			
1N444B	500	650 ma	15 A	1.75 μa	1.5V	150°	114	Very low leakage. Ideal for magnetic-amplifier applications. Premium price. Now with transient PRV ratings up to 800V.
1N445B	600	650 ma	15 A	2.0 μa	1.5V	150°	114	
1N440B	100	750 ma	15 A	0.3 μa	1.5V	165°	114	
1N441B	200	750 ma	15 A	0.75 μa	1.5V	165°	114	
1N442B	300	750 ma	15 A	1.0 μa	1.5V	165°	114	
1N443B	400	750 ma	15 A	1.5 μa	1.5V	165°	114	
		@ 50°C		@ 150°C				
1N1100	100	750 ma	15 A	.3 ma	1.5V	165°	114	Refer also to 1N536-540 specification sheet.
1N1101	200	750 ma	15 A	.3 ma	1.5V	165°	114	
1N1102	300	750 ma	15 A	.3 ma	1.5V	165°	114	
1N1103	400	750 ma	15 A	.3 ma	1.5V	165°	114	
		@ 25°C		@ 125°C	@ 125°C			
1N1487	100	750 ma	15 A	.4 ma	0.55V	140°	114	Similar to 1N536-47 series. Intermediate temp. operation. Lower priced. Now with transient PRV ratings up to 800V.
1N1488	200	750 ma	15 A	.3 ma	0.55V	140°	114	
1N1489	300	750 ma	15 A	.3 ma	0.55V	140°	114	
1N1490	400	750 ma	15 A	.3 ma	0.55V	140°	114	
1N1491	500	750 ma	15 A	.3 ma	0.55V	125°	114	
1N1492	600	750 ma	15 A	.3 ma	0.55V	120°	114	
		@ 50°C		@ 150°C	@ 150°C			
1N536	50	750 ma	15 A	.4 ma	0.5V	165°	114	The popular line. Provides maximum forward conductance at high operating temperatures (165°C). Now with transient PRV ratings up to 800V.
1N537	100	750 ma	15 A	.4 ma	0.5V	165°	114	
1N538	200	750 ma	15 A	.3 ma	0.5V	165°	114	
1N539	300	750 ma	15 A	.3 ma	0.5V	165°	114	
1N540	400	750 ma	15 A	.3 ma	0.5V	165°	114	
1N1095	500	675 ma	15 A	.3 ma	0.5V	150°	114	
1N1096	600	640 ma	15 A	.3 ma	0.5V	150°	114	
1N547	600	750 ma	15 A	.3 ma	0.5V	165°	114	
				@ 25°C	@ 25°C and 500 ma			
A13F2	50	1.0 A	30 A	10 μa	1.0V	175°	119	High performance, general purpose rectifier suitable for most low current silicon applications.
A13A2	100	1.0 A	30 A	10 μa	1.0V	175°	119	
A13B2	200	1.0 A	30 A	10 μa	1.0V	175°	119	
A13C2	300	1.0 A	30 A	10 μa	1.0V	175°	119	
A13D2	400	1.0 A	30 A	10 μa	1.0V	175°	119	
A13E2	500	1.0 A	30 A	10 μa	1.0V	175°	119	
A13M2	600	1.0 A	30 A	10 μa	1.0V	175°	119	
		@ 25°C		@ 150°C	@ 150°C			
A10A	100	1.5 A	45 A	.4 ma	0.5V	165°	115	For reliable long life where high voltage and high surge current are required.
A10B	200	1.5 A	45 A	.4 ma	0.5V	165°	115	
A10C	300	1.5 A	45 A	.4 ma	0.5V	165°	115	
A10D	400	1.5 A	45 A	.4 ma	0.5V	165°	115	
A10E	500	1.5 A	45 A	.4 ma	0.5V	165°	115	
A10M	600	1.5 A	45 A	.4 ma	0.5V	165°	115	
A10N	800	1.5 A	45 A	.4 ma	0.5V	165°	115	
A10P	1000	1.5 A	45 A	.4 ma	0.5V	165°	115	



Pkg. No. 114





Pkg. No. 119

Pkg. No. 115

SILICON LOW CURRENT RECTIFIER CELLS (Stud Mounted)

UP TO 3.3 AMPS **UP TO 1000 PRV**

JEDEC Number	PRV	Max. I_{DC} @ T°C	Max. Peak 1 cycle Surge	Max. Rev. Cur. (Full cycle Av.)	Max. Full Load Voltage Drop	Max. Oper. °C	Outline Drwg.	COMMENTS
		@150° Case		**@150°C**	**@25°C**			
1N340	100	200 ma	10 A	.1 ma	2V @ 400 ma	170°	120	
1N349	100	200 ma	10 A	.1 ma	2V @ 400 ma	170°	120	
1N337	200	200 ma	10 A	.1 ma	2V @ 400 ma	170°	120	
1N346	200	200 ma	10 A	.5 ma	2V @ 400 ma	170°	120	
1N335	300	200 ma	10 A	.2 ma	2V @ 400 ma	170°	120	
1N344	300	200 ma	10 A	.5 ma	2V @ 400 ma	170°	120	
1N333	400	200 ma	10 A	.2 ma	2V @ 400 ma	170°	120	For applications requiring moderate currents operating up to 170°C.
1N342	400	200 ma	10 A	.5 ma	2V @ 400 ma	170°	120	
1N339	100	400 ma	15 A	.1 ma	2V @ 800 ma	170°	120	
1N348	100	400 ma	15 A	.5 ma	2V @ 800 ma	170°	120	
1N336	200	400 ma	15 A	.1 ma	2V @ 800 ma	170°	120	
1N345	200	400 ma	15 A	.5 ma	2V @ 800 ma	170°	120	
1N334	300	400 ma	15 A	.2 ma	2V @ 800 ma	170°	120	
1N343	300	400 ma	15 A	.5 ma	2V @ 800 ma	170°	120	
1N332	400	400 ma	15 A	.2 ma	2V @ 800 ma	170°	120	
1N341	400	400 ma	15 A	.5 ma	2V @ 800 ma	170°	120	
		@100° Case			**@150°C**			
1N562	800	400 ma	15 A	.3 ma	.65V	150°	120	1N560-61 mounted on studs. Popular model.
1N563	1000	400 ma	15 A	.3 ma	.65V	150°	120	
		@100° Amb.		**@25°C**	**@25°C**			
1N550	100	500 ma	4 A, 3ms	.5 μa	1.5V	150°	120	Very low leakage for magnetic amplifier applications. The 1N440B-5B series mounted on studs. Now with transient PRV ratings up to 800V.
1N551	200	500 ma	4 A, 3ms	1.0 μa	1.5V	150°	120	
1N552	300	500 ma	4 A, 3ms	1.5 μa	1.5V	150°	120	
1N553	400	500 ma	4 A, 3ms	2.5 μa	1.5V	150°	120	
1N554	500	500 ma	4 A, 3ms	3.5 μa	1.5V	150°	120	
1N555	600	500 ma	4 A, 3ms	5.0 μa	1.5V	150°	120	
		@135° Case			**@135°C**			
1N256	570	600 ma	15 A	.25 ma	.69V	155°	120	Refer also to 1N1115-1120 specification sheet.
1N254	190	800 ma	15 A	.1 ma	.70V	170°	120	
1N255	380	800 ma	15 A	.15 ma	.70V	170°	120	
		@100° Amb.		**@25°C**	**@25°C**			
1N607	50	1 A	2 A, .1 sec	.025 ma	1.5V @ 200 ma	150°	120	
1N607A	50	1 A	2 A, .1 sec	.001 ma	1.5V @ 200 ma	150°	120	
1N608	100	1 A	2 A, .1 sec	.025 ma	1.5V @ 200 ma	150°	120	
1N608A	100	1 A	2 A, .1 sec	.001 ma	1.5V @ 200 ma	150°	120	
1N609	150	1 A	2 A, .1 sec	.025 ma	1.5V @ 200 ma	150°	120	
1N609A	150	1 A	2 A, .1 sec	.001 ma	1.5V @ 200 ma	150°	120	
1N610	200	1 A	2 A, .1 sec	.025 ma	1.5V @ 200 ma	150°	120	
1N610A	200	1 A	2 A, .1 sec	.001 ma	1.5V @ 200 ma	150°	120	
1N611	300	1 A	2 A, .1 sec	.025 ma	1.5V @ 200 ma	150°	120	
1N611A	300	1 A	2 A, .1 sec	.001 ma	1.5V @ 200 ma	150°	120	
1N612	400	1 A	2 A, .1 sec	.025 ma	1.5V @ 200 ma	150°	120	
1N612A	400	1 A	2 A, .1 sec	.0015 ma	1.5V @ 200 ma	150°	120	
1N613	500	1 A	2 A, .1 sec	.025 ma	1.5V @ 200 ma	150°	120	
1N613A	500	1 A	2 A, .1 sec	.002 ma	1.5V @ 200 ma	150°	120	
1N614	600	1 A	2 A, .1 sec	.025 ma	1.5V @ 200 ma	150°	120	
1N614A	600	1 A	2 A, .1 sec	.0025 ma	1.5V @ 200 ma	150°	120	
		@85° Case		**@150°C**	**@150°C**			
1N1115	100	1.5 A	15 A	.4 ma	.65V	170°	120	The popular line. 1N536-40, 1N547, 1N1095-6 mounted on studs. Now with transient PRV ratings up to 800V.
1N1116	200	1.5 A	15 A	.3 ma	.65V	170°	120	
1N1117	300	1.5 A	15 A	.3 ma	.65V	170°	120	
1N1118	400	1.5 A	15 A	.3 ma	.65V	170°	120	
1N1119	500	1.3 A	15 A	.3 ma	.65V	155°	120	
1N1120	600	1.3 A	15 A	.3 ma	.65V	155°	120	
		@135° Case		**@135°C**	**@135°C**			
1N253	95	1 A I_{FM} (AVE.)	15 A	.1 ma	.75V	170°	120	Refer also to 1N1115-1120 specification sheet.
		@50°C Amb.		**@150°C**	**@25°C**			
1N1124	200	3.0 A	25 A	.3 ma	1.1V @ 1 Amp	150°	121	
1N1124A	200	3.3 A	25 A	.3 ma	1.1V @ 1 Amp	150°	121	
1N1125	300	3.0 A	25 A	.3 ma	1.1V @ 1 Amp	150°	121	
1N1126	400	3.0 A	25 A	.3 ma	1.1V @ 1 Amp	150°	121	
1N1126A	400	3.3 A	25 A	.3 ma	1.1V @ 1 Amp	150°	121	
1N1127	500	3.0 A	25 A	.3 ma	1.1V @ 1 Amp	150°	121	
1N1128	600	3.0 A	25 A	.3 ma	1.1V @ 1 Amp	150°	121	
1N1128A	600	3.3 A	25 A	.3 ma	1.1V @ 1 Amp	150°	121	Low reverse current, available up to 600 volts. Designed for stringent military environmental specifications.



Pkg. No. 120



Pkg. No. 121

SILICON MEDIUM CURRENT RECTIFIER CELLS
UP TO 20 AMPS UP TO 1000 PRV

JEDEC or G-E Number	Repetitive PRV	Transient PRV	Max. I_{DC} Stud Single Phase	Max. Peak 1 Cycle Surge	Max. Rev. Cur. (Full cycle Av. @ Full load)	Max. Full Load Voltage Drop	Max. Oper. °C	Outline Drwg.	Max. Recovery Time (n Sec.)	COMMENTS
			@85°C		@150°C amb.	@150°C amb.				
1N3569	100	150	3.5A	35A	0.4 ma	0.5V	165°	120		
1N3570	200	275	3.5A	35A	0.4 ma	0.5V	165°	120		
1N3571	300	400	3.5A	35A	0.4 ma	0.5V	165°	120		
1N3572	400	525	3.5A	35A	0.4 ma	0.5V	165°	120		
1N3573	500	650	3.5A	35A	0.4 ma	0.5V	165°	120		
1N3574	600	775	3.5A	35A	0.4 ma	0.5V	165°	120		
			@150°C		150°C Stud	150°C Stud				
1N1612	50	100	5A	150A	1 ma	.64V	190°C	120		
1N1613	100	200	5A	150A	1 ma	.64V	190°C	120		
1N1614	200	350	5A	150A	1 ma	.64V	190°C	120		
1N1615	400	600	5A	150A	1 ma	.64V	190°C	120		
1N1616	600	800	5A	150A	1 ma	.64V	190°C	120		
			@145°C		@150°C Stud	@150°C Stud				
1N1341A	50	100	6A	150A	3 ma	.64V	200°	120		
1N1342A	100	200	6A	150A	2.5 ma	.64V	200°	120		
1N1343A	150	300	6A	150A	2.25 ma	.64V	200°	120		
1N1344A	200	350	6A	150A	2.0 ma	.64V	200°	120		
1N1345A	300	450	6A	150A	1.75 ma	.64V	200°	120		
1N1346A	400	600	6A	150A	1.5 ma	.64V	200°	120		
1N1347A	500	700	6A	150A	1.25 ma	.64V	200°	120		
1N1348A	600	800	6A	150A	1.0 ma	.64V	200°	120		
Fast Recovery Types			@100°C		Case @100°C	Case @25°C				
1N3879, R	50		6A	75A	1.0 ma	1.4V	150°	120	200	
1N3880, R	100		6A	75A	1.0 ma	1.4V	150°	120	200	
1N3881, R	200		6A	75A	1.0 ma	1.4V	150°	120	200	
1N3882, R	300		6A	75A	1.0 ma	1.4V	150°	120	200	
1N3883, R	400		6A	75A	1.0 ma	1.4V	150°	120	200	
Fast Recovery Types			@135°C		@135°C Case	@135°C Case				
A28A	100		12A	240A	8.0 ma	0.7V	175°	120	100	
A28B	200		12A	240A	8.0 ma	0.7V	175°	120	100	
A28C	300		12A	240A	8.0 ma	0.7V	175°	120	100	
A28D	400		12A	240A	8.0 ma	0.7V	175°	120	100	
A28F	50		12A	240A	8.0 ma	0.7V	175°	120	100	
Fast Recovery Types			@100°C		@100°C Case	@25°C				
1N3889, R	50		12A	150A	3.0 ma	1.4V	150°	120	200	
1N3890, R	100		12A	150A	3.0 ma	1.4V	150°	120	200	
1N3891, R	200		12A	150A	3.0 ma	1.4V	150°	120	200	
1N3892, R	300		12A	150A	3.0 ma	1.4V	150°	120	200	
1N3893, R	400		12A	150A	3.0 ma	1.4V	150°	120	200	
1N1199A	50	100	12A	240A	3 ma	.55V	200°	120		
1N1200A	100	200	12A	240A	2.5 ma	.55V	200°	120		
1N1201A	150	300	12A	240A	2.25 ma	.55V	200°	120		
1N1202A	200	350	12A	240A	2.0 ma	.55V	200°	120		
1N1203A	300	450	12A	240A	1.75 ma	.55V	200°	120		
1N1204A	400	600	12A	240A	1.5 ma	.55V	200°	120		
1N1205A	500	700	12A	240A	1.25 ma	.55V	200°	120		
1N1206A	600	800	12A	240A	1.0 ma	.55V	200°	120		
					@ 150°C Case	@ 150°C Case				
1N3670A	700	400	12A	240A	.9 ma	.55V	200°	122		
1N3671A	800	1000	12A	240A	.8 ma	.55V	200°	122		
1N3672A	900	1100	12A	240A	.7 ma	.55V	200°	122		
1N3673A	1000	1200	12A	240A	.6 ma	.55V	200°	122		
			@ 150°C T_C		@ 25°C	@ 25°C				
1N3208	50	50	15A	250A	1.0 mA	1.5V	175°	125		
1N3209	100	100	15A	250A	1.0 mA	1.5V	175°	125		
1N3210	200	200	15A	250A	1.0 mA	1.5V	175°	125		
1N3211	300	300	15A	250A	1.0 mA	1.5V	175°	125		
1N3212	400	400	15A	250A	1.0 mA	1.5V	175°	125		
1N3213	500	500	15A	250A	1.0 mA	1.5V	175°	125		
1N3214	600	600	15A	250A	1.0 mA	1.5V	175°	125		
			@110°C		@ 150°C Stud	150°C T_J				
A40F	50	50	20A	300A	10 ma	0.75V	175°	125		
A40A	100	100	20A	300A	9 ma	0.75V	175°	125		
A40B	200	200	20A	300A	8 ma	0.75V	175°	125		
A40C	300	300	20A	300A	6 ma	0.75V	175°	125		
A40D	400	400	20A	300A	5 ma	0.75V	175°	125		
A40E	500	500	20A	300A	4.5 ma	0.75V	175°	125		
A40M	600	600	20A	300A	4.0 ma	0.75V	175°	125		
A44F	50	50	20A	300A	10 ma	0.75V	175°	126		
A44A	100	100	20A	300A	9 ma	0.75V	175°	126		
A44B	200	200	20A	300A	8 ma	0.75V	175°	126		
A44C	300	300	20A	300A	6 ma	0.75V	175°	126		
A44D	400	400	20A	300A	5 ma	0.75V	175°	126		
A44E	500	500	20A	300A	4.5 ma	0.75V	175°	126		
A44M	600	600	20A	300A	4.0 ma	0.75V	175°	126		

Designed for use in the 2 to 35 ampere range. High junction temperature and extremely low forward voltage drop and thermal impedance permit high current operation with minimum space requirements. May be mounted directly to a chassis or fin or may be insulated by using insulating kit provided. All units except 1N3569, 1N3670A-73A, 1N1183-90 and 1N3765-68 are also available with negative polarity (stud is anode).



Pkg. No. 120



Pkg. No. 122


Pkg. No. 125


Pkg. No. 126

Note: Series 1N1191-1N1206; Series 1N248-1N250, 1N248A-250A, 1N248B-250B medium current rectifiers are also available. Write for complete specifications.

SILICON MEDIUM CURRENT RECTIFIER CELLS (Continued)

UP TO 35 AMPS **UP TO 1000 PRV**

JEDEC or G-E Number	Repetitive PRV	Transient PRV	Max. I_{DC} Stud Single Phase	Max. Peak 1 Cycle Surge	Max. Rev. Cur. (Full cycle Av. @ Full load)	Max. Full Load Voltage Drop	Max. Oper. °C	Outline Drwg.	Max. Recovery Time (n Sec.)	COMMENTS
			@ 145°C			25°C T_J				
1N248C	55		20A	350A	3.8 ma	0.6V	175°	123		
1N249C	110		20A	350A	3.6 ma	0.6V	175°	123		
1N250C	220		20A	350A	3.4 ma	0.6V	175°	123		
1N1195A	300		20A	350A	3.2 ma	0.6V	175°	123		
1N1196A	400		20A	350A	2.5 ma	0.6V	175°	123		
1N1197A	500		20A	350A	2.2 ma	0.6V	175°	123		
1N1198A	600		20A	350A	1.5 ma	0.6V	175°	123		
Fast Recovery Types			@100°C		Case @100°C	Case @25°C				
1N3899, R	50		20A	225A	10 ma	1.4V	150°	123	200	
1N3900, R	100		20A	225A	10 ma	1.4V	150°	123	200	
1N3901, R	200		20A	225A	10 ma	1.4V	150°	123	200	
1N3902, R	300		20A	225A	10 ma	1.4V	150°	123	200	
1N3903, R	400		20A	225A	10 ma	1.4V	150°	123	200	
1N3909, R	50		30A	300A	15 ma	1.4V	150°	123	200	
1N3910, R	100		30A	300A	15 ma	1.4V	150°	123	200	
1N3911, R	200		30A	300A	15 ma	1.4V	150°	123	200	
1N3912, R	300		30A	300A	15 ma	1.4V	150°	123	200	
1N3913, R	400		30A	300A	15 ma	1.4V	150°	123	200	
					@145°C Stud	@145°C Stud				
1N2154	50	100	25A	400A	5 ma	0.6V	200°	123		
1N2155	100	200	25A	400A	4.5 ma	0.6V	200°	123		
1N2156	200	350	25A	400A	4.0 ma	0.6V	200°	123		
1N2157	300	450	25A	400A	3.5 ma	0.6V	200°	123		
1N2158	400	600	25A	400A	3.0 ma	0.6V	200°	123		
1N2159	500	700	25A	400A	2.5 ma	0.6V	200°	123		
1N2160	600	800	25A	400A	2.0 ma	0.6V	200°	123		
			@ 140°C		@ 140°C	@ 140°C				
1N1183	50		35A	500A	10 mAdc	.65	200°	124		
1N1184	100		35A	500A	10 mAdc	.65	200°	124		
1N1185	150		35A	500A	10 mAdc	.65	200°	124		
1N1186	200		35A	500A	10 mAdc	.65	200°	124		
1N1187	300		35A	500A	10 mAdc	.65	200°	124		
1N1188	400		35A	500A	10 mAdc	.65	200°	124		
1N1189	500		35A	500A	10 mAdc	.65	200°	124		
1N1190	600		35A	500A	10 mAdc	.65	200°	124		
1N3765	700		35A	500A	10 mAdc	.65	200°	124		
1N3766	800		35A	500A	10 mAdc	.65	200°	124		
1N3767	900		35A	500A	10 mAdc	.65	200°	124		
1N3768	1000		35A	500A	10 mAdc	.65	200°	124		

Designed for use in the 2 to 35 ampere range. High junction temperature and extremely low forward voltage drop and thermal impedance permit high current operation with minimum space requirements. May be mounted directly to a chassis or fin or may be insulated by using insulating kit provided. All units except 1N3569, 1N3670A-73A, 1N1183-90 and 1N3765-68 are also available with negative polarity (stud is anode).



Pkg. No. 123



Pkg. No. 124

Note: Series 1N1191-1N206; Series 1N248-1N250, 1N248A-250A, 1N248B-250B medium current rectifiers are also available. Write for complete specifications.

SILICON GATE TURN-OFF SWITCHES

The G5/G6 is a three-terminal PNPN semiconductor switch. While similar in many ways to conventional Silicon Controlled Rectifiers, the G5/G6 can be turned "off" as well as "on" from its gate input terminal. It is ideally suited for low power, high speed DC switching applications.

UP TO 2 AMPS **UP TO 400 VOLTS**

G-E Type Number	V_{RO}	PRV	Peak Controllable Anode Current (I_P)	Turn-off Gain (Min.)	I_H (Max.)	Outline Drwg.
				I_P = .2 to 1A		
G5U, G511U*	25	25	1 A	5	40 ma	101
G5F, G511F*	50	25	1 A	5	40 ma	101
G5A, G511A*	100	25	1 A	5	40 ma	101
G5B, G511B*	200	25	1 A	5	40 ma	101
G5C, G511C*	300	25	1 A	5	40 ma	101
G5D, G511D*	400	25	1 A	5	40 ma	101
				I_P = .5 to 2A		
G6U, G611U*	25	25	2 A	5	60 ma	101
G6F, G611F*	50	25	2 A	5	60 ma	101
G6A, G611A*	100	25	2 A	5	60 ma	101
G6B, G611B*	200	25	2 A	5	60 ma	101
G6C, G611C*	300	25	2 A	5	60 ma	101
G6D, G611D*	400	25	2 A	5	60 ma	101



Pkg. No. 101

*The G511 and G611 series are soldered to a diamond shaped mounting base for increased dissipation capability. See outline drawing 102.

SILICON HIGH CURRENT RECTIFIER CELLS (Continued)
UP TO 500 AMPS UP TO 1800 PRV (2000 TRANS. PRV)

G-E Type Number	JEDEC Number	Repetitive PRV	Transient PRV	Max. I_{DC} Single Phase Av.	Max. 1 cycle Surge I	Max. Single Phase Ave. Rev. 1 T_J = 200°C	Max. Full Load Forward Voltage Drop Single Phase	Max. Oper. Junction Temp. °C	Outline Drwg.	COMMENTS
					@130°C T_C		@130°C T_C			
A70B	1N3289	200	300	100A	1600A	9.0 ma	0.6V	200°	127	
A70C	1N3290	300	400	100A	1600A	9.0 ma	0.6V	200°	127	
A70D	1N3291	400	525	100A	1600A	9.0 ma	0.6V	200°	127	
A70E	1N3292	500	650	100A	1600A	8.0 ma	0.6V	200°	127	
A70M	1N3293	600	800	100A	1600A	6.5 ma	0.6V	200°	127	
A70N	1N3294	800	1050	100A	1600A	5.5 ma	0.6V	200°	127	
A70P	1N3295	1000	1300	100A	1600A	4.5 ma	0.6V	200°	127	
A70PA	——	1100	1400	100A	1600A	4.0 ma	0.6V	200°	127	
A70PB	1N3296	1200	1500	100A	1600A	4.0 ma	0.6V	200°	127	
A70S	——	700	900	100A	1600A	6.0 ma	0.6V	200°	127	
A70T	——	900	1100	100A	1600A	5.0 ma	0.6V	200°	127	
——	1N3260	50		160A					127	
——	1N3261	100		160A					127	
——	1N3262	150		160A					127	
——	1N3263	200		160A					127	
——	1N3264	250		160A					127	
——	1N3265	300		160A					127	
——	1N3266	350		160A					127	
——	1N3267	400		160A					127	
——	1N3268	500		160A					127	
——	1N3269	600		160A					127	
——	1N3270	700		160A					127	
——	1N3271	800		160A					127	
——	1N3272	900		160A					127	
——	1N3273	1000		160A					127	
A90B	1N3736	200	300	250A	4500A	16 ma	0.4V	200°	128	
A90C	1N3737	300	400	250A	4500A	16 ma	0.4V	200°	128	
A90D	1N3738	400	525	250A	4500A	16 ma	0.4V	200°	128	
A90E	1N3739	500	650	250A	4500A	15 ma	0.4V	200°	128	
A90M	1N3740	600	800	250A	4500A	12.5 ma	0.4V	200°	128	
A90N	1N3741	800	1050	250A	4500A	10 ma	0.4V	200°	128	
A90P	1N3742	1000	1300	250A	4500A	8 ma	0.4V	200°	128	
A90PA	——	1100	1400	250A	4500A	8 ma	0.4V	200°	128	
A90PB	——	1200	1500	250A	4500A	8 ma	0.4V	200°	128	
A90S	——	700	900	250A	4500A	11 ma	0.4V	200°	128	
A90T	——	900	1100	250A	4500A	9 ma	0.4V	200°	128	
——	1N4044	50		250A					128	
——	1N4045	100		250A					128	
——	1N4046	150		250A					128	
——	1N4047	200		250A					128	
——	1N4048	250		250A					128	
——	1N4049	300		250A					128	
——	1N4050	400		250A					128	
——	1N4051	500		250A					128	
——	1N4052	600		250A					128	
——	1N4053	700		250A					128	
——	1N4054	800		250A					128	
——	1N4055	900		250A					128	
——	1N4056	1000		250A					128	
A291PC	——	1300	1500	250A	4500A	8 ma	0.4V	200°	129	
A291PD	——	1400	1600	250A	4500A	8 ma	0.4V	200°	129	
A291PE	——	1500	1700	250A	4500A	8 ma	0.4V	200°	129	
A291PM	——	1600	1800	250A	4500A	8 ma	0.4V	200°	129	
A291PN	——	1800	2000	250A	4500A	8 ma	0.4V	200°	129	
A291PS	——	1700	1900	250A	4500A	8 ma	0.4V	200°	129	
A295B	——	200	400	500A	7000A	15 ma	0.4V	200°	129	
A295C	——	300	500	500A	7000A	15 ma	0.4V	200°	129	
A295D	——	400	600	500A	7000A	15 ma	0.4V	200°	129	
A295E	——	500	700	500A	7000A	15 ma	0.4V	200°	129	
A295M	——	600	800	500A	7000A	15 ma	0.4V	200°	129	
A295N	——	800	1000	500A	7000A	15 ma	0.4V	200°	129	
A295P	——	1000	1300	500A	7000A	15 ma	0.4V	200°	129	
A295S	——	700	900	500A	7000A	15 ma	0.4V	200°	129	
A295T	——	900	1200	500A	7000A	15 ma	0.4V	200°	129	

Continuing its leadership in the industry, G.E. offers this line of large area junction rectifiers for applications requiring d-c output as high as 500 amps per rectifying element at RMS input voltages up to 700 volts. These rectifiers have high surge current capabilities and are highly resistant to thermal fatigue.
All A70 and A90 high current rectifiers are also available in forward or reverse polarity. Use type numbers A71____, A91____, or 1N____R.
All A291 and A295 high current rectifiers are available in reverse polarity only.



Pkg. No. 127


Pkg. No. 128


Pkg. No. 129



1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625

SILICON CONTROLLED RECTIFIERS

SILICON LOW CURRENT CONTROLLED RECTIFIERS

UP TO 7.0 AMPS **UP TO 600 PRV**

G-E Type Number	JEDEC Number	PRV and V_{BO}	Max. I_{DC} @ Temp. °C	Max. Temp. °C Oper.	Max. Temp. °C Stor.	Max. Req'd Gate Signal @ 25°C T_J	Out-line Drwg.	COMMENTS
——	2N877	30	.5 A @ 65°C case	150°	150°	0.8V, 200 μa	112	C5 features in a miniature (TO-18) package.
——	2N878	60	.5 A @ 65°C case	150°	150°	0.8V, 200 μa	112	
——	2N879	100	.5 A @ 65°C case	150°	150°	0.8V, 200 μa	112	
——	2N880	150	.5 A @ 65°C case	150°	150°	0.8V, 200 μa	112	
——	2N881	200	.5 A @ 65°C case	150°	150°	0.8V, 200 μa	112	
——	2N885	30	.5 A @ 65°C case	150°	150°	0.6V, 20 μa	112	Sensitive triggering capability, in a TO-18 package.
——	2N886	60	.5 A @ 65°C case	150°	150°	0.6V, 20 μa	112	
——	2N887	100	.5 A @ 65°C case	150°	150°	0.6V, 20 μa	112	
——	2N888	150	.5 A @ 65°C case	150°	150°	0.6V, 20 μa	112	
——	2N889	200	.5 A @ 65°C case	150°	150°	0.6V, 20 μa	112	
C7U	2N2344	25	.6 A @ 87°C case	100°	150°	0.8V, 20 μa	101	Extra sensitive triggering.
C7F	2N2345	50	.6 A @ 87°C case	100°	150°	0.8V, 20 μa	101	
C7A	2N2346	100	.6 A @ 87°C case	100°	150°	0.8V, 20 μa	101	
C7G	2N2347	150	.6 A @ 87°C case	100°	150°	0.8V, 20 μa	101	
C7B	2N2348	200	.6 A @ 87°C case	100°	150°	0.8V, 20 μa	101	
C5U	2N2322	25	1.6 A @ 87°C case	125°	150°	0.8V, 200 μa	101	Features 200μa triggering. Designed to meet MIL-S-19500/276.
C5F	2N2323	50	1.6 A @ 87°C case	125°	150°	0.8V, 200 μa	101	
C5A	2N2324	100	1.6 A @ 87°C case	125°	150°	0.8V, 200 μa	101	
C5G	2N2325	150	1.6 A @ 87°C case	125°	150°	0.8V, 200 μa	101	
C5B	2N2326	200	1.6 A @ 87°C case	125°	150°	0.8V, 200 μa	101	
C5H	2N2327	250	1.6 A @ 87°C case	125°	150°	0.8V, 200 μa	101	
C5C	2N2328	300	1.6 A @ 87°C case	125°	150°	0.8V, 200 μa	101	
C5D	2N2329	400	1.6 A @ 87°C case	125°	150°	0.8V, 200 μa	101	
——	2N2322A	25	1.6 A @ 87°C case	125°	150°	0.6V, 20 μa	101	Features 20μa triggering.
——	2N2323A	50	1.6 A @ 87°C case	125°	150°	0.6V, 20 μa	101	
——	2N2324A	100	1.6 A @ 87°C case	125°	150°	0.6V, 20 μa	101	
——	2N2325A	150	1.6 A @ 87°C case	125°	150°	0.6V, 20 μa	101	
——	2N2326A	200	1.6 A @ 87°C case	125°	150°	0.6V, 20 μa	101	
——	2N2327A	250	1.6 A @ 87°C case	125°	150°	0.6V, 20 μa	101	
——	2N2328A	300	1.6 A @ 87°C case	125°	150°	0.6V, 20 μa	101	
C511U	——	25	1.6 A @ 104°C case	125°	150°	0.8V, 200 μa	102	Diamond base heatsink version of the C5.
C511F	——	50	1.6 A @ 104°C case	125°	150°	0.8V, 200 μa	102	
C511A	——	100	1.6 A @ 104°C case	125°	150°	0.8V, 200 μa	102	
C511G	——	150	1.6 A @ 104°C case	125°	150°	0.8V, 200 μa	102	
C511B	——	200	1.6 A @ 104°C case	125°	150°	0.8V, 200 μa	102	
C511H	——	250	1.6 A @ 104°C case	125°	150°	0.8V, 200 μa	102	
C511C	——	300	1.6 A @ 104°C case	125°	150°	0.8V, 200 μa	102	
C511D	——	400	1.6 A @ 104°C case	125°	150°	0.8V, 200 μa	102	
C6U	——	25	1.6 A @ 87°C case	125°	150°	0.8V, 1 ma	101	Thrifty line — for light industrial and consumer applications, in a TO-5 package.
C6F	——	50	1.6 A @ 87°C case	125°	150°	0.8V, 1 ma	101	
C6A	——	100	1.6 A @ 87°C case	125°	150°	0.8V, 1 ma	101	
C6G	——	150	1.6 A @ 87°C case	125°	150°	0.8V, 1 ma	101	
C6B	——	200	1.6 A @ 87°C case	125°	150°	0.8V, 1 ma	101	
C611U	——	25	1.6 A @ 87°C case	125°	150°	0.8V, 1 ma	102	C6 mounted on a diamond base heatsink.
C611F	——	50	1.6 A @ 87°C case	125°	150°	0.8V, 1 ma	102	
C611A	——	100	1.6 A @ 87°C case	125°	150°	0.8V, 1 ma	102	
C611G	——	150	1.6 A @ 87°C case	125°	150°	0.8V, 1 ma	102	
C611B	——	200	1.6 A @ 87°C case	125°	150°	0.8V, 1 ma	102	
——	2N1595	50	1.6 A @ 87°C case	150°	150°	3V, 10 ma	101	Features reverse blocking at temp. up to 150°C.
——	2N1596	100	1.6 A @ 87°C case	150°	150°	3V, 10 ma	101	
——	2N1597	200	1.6 A @ 87°C case	150°	150°	3V, 10 ma	101	
——	2N1598	300	1.6 A @ 87°C case	150°	150°	3V, 10 ma	101	
——	2N1599	400	1.6 A @ 87°C case	150°	150°	3V, 10 ma	101	
——	2N1929	25	1.1 A @ 25°C amb.	125°	150°	2V, 15 ma	103	High surge current rating — ideal for point to point wiring.
——	2N1930	50	1.1 A @ 25°C amb.	125°	150°	2V, 15 ma	103	
——	2N1931	100	1.1 A @ 25°C amb.	125°	150°	2V, 15 ma	103	
——	2N1932	150	1.1 A @ 25°C amb.	125°	150°	2V, 15 ma	103	
——	2N1933	200	1.1 A @ 25°C amb.	125°	150°	2V, 15 ma	103	
——	2N1934	250	1.1 A @ 25°C amb.	125°	150°	2V, 15 ma	103	
——	2N1935	300	1.1 A @ 25°C amb.	125°	150°	2V, 15 ma	103	
C9U	——	25	Other ratings and characteristics are the same as for 2N1929-1935, except that turn-off time is guaranteed at less than 12 microseconds. These units are designed specifically for fast turn-off time for inverter applications.				103	
C9F	——	50					103	
C9A	——	100					103	
C9G	——	150					103	
C9B	——	200					103	
C9H	——	250					103	
C9C	——	300					103	
C11U	2N1770	25	6 A @ 70°C stud	125°	150°	2V, 15 ma	104	General purpose medium temp. series (125°C).
C11F	2N1771	50	6 A @ 70°C stud	125°	150°	2V, 15 ma	104	
C11A	2N1772	100	6 A @ 70°C stud	125°	150°	2V, 15 ma	104	
C11G	2N1773	150	6 A @ 70°C stud	125°	150°	2V, 15 ma	104	
C11B	2N1774	200	6 A @ 70°C stud	125°	150°	2V, 15 ma	104	
C11H	2N1775	250	6 A @ 70°C stud	125°	150°	2V, 15 ma	104	
C11C	2N1776	300	6 A @ 70°C stud	125°	150°	2V, 15 ma	104	
C11D	2N1777	400	6 A @ 70°C stud	125°	150°	2V, 15 ma	104	
C11E	2N1778	500	6 A @ 70°C stud	125°	150°	2V, 15 ma	104	
C11M	2N2619	600	6 A @ 70°C stud	125°	150°	2V, 15 ma	104	
C12U	——	25	Other ratings and characteristics are the same as for 2N1770-1776, except that turn-off time is guaranteed at less than 12 microseconds. These units are designed specifically for fast turn-off time for inverter applications.				104	
C12F	——	50					104	
C12A	——	100					104	
C12G	——	150					104	
C12B	——	200					104	
C12H	——	250					104	
C12C	——	300					104	
C10U	2N1770A	25	7 A @ 115°C stud	150°	150°	2V, 15 ma	104	General purpose high temp. series (150°C).
C10F	2N1771A	50	7 A @ 115°C stud	150°	150°	2V, 15 ma	104	
C10A	2N1772A	100	7 A @ 115°C stud	150°	150°	2V, 15 ma	104	
C10G	2N1773A	150	7 A @ 115°C stud	150°	150°	2V, 15 ma	104	
C10B	2N1774A	200	7 A @ 115°C stud	150°	150°	2V, 15 ma	104	
C10H	2N1775A	250	7 A @ 115°C stud	150°	150°	2V, 15 ma	104	
C10C	2N1776A	300	7 A @ 115°C stud	150°	150°	2V, 15 ma	104	
C10D	2N1777A	400	7 A @ 115°C stud	150°	150°	2V, 15 ma	104	



Pkg. No. 112



Pkg. No. 101



Pkg. No. 102



Pkg. No. 103



Pkg. No. 104

SILICON MEDIUM CURRENT CONTROLLED RECTIFIERS

UP TO 35 AMPS — UP TO 800 PRV

G-E Type Number	JEDEC Number	PRV and V_{BO}	Max. I_{DC} @ Temp. °C	Max. Temp. °C Oper.	Max. Temp. °C Stor.	Max. Req'd Gate Signal @ 25°C T_J	Outline Drwg.	COMMENTS
C20U	—	25	7.4 A @ 80°C case	100°	100°	3V, 25 ma	105	Thrifty line—all diffused construction for uniform characteristics.
C20F	—	50	7.4 A @ 80°C case	100°	100°	3V, 25 ma	105	
C20A	—	100	7.4 A @ 80°C case	100°	100°	3V, 25 ma	105	
C20B	—	200	7.4 A @ 80°C case	100°	100°	3V, 25 ma	105	
C20C	—	300	7.4 A @ 80°C case	100°	100°	3V, 25 ma	105	
C20D	—	400	7.4 A @ 80°C case	100°	100°	3V, 25 ma	105	
C22U	—	25	7.4 A @ 80°C case	100°	100°	3V, 25 ma	106	
C22F	—	50	7.4 A @ 80°C case	100°	100°	3V, 25 ma	106	
C22A	—	100	7.4 A @ 80°C case	100°	100°	3V, 25 ma	106	
C22B	—	200	7.4 A @ 80°C case	100°	100°	3V, 25 ma	106	
C22C	—	300	7.4 A @ 80°C case	100°	100°	3V, 25 ma	106	
C22D	—	400	7.4 A @ 80°C case	100°	100°	3V, 25 ma	106	
C36U	2N1842	25	16 A @ 25°C stud	100°	125°	3.5V, 80 ma	107	Moderate temperature (100°C); broad voltage range.
C36F	2N1843	50	16 A @ 25°C stud	100°	125°	3.5V, 80 ma	107	
C36A	2N1844	100	16 A @ 25°C stud	100°	125°	3.5V, 80 ma	107	
C36G	2N1845	150	16 A @ 25°C stud	100°	125°	3.5V, 80 ma	107	
C36B	2N1846	200	16 A @ 25°C stud	100°	125°	3.5V, 80 ma	107	
C36H	2N1847	250	16 A @ 25°C stud	100°	125°	3.5V, 80 ma	107	
C36C	2N1848	300	16 A @ 25°C stud	100°	125°	3.5V, 80 ma	107	
C36D	2N1849	400	16 A @ 25°C stud	100°	125°	3.5V, 80 ma	107	
C36E	2N1850	500	16 A @ 25°C stud	100°	125°	3.5V, 80 ma	107	
C36M	—	600	16 A @ 25°C stud	100°	125°	3.5V, 80 ma	107	
C36S	—	700	16 A @ 25°C stud	100°	125°	3.5V, 80 ma	107	
C36N	—	800	16 A @ 25°C stud	100°	125°	3.5V, 80 ma	107	
—	2N1842A	25	25 A @ 40°C stud	125°	125°	3.5V, 80 ma	107	
—	2N1843A	50	25 A @ 40°C stud	125°	125°	3.5V, 80 ma	107	
—	2N1844A	100	25 A @ 40°C stud	125°	125°	3.5V, 80 ma	107	
—	2N1845A	150	25 A @ 40°C stud	125°	125°	3.5V, 80 ma	107	
—	2N1846A	200	25 A @ 40°C stud	125°	125°	3.5V, 80 ma	107	
—	2N1847A	250	25 A @ 40°C stud	125°	125°	3.5V, 80 ma	107	
—	2N1848A	300	25 A @ 40°C stud	125°	125°	3.5V, 80 ma	107	
—	2N1849A	400	25 A @ 40°C stud	125°	125°	3.5V, 80 ma	107	
—	2N1850A	500	25 A @ 40°C stud	125°	125°	3.5V, 80 ma	107	
C30U	—	25	25 A @ 100°C case	100°	150°	2.5V, 25 ma	105	Thrifty line—stud mounted and press fit packages available.
C30F	—	50	25 A @ 100°C case	100°	150°	2.5V, 25 ma	105	
C30A	—	100	25 A @ 100°C case	100°	150°	2.5V, 25 ma	105	
C30B	—	200	25 A @ 100°C case	100°	150°	2.5V, 25 ma	105	
C30C	—	300	25 A @ 100°C case	100°	150°	2.5V, 25 ma	105	
C30D	—	400	25 A @ 100°C case	100°	150°	2.5V, 25 ma	105	
C31U	—	25	Same as C30 except Maximum Required Gate Signal is 9 ma at 25°C T_J.				105	
C31F	—	50					105	
C31A	—	100					105	
C31B	—	200					105	
C31C	—	300					105	
C31D	—	400					105	
C32U	—	25	25 A @ 100°C case	100°	150°	2.5V, 25 ma	106	
C32F	—	50	25 A @ 100°C case	100°	150°	2.5V, 25 ma	106	
C32A	—	100	25 A @ 100°C case	100°	150°	2.5V, 25 ma	106	
C32B	—	200	25 A @ 100°C case	100°	150°	2.5V, 25 ma	106	
C32C	—	300	25 A @ 100°C case	100°	150°	2.5V, 25 ma	106	
C32D	—	400	25 A @ 100°C case	100°	150°	2.5V, 25 ma	106	
C33U	—	25	Same as C32 except Maximum Required Gate Signal is 9 ma at 25°C T_J.				106	
C33F	—	50					106	
C33A	—	100					106	
C33B	—	200					106	
C33C	—	300					106	
C33D	—	400					106	
C35U	2N681	25	25 A @ 57°C stud	125°	150°	3V, 40 ma	107	Work horse of the industry; 125°C.
C35F	2N682	50	25 A @ 57°C stud	125°	150°	3V, 40 ma	107	
C35A	2N683	100	25 A @ 57°C stud	125°	150°	3V, 40 ma	107	
C35G	2N684	150	25 A @ 57°C stud	125°	150°	3V, 40 ma	107	
C35B	2N685	200	25 A @ 57°C stud	125°	150°	3V, 40 ma	107	
C35H	2N686	250	25 A @ 57°C stud	125°	150°	3V, 40 ma	107	
C35C	2N687	300	25 A @ 57°C stud	125°	150°	3V, 40 ma	107	
C35D	2N688	400	25 A @ 57°C stud	125°	150°	3V, 40 ma	107	
C35E	2N689	500	25 A @ 57°C stud	125°	150°	3V, 40 ma	107	
C35M	2N690	600	25 A @ 57°C stud	125°	150°	3V, 40 ma	107	
C35S	2N691	700	25 A @ 57°C stud	125°	150°	3V, 40 ma	107	
C35N	2N692	800	25 A @ 57°C stud	125°	150°	3V, 40 ma	107	
C40U	—	25	Other rating and characteristics are the same as for 2N681-689, except that turn-off time is guaranteed at less than 12 microseconds. These units are designed specifically for fast turn-off time for inverter applications.				107	
C40F	—	50					107	
C40A	—	100					107	
C40G	—	150					107	
C40B	—	200					107	
C40H	—	250					107	
C40C	—	300					107	
C40D	—	400					107	
C40E	—	500					107	
C38U	—	25	35 A @ 57°C stud	150°	150°	3.0V, 40 ma	107	For high temperature application to 150°C.
C38F	—	50	35 A @ 57°C stud	150°	150°	3.0V, 40 ma	107	
C38A	—	100	35 A @ 57°C stud	150°	150°	3.0V, 40 ma	107	
C38G	—	150	35 A @ 57°C stud	150°	150°	3.0V, 40 ma	107	
C38B	—	200	35 A @ 57°C stud	150°	150°	3.0V, 40 ma	107	
C38H	—	250	35 A @ 57°C stud	150°	150°	3.0V, 40 ma	107	
C38C	—	300	35 A @ 57°C stud	150°	150°	3.0V, 40 ma	107	
C38D	—	400	35 A @ 57°C stud	150°	150°	3.0V, 40 ma	107	
C38E	—	500	35 A @ 57°C stud	150°	150°	3.0V, 40 ma	107	
C135F	—	50	25 A @ 57°C T_C	120°C	150°C	3V, 100 ma	107.1	An improved version of the 2N681-689 with higher dv/dt (200V/μsec) and higher di/dt (200A/μsec). Specifically designed for high voltage phase control applications.
C135A	—	100	25 A @ 57°C T_C	120°C	150°C	3V, 100 ma	107.1	
C135B	—	200	25 A @ 57°C T_C	120°C	150°C	3V, 100 ma	107.1	
C135C	—	300	25 A @ 57°C T_C	120°C	150°C	3V, 100 ma	107.1	
C135D	—	400	25 A @ 57°C T_C	120°C	150°C	3V, 100 ma	107.1	
C135E	—	500	25 A @ 57°C T_C	120°C	150°C	3V, 100 ma	107.1	
C135M	—	600	25 A @ 57°C T_C	120°C	150°C	3V, 100 ma	107.1	
C135S	—	700	25 A @ 57°C T_C	120°C	150°C	3V, 100 ma	107.1	
C135N	—	800	25 A @ 57°C T_C	120°C	150°C	3V, 100 ma	107.1	
C140F	2N3649	50	25 A @ 40°C T_C	120°C	150°C	3V, 180 ma	107	A new SCR design with superior characteristics including high dv/dt (200V/sec), high di/dt (400A/μsec) and short turn-off time (15μsec) interdynamically balanced to permit operation up to 25 KC/sec.
C140A	2N3650	100	25 A @ 40°C T_C	120°C	150°C	3V, 180 ma	107	
C140B	2N3651	200	25 A @ 40°C T_C	120°C	150°C	3V, 180 ma	107	
C140C	2N3652	300	25 A @ 40°C T_C	120°C	150°C	3V, 180 ma	107	
C140D	2N3653	400	25 A @ 40°C T_C	120°C	150°C	3V, 180 ma	107	
C141F	2N3654	50	Other ratings and characteristics are the same as 2N3649-3653, except turn-off time which is guaranteed at 10 μsec maximum. Specifically designed for high speed inverter applications.				107	
C141A	2N3655	100					107	
C141B	2N3656	200					107	
C141C	2N3657	300					107	
C141D	2N3658	400					107	



Pkg. No. 105



Pkg. No. 106



Pkg. No. 107



Pkg. No. 107.1

GE21

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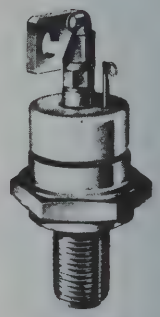
SILICON HIGH CURRENT CONTROLLED RECTIFIERS

UP TO 235 AMPS **UP TO 1100 PRV**

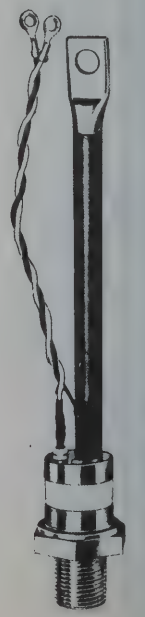
G-E Type Number	JEDEC Number	PRV and V_{BO}	Max. I_{DC}	Max. Temp. °C Oper. T	Max. Temp. °C Stor.	Max. Req'd Gate Signal	Outline Drwg.
C50U	2N1909	25	110 A	125°	150°	3V, 40 ma @ 125°C T_J	109
C50F	2N1910	50	110 A	125°	150°	3V, 40 ma @ 125°C T_J	109
C50A	2N1911	100	110 A	125°	150°	3V, 40 ma @ 125°C T_J	109
C50G	2N1912	150	110 A	125°	150°	3V, 40 ma @ 125°C T_J	109
C50B	2N1913	200	110 A	125°	150°	3V, 40 ma @ 125°C T_J	109
C50H	2N1914	250	110 A	125°	150°	3V, 40 ma @ 125°C T_J	109
C50C	2N1915	300	110 A	125°	150°	3V, 40 ma @ 125°C T_J	109
C50D	2N1916	400	110 A	125°	150°	3V, 40 ma @ 125°C T_J	109
C50E	—	500	110 A	125°	150°	3V, 40 ma @ 125°C T_J	109
C50M	—	600	110 A	125°	150°	3V, 40 ma @ 125°C T_J	109
C50S	—	700	110 A	125°	150°	3V, 40 ma @ 125°C T_J	109
C50N	—	800	110 A	125°	150°	3V, 40 ma @ 125°C T_J	109
C50T	—	900	110 A	125°	150°	3V, 40 ma @ 125°C T_J	109
C52F	2N1792*	50	*PRV for 2N1792 — 1798 is 20% higher than the V_{BO} rating. Other ratings and characteristics are the same as for 2N1910 — 1916 and C50E — T.				108
C52A	2N1793	100					108
C52G	2N1794	150					108
C52B	2N1795	200					108
C52H	2N1796	250					108
C52C	2N1797	300					108
C52D	2N1798	400					108
C52E	—	500					108
C52M	—	600					108
C52S	—	700					108
C52N	—	800					108
C52T	—	900					108
						dv/dt V/μsec	
C150E, C152E	—	500	110 A	125°	125°	200 min.	108, 109
C150M, C152M	—	600	110 A	125°	125°	200 min.	108, 109
C150S, C152S	—	700	110 A	125°	125°	200 min.	108, 109
C150N, C152N	—	800	110 A	125°	125°	200 min.	108, 109
C150T, C152T	—	900	110 A	125°	125°	200 min.	108, 109
C150P, C152P	—	1000	110 A	125°	125°	200 min.	108, 109
C150PA, C152PA	—	1100	110 A	125°	125°	200 min.	108, 109
C150PB, C152PB	—	1200	110 A	125°	125°	200 min.	108, 109
C150PC, C152PC	—	1300	110 A	125°	125°	200 min.	108, 109
C151E, C153E	—	500	Similar to C150, C152, except for typical turn-off times of 40 — 70 μsec depending on blocking voltage.				108, 109
C151M, C153M	—	600					108, 109
C151S, C153S	—	700					108, 109
C151N, C153N	—	800					108, 109
C151T, C153T	—	900					108, 109
C151P, C153P	—	1000					108, 109
C151PA, C153PA	—	1100					108, 109
C151PB, C153PB	—	1200					108, 109
C151PC, C153PC	—	1300					108, 109
C154A, C156A	—	100	Inverter type. Similar to C150, C152, except for guaranteed turn-off times of 10 μsec or less.				108, 109
C154B, C156B	—	200					108, 109
C154C, C156C	—	300					108, 109
C154D, C156D	—	400					108, 109
C154E, C156E	—	500					108, 109
C155A, C157A	—	100	Inverter type. Similar to C150, C152, except for guaranteed turn-off times of 20 μsec or less.				108, 109
C155B, C157B	—	200					108, 109
C155C, C157C	—	300					108, 109
C155D, C157D	—	400					108, 109
C155E, C157E	—	500					108, 109
C55U, C56U	—	25	Other ratings and characteristics are the same as for 2N1909 series, except that turn-off time is guaranteed at less than 20 microseconds.				108, 109
C55F, C56F	—	50					108, 109
C55A, C56A	—	100					108, 109
C55G, C56G	—	150					108, 109
C55B, C56B	—	200					108, 109
C55H, C56H	—	250					108, 109
C55C, C56C	—	300					108, 109
C55D, C56D	—	400					108, 109
C55E, C56E	—	500					108, 109
C55M, C56M	—	600					108, 109
C55S, C56S	—	700					108, 109
C55N, C56N	—	800					108, 109
C60U	2N2023	25	110 A	150°	150°	200 min.	109
C60F	2N2024	50	110 A	150°	150°	200 min.	109
C60A	2N2025	100	110 A	150°	150°	200 min.	109
C60G	2N2026	150	110 A	150°	150°	200 min.	109
C60B	2N2027	200	110 A	150°	150°	200 min.	109
C60H	2N2028	250	110 A	150°	150°	200 min.	109
C60C	2N2029	300	110 A	150°	150°	200 min.	109
C60D	—	400	110 A	150°	150°	200 min.	109
C60E	—	500	110 A	150°	150°	200 min.	109
C80A	—	100	235 A	125°	150°	200 min.	110
C80G	—	150	235 A	125°	150°	200 min.	110
C80B	—	200	235 A	125°	150°	200 min.	110
C80H	—	250	235 A	125°	150°	200 min.	110
C80C	—	300	235 A	125°	150°	200 min.	110
C80D	—	400	235 A	125°	150°	200 min.	110
C80E	—	500	235 A	125°	150°	200 min.	110
C80M	—	600	235 A	125°	150°	200 min.	110
C180A	—	100	235 A	125°	125°	200 min.	110
C180B	—	200	235 A	125°	125°	200 min.	110
C180C	—	300	235 A	125°	125°	200 min.	110
C180D	—	400	235 A	125°	125°	200 min.	110
C180E	—	500	235 A	125°	125°	200 min.	110
C180M	—	600	235 A	125°	125°	200 min.	110
C180S	—	700	235 A	125°	125°	200 min.	110
C180N	—	800	235 A	125°	125°	200 min.	110
C180T	—	900	235 A	125°	125°	200 min.	110
C180P	—	1000	235 A	125°	125°	200 min.	110
C180PA	—	1100	235 A	125°	125°	200 min.	110
C180PB	—	1200	235 A	125°	125°	200 min.	110
C180PC	—	1300	235 A	125°	125°	200 min.	110



Pkg. No. 109



Pkg. No. 108

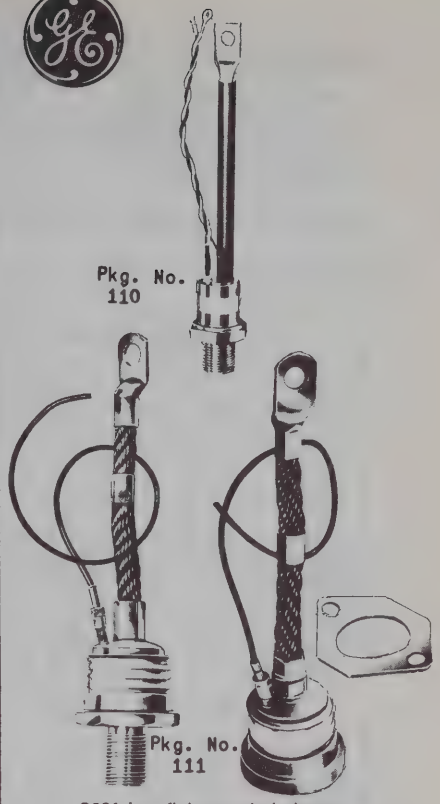


Pkg. No. 110

SILICON HIGH CURRENT CONTROLLED RECTIFIERS (Continued)

UP TO 470 AMPS — UP TO 1100 PRV

G-E Type Number	JEDEC Number	PRV and V_{BO}	Max. I_{DC}	Max. Temp. °C Oper. T	Max. Temp. °C Stor.	Max. Req'd Gate Signal	Outline Drwg.
C181A	—	100	Similar to C180 except for faster turn-off times. Typical values range from 25 to 75 μsec depending on blocking voltage.				110
C181B	—	200					110
C181C	—	300					110
C181D	—	400					110
C181E	—	500					110
C181M	—	600					110
C181S	—	700					110
C181N	—	800					110
C181T	—	900					110
C181P	—	1000					110
C181PA	—	1100					110
C181PB	—	1200					110
C181PC	—	1300					110
C185A	—	100	Inverter type. Similar to C180 except turn-off time guaranteed to be 20 μsec or less.				110
C185B	—	200					110
C185C	—	300					110
C185D	—	400					110
C185E	—	500					110
C185M	—	600					110
						dv/dt V/μsec	
C280N	—	800	235 A	125°	125°	200 min.	111
C280P	—	1000	235 A	125°	125°	200 min.	111
C280PA	—	1100	235 A	125°	125°	200 min.	111
C280PB	—	1200	235 A	125°	125°	200 min.	111
C280PC	—	1300	235 A	125°	125°	200 min.	111
C280S	—	700	235 A	125°	125°	200 min.	111
C280T	—	900	235 A	125°	125°	200 min.	111
C290A, C291A	—	100	470 A	125°	125°	200 min.	111
C290B, C291B	—	200	470 A	125°	125°	200 min.	111
C290C, C291C	—	300	470 A	125°	125°	200 min.	111
C290D, C291D	—	400	470 A	125°	125°	200 min.	111
C290E, C291E	—	500	470 A	125°	125°	200 min.	111
C290F, C291F	—	50	470 A	125°	125°	200 min.	111
C290G, C291G	—	150	470 A	125°	125°	200 min.	111
C290H, C291H	—	250	470 A	125°	125°	200 min.	111
C290J, C291J	—	350	470 A	125°	125°	200 min.	111
C290M, C291M	—	600	470 A	125°	125°	200 min.	111
C290N, C291N	—	800	470 A	125°	125°	200 min.	111
C290P, C291P	—	1000	470 A	125°	125°	200 min.	111
C290S, C291S	—	700	470 A	125°	125°	200 min.	111
C290T, C291T	—	900	470 A	125°	125°	200 min.	111



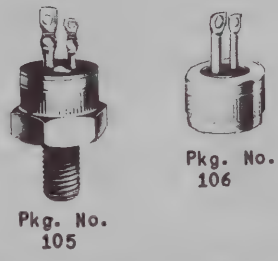
C291 is a flat mounted clamp down version of the C290.

CONTROLLED AC SWITCHES

TRIAC — BI-DIRECTIONAL TRIODES for gate-control of AC power

G-E Type Number	Breakover Voltage at 100°C T_J Volts	Peak Gate Power Dissipation Watts	RMS Current at 75°C T_C Amps	Gate Triggering Requirements, Typical	Operating Temperature T_J	Outline Drwg.
SC40B, SC41B*	±200	5.0	6	$I_G = \pm 50$ ma, $V_G = \pm 3$ V, $T_J = 25°C$	—40°C to 100°C	105, 106
SC40D SC41D	±400					105, 106
SC45B, SC46B†	±200	5.0	10	$I_G = \pm 50$ ma, $V_G = \pm 3$ V, $T_J = 25°C$	—40°C to 100°C	105, 106
SC45D SC46D	±400					105, 106

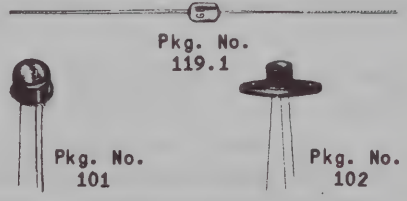
*Formerly ZJ257B & ZJ285B †Formerly ZJ290B & ZJ291B



DIAC — BI-DIRECTIONAL TRIGGER DIODES for gate trigger of TRIACs or Silicon Controlled Rectifiers

G-E Type Number	Breakover Voltage Min.	Breakover Voltage Max.	Breakover Current $I_{(BR)}$ μa	Pulse Output $T_A = 50°C$ e_p	Peak Current $T_A = 50°C$ I_P	Outline Drwg.
ST2‡	±28V	±36V	±200 max.	±3 V*	±2 Amps Max.**	119.1

‡Formerly ZJ238
*Peak Minimum, across 20 ohm load resistor when discharging 0.1 μf capacitor.
**10 μsec. duration, 120 cps repetition rate.



LIGHT ACTIVATED SCR

The L8, L9 Light Activated SCR's are basically Silicon Controlled Rectifiers with incident light taking the place of (or adding to) an electrical gate current. Thus it is a photo-operated device that is truly a switch. It features optional gate triggering inputs; i.e., from either an isolated light source or direct electrical supply. The former trigger technique offers a range of light trigger intensity with varying gate bias. The L811 and L911 series are identical to the L8 and L9 respectively except that they are soldered to a diamond base heat sink. These devices are expected to be particularly useful in such applications as:

- Optical logic control
- Counting
- Sorting
- Precision Indexing
- Explosion proof isolated switches
- Static Relays
- Meter Relays

G-E Type Number	PRV/V_{BO}	Max. I_{DC} @ 25°C Amb.	Max. Temp. °C Oper.	Max. Temp. °C Stor.	Effective Irradiance (mw/cm²) to Trigger* at 25°C T_J, 6Vdc Min.	Effective Irradiance (mw/cm²) to Trigger* at 25°C T_J, 6Vdc Max.	Outline Drwg.
L8U	25	.44 A	100°	150°	0.68	10.0	101
L8F	50	.44 A	100°	150°	0.68	10.0	101
L8A	100	.44 A	100°	150°	0.68	10.0	101
L8G	150	.44 A	100°	150°	0.68	10.0	101
L8B	200	.44 A	100°	150°	0.68	10.0	101
L811U	25	.77 A	100°	150°	0.68	10.0	102
L811F	50	.77 A	100°	150°	0.68	10.0	102
L811A	100	.77 A	100°	150°	0.68	10.0	102
L811G	150	.77 A	100°	150°	0.68	10.0	102
L811B	200	.77 A	100°	150°	0.68	10.0	102
L9U	25	.44 A	100°	150°	0.68	4.2	101
L9F	50	.44 A	100°	150°	0.68	4.2	101
L9A	100	.44 A	100°	150°	0.68	4.2	101
L9G	150	.44 A	100°	150°	0.68	4.2	101
L9B	200	.44 A	100°	150°	0.68	4.2	101
L911U	25	.77 A	100°	150°	0.68	4.2	102
L911F	50	.77 A	100°	150°	0.68	4.2	102
L011A	100	.77 A	100°	150°	0.68	4.2	102
L911G	150	.77 A	100°	150°	0.68	4.2	102
L911B	200	.77 A	100°	150°	0.68	4.2	102

*Effective Irradiance to trigger decreases with increasing anode voltage and increasing gate to cathode resistance.

NOTE: Gate current to trigger from direct electrical supply is 20 μa typical, 200 μa maximum at 25°C T_J.

1 WATT SILICON ZENER DIODES

SERIES

1N1765 – 1N1776
1N1765A – 1N1776A
Z4X5.1B; Z4X5.1A
Z4X14B; Z4X14A

Non-Recurrent Surge Rating in Zener direction at 175°C Junction ($0.001 < t < 0.008$ sec) = 25 mw/sec
Non-Recurrent Surge Rating in Forward Direction at 175°C Junction ($0.001 < t < 0.008$ sec) = 0.50 amp²/sec
Storage Temperature = −65°C to +175°C
Operating Junction Temperature = −65°C to +175°C

Z4XL6.2 — Z4XL22 Low Cost Zeners



Pkg. No. 118

JEDEC or G-E Number	V_{ZT} @ I_{ZT} ZENER VOLTAGE (see notes) Volts @ 25°C			Test Current I_{ZT} mA	Maximum Dynamic Impedance Z_{ZT} @ I_{ZT} @ 25°C Ohms	Maximum Leakage Current I_s @ V_s @ 25°C		Typical Temp. Coefficient %/°C	Typical Voltage Regulation ΔV_Z Volts	MAXIMUM ZENER CURRENT I_{ZM} — MA			Outline Drwg.
	10% Min.	Nominal	10% Max.			V_s Volts	I_s mA			T_A=50°C Maximum	T_A=100°C Maximum	T_A=150°C Maximum	
Z4X5.1B	4.6	5.1	5.6	100	7.0	4.1	15.00	0.013	0.11	160	96	32	118
1N1765	5.0	5.6	6.2	100	1.2	4.5	5.00	0.021	0.14	150	88	29	118
1N1766	5.6	6.2	6.8	100	1.5	5.0	1.70	0.030	0.16	130	79	26	118
1N1767	6.1	6.8	7.5	100	1.7	5.4	0.96	0.037	0.20	120	72	24	118
1N1768	6.8	7.5	8.3	100	2.1	6.0	0.75	0.044	0.24	109	65	22	118
1N1769	7.4	8.2	9.0	100	2.4	6.6	0.64	0.050	0.28	100	60	20	118
1N1770	8.2	9.1	10.0	50	3.0	7.3	0.52	0.056	0.34	90	54	18	118
1N1771	9.0	10.0	11.0	50	3.5	8.0	0.44	0.062	0.41	82	49	16	118
1N1772	9.9	11.0	12.1	50	4.2	8.8	0.38	0.067	0.48	74	45	15	118
1N1773	10.8	12.0	13.2	50	5.0	9.6	0.34	0.071	0.57	68	41	14	118
1N1774	11.7	13.0	14.3	50	5.8	10.4	0.31	0.074	0.66	63	38	13	118
Z4X14B	12.6	14.0	15.4	50	6.6	11.2	0.29	0.077	0.75	58	35	12	118
1N1775	13.5	15.0	16.5	50	7.6	12.0	0.26	0.080	0.86	54	33	11	118
1N1776	14.4	16.0	17.6	50	8.6	12.8	0.24	0.082	0.97	51	31	10	118
	20% Min.		20% Max.								T_A=125°C		
Z4XL6.2	4.96	6.2	7.44	20	9			.030		123	48		118
Z4XL7.5	6.00	7.5	9.00	20	12			.044		101	39		118
Z4XL9.1	7.28	9.1	10.9	20	15			.056		83	32		118
Z4XL12	9.60	12.0	14.4	20	24			.071		63	24		118
Z4XL14	11.2	14.0	16.8	20	3.0			.077		54	20		118
Z4XL16	12.8	16.0	19.2	20	40			.082		47	18		118
Z4XL18	14.4	18.0	21.6	20	50			.085		43	16		118
Z4XL20	16.0	20.0	24.0	20	60			.088		38	14		118
Z4XL22	17.6	22.0	26.0	20	72			.090		34	13		118

NOTE: Standard 1N or Z4X types are supplied to the ±10% of voltage values listed.
For 5% tolerance; (1) Add "A" suffix to 1N number, i.e. 1N1776A.
(2) Change "B" suffix on Z4X number to "A" i.e. Z4X5.1A.
Standard Z4XL types are supplied to the ±20% of voltage values listed.
For 10% tolerance, add suffix "B" to type number, i.e. Z4XL6.2B.

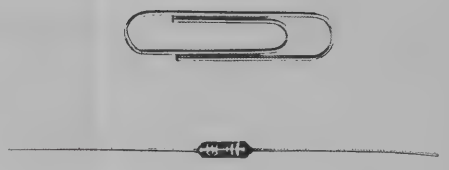
SILICON CONTROLLED AVALANCHE RECTIFIERS

High Voltage Rectifiers with Built-in Zener Diode Protection

Self-Protection Against Voltage Transients — Dissipates hundreds of times more power in reverse direction than comparably rated conventional diodes.

Can be series operated at high voltage without equalizing resistors.

Protection of other circuit components against overvoltage through rigidly specified maximum and minimum avalanche characteristics.



Pkg. No. 113



Pkg. No. 122



Pkg. No. 124

G-E Type Number	JEDEC Number	Working PRV	Min. Avalanche Voltage @ 50 μa, 25°C	Max. Avalanche Voltage @ 500 μa, 25°C	Max. I_{DC} @ 50°C Amb.	Peak 1 Cycle Forward Surge	Peak Transient Reverse Surge 10 μsec	Max. Continuous Reverse Power	Max. Rev. Current @ Working PRV 150°C	Max. Forward Voltage Drop at 25°C at 400 ma	Max. Op. Temp.	Outline Drwg.
A7G	—	150	200	350	500 ma	10 Amps	310 watts	0.5 watts	100 μa	1 V	175°C	113
A7B	—	200	300	450	500 ma	10 Amps	310 watts	0.5 watts	100 μa	1 V	175°C	113
A7C	—	300	400	550	500 ma	10 Amps	310 watts	0.5 watts	100 μa	1 V	175°C	113
A7D	—	400	500	650	500 ma	10 Amps	310 watts	0.5 watts	100 μa	1 V	175°C	113
A7E	—	500	600	750	500 ma	10 Amps	310 watts	0.5 watts	100 μa	1 V	175°C	113
			5 ma, 25°C	5 ma, 25°C	125°C Stud				125°C Stud	125°C Stud 12 A		
A27B	IN4506	200	250	515	12 Amps	200 Amps	3900 watts		2.5 mA	0.7 V	175°C	122
A27D	IN4507	400	500	770	12 Amps	200 Amps	3900 watts		2.5 mA	0.7 V	175°C	122
A27M	IN4508	600	750	1030	12 Amps	200 Amps	3900 watts		2.5 mA	0.7 V	175°C	122
A27N	IN4509	800	1000	1290	12 Amps	200 Amps	3900 watts		2.0 mA	0.7 V	175°C	122
A27P	IN4510	1000	1250	1550	12 Amps	200 Amps	3900 watts		1.75 mA	0.7 V	175°C	122
A27PB	IN4511	1200	1500	1930	12 Amps	200 Amps	3900 watts		1.5 mA	0.7 V	175°C	122
A38B	IN4525	200	250	515	35 Amps	500 Amps	12,000 watts		3.5 mA	0.75V	175°C	124
A38D	IN4526	400	500	770	35 Amps	500 Amps	12,000 watts		3.5 mA	0.75V	175°C	124
A38M	IN4527	600	750	1030	35 Amps	500 Amps	12,000 watts		3.5 mA	0.75V	175°C	124
A38N	IN4528	800	1000	1290	35 Amps	500 Amps	12,000 watts		3.0 mA	0.75V	175°C	124
A38P	IN4529	1000	1250	1550	35 Amps	500 Amps	12,000 watts		2.5 mA	0.75V	175°C	124
A38PB	IN4530	1200	1500	1930	35 Amps	500 Amps	12,000 watts		2.0 mA	0.75V	175°C	124

ELECTRONICS

SERVICE-DESIGNED ENTERTAINMENT SEMICONDUCTORS

UNIVERSAL REPLACEMENT TRANSISTORS

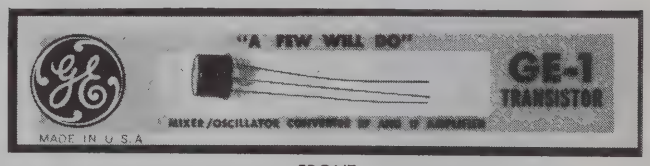


Highly dependable low-cost transistors especially designed as general replacements for most types of transistors used in Radio and TV Sets and other home entertainment devices. The nine transistors listed cover the vast majority of applications that a radio or TV serviceman will encounter. They permit a service shop to reduce to a minimum the number of different types of transistors that it must stock. Average weight: 2 oz.

Catalog No.	Outline Drawing	Use	Application	List Price
GE-1	B	PNP	Mixer/Oscillator Converter • RF and IF Amplifier	$2.00
GE-2	B	PNP	AF Amplifier	1.70
GE-3	C	PNP	AF Power Amplifier	3.90
GE-4	D	PNP	AF High Power Amplifier	7.40
GE-5	B	NPN	Mixer/Oscillator Converter • RF and AF Amplifier	2.80
GE-6	A	NPN	Mixer/Oscillator Converter • RF Amplifier	3.05
GE-7	A	NPN	IF Amplifier	2.95
GE-8	B	NPN	AF Amplifier	2.15
GE-9	*B	PNP	Mixer/Oscillator Converter • RF and IF Amplifier	2.10
GE-10	E	NPN	AF Amplifier-Driver-Output	2.10

* GE-9 Smaller size than GE-1 (GE-9 .209 diameter — GE-1 .335 diameter)

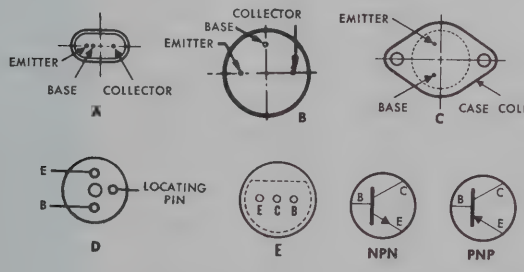
EACH TRANSISTOR IS SKIN PACKAGED WITH INTERCHANGEABILITY ON BACK OF CARD



FRONT

PNP TYPE GE-1 INTERCHANGEABLE WITH THE FOLLOWING									
2N111	2N139	2N271	2N412	2N415A	2N485	2N1109	GT-761	2S45	2SA52
2N111A	2N140	2N271A	2N413	2N416	2N486	2N1110	GT-761R	2S52	SYL-1536
2N112	2N218	2N273	2N413A	2N417	2N614	2N1111	GT-762R	2S53	SYL-1537
2N112A	2N219	2N274	2N414	2N481	2N616	2N1266	GT-766	2SA37	SYL-1583
2N113	2N247	2N409	2N414A	2N482	2N617	GT-759R	CK-760	2SA38	SYL-1608
2N135	2N252	2N410	2N414B	2N483	2N1107	GT-760	CK-766	2SA39	SYL-1621
2N136	2N267	2N411	2N415	2N484	2N1108	GT-760R	2S30	2SA49	

BACK



TRANSISTOR MANUAL

19 fact-filled chapters containing transistor theory, specifications, characteristics, and applications. Valuable information needed by every engineer, hobbyist, experimenter. Price $2.00.



NEW G.E. GE-504A UNIVERSAL RECTIFIER



A silicon rectifier with a 60-amp surge rating. Recommended as a replacement for all selenium, germanium and silicon rectifiers used in TV receivers. The 60-amp surge rating eliminates the need for the urge limiting resistors normally required when silicon rectifiers are used.

PIV is 600 volts; max. I_{DC}, 1 amp. Shipping weight: 2 oz. List Price $1.35.

G.E. SILICON AND GERMANIUM RECTIFIERS



These top hat, hermetically sealed rectifiers are designed for general-purpose applications requiring maximum economy.

Type	PIV	Max IDC	List Price	Type	PIV	Max IDC	List Price
1N91	100	150	$1.55	1N1695	400	600	$1.25
1N1692	100	600	.85	1N1696	500	600	1.35
1N1693	200	600	.90	1N1697	600	600	1.75
1N1694	300	600	.95				

G.E. CRYSTAL DIODES

Type	Description	Average Forward Current (ma)	Peak Reverse Voltage (volts)	List Price
1N34AS	General Purpose	50	75	$0.60
1N60	Video Detector	50	30	.85
1N82A	Silicon UHF Mixer	—	5	1.45
1N295	50 MC Detector	30	50	.55

G.E. SELENIUM RECTIFIERS FOR COLOR TV SETS

Cat. No.	Type	List Price
GECR-1	Focus Rect.	$6.20
GECR-2	Boosted Boost	2.45
GECR-3	Convergence	1.70

G.E. VAC-U-SEL® DOUBLE DIODES

Miniature double diodes for TV horizontal phase detector, replacement and other applications. 7/16 x 9/16 x 3/16". Shipping weight: 2 oz.

Type No.	Ifwd	Imr	Description	Max. Case Temp.	List Price
6GC1	1.1 @ 2.5V	4 @ 20V	Common cathode	85°C	$0.99
6GD1	1.1 @ 2.5V	4 @ 20V	Series connected	85°C	.99
6GX1	1.1 @ 2.5V	4 @ 20V	Common anode	85°C	.99

G.E. SEMICONDUCTOR REPLACEMENT KIT

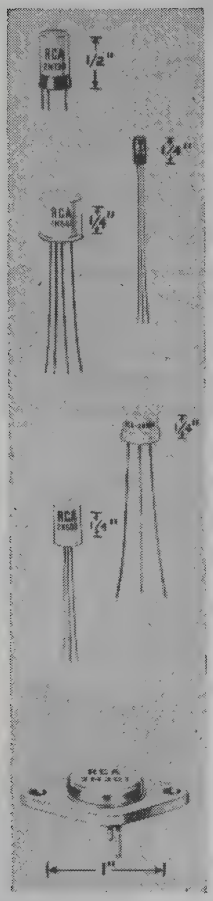
Model K-915B convenient kit covers a majority of entertainment-type semiconductor replacement needs — an ideal aid for radio and TV servicemen. Contains 21 units of service-designed semiconductors including 7 universal transistors. 3 silicon rectifiers, 6 crystal diodes, 4 dual diodes, and 1 color TV focus rectifier. Units are housed in a sturdy cabinet with 15 clearly labeled drawers. Every unit always within hand reach. Cabinet size, 8½ x 12⅛ x 9". Shipping weight: 4 lbs. List Price $38.83.

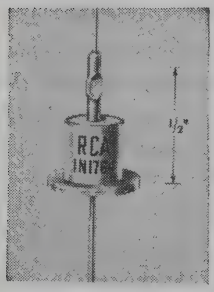
GENERAL ELECTRIC

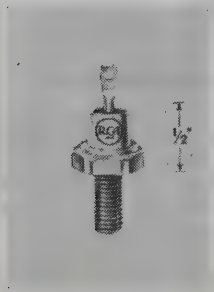
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SEMICONDUCTOR PRODUCTS

JULY, 1965







TRANSISTORS, THYRISTORS, GERMANIUM DIODES & TUNNEL DIODES

Type	RCA Equipment Manufacturers Price 1-99	100-999
1N2326	$ .50	$ .35
1N2858A	.37	.25
1N2859A	.38	.27
1N2860A	.40	.28
1N2861A	.43	.30
1N2862A	.61	.43
1N2863A	.66	.46
1N2864A	.83	.57
1N3128	6.35	4.39
1N3129	7.59	5.24
1N3130	8.17	5.64
1N3193	.37	.26
1N3194	.42	.29
1N3195	.66	.46
1N3196	.91	.63
1N3253	.42	.29
1N3254	.45	.31
1N3255	.70	.48
1N3256	.94	.65
1N3563	1.65	1.14
1N3754	.32	.22
1N3755	.32	.22
1N3756	.35	.24
1N2847	4.95	3.42
1N3848	4.95	3.42
1N3849	4.95	3.42
1N3850	4.95	3.42
1N3851	4.95	3.42
1N3852	6.35	4.39
1N3853	5.94	4.10
1N3854	7.59	5.24
1N3855	8.17	5.64
1N3856	8.17	5.64
1N3857	8.58	5.95
1N3858	6.52	4.50
1N3859	8.17	5.64
1N3860	10.73	7.40
1N3861	6.19	4.28
1N3862	7.67	5.30
1N3863	9.41	6.50
1N4785	1.65	1.14
2N104	1.65	1.14
2N109	.60	.41
2N139	1.16	.80
2N140	1.24	.86
2N173	3.75	2.59
2N174	4.01	2.77
JAN2N174	4.77	3.29
2N175	1.64	1.13
2N176	1.31	.79
2N215	1.73	1.20
2N217	.57	.39
2N218	1.16	.80
2N219	1.24	.86
2N220	1.52	1.05
JAN2N220	2.06	1.43
2N270	.83	.57
2N274	1.24	.86
USA2N274	2.48	1.71
2N277	2.72	1.88
2N278	3.10	2.14
2N307	1.49	1.03
2N351	1.73	1.20
2N370	.81	.56
2N371	.80	.55
2N372	.80	.55
2N376	1.88	1.30
2N384	1.65	1.14
JAN2N348	3.30	2.28
2N388	.60	.41
JAN2N388	.61	.42
2N388A	1.09	.76
2N395	.66	.46
2N396	.61	.43
3N396A	.61	.43
2N397	$1.34	$ .93
2N398	1.24	.86
USN2N398	1.36	.94
2N398A	1.24	.86
2N398B	1.44	1.00
2N404	.47	.32
JAN2N404	.50	.35
2N404A	.75	.52
3907/2N404	1.08	.75
2N405	.37	.25
2N406	.33	.23
2N407	.42	.29
2N408	.38	.27
2N409	.43	.30
2N410	.40	.28
2N411	.47	.32
2N412	.43	.30
2N414	.42	.29
2N441	2.23	1.54
2N442	2.31	1.60
2N443	2.39	1.65
2N581	.50	.35
2N582	.91	.63
2N585	.99	.69
2N586	1.73	1.20
2N591	.53	.37
(For New Equip. Design, Use Type 2N1637)		
2N645*	2.64	1.82
(For New Equip. Use 2N960)		
2N646*	1.82	1.25
(For New Equip. Use 2N960)		
2N647	1.08	.75
2N649	.86	.60
2N681	8.60	5.95
2N682	9.40	6.50
2N683	10.50	7.25
2N684	12.70	8.80
2N685	14.85	10.25
2N686	18.00	12.45
2N687	20.95	14.50
2N688	26.25	18.15
2N689	31.85	22.00
2N690	37.95	26.20
2N697	.81	.56
2N699	1.57	1.09
2N705	1.98	1.37
2N706	.99	.69
2N706A	1.19	.82
2N708	1.32	.92
2N709	2.48	1.71
2N710	1.73	1.20
2N711	1.16	.80
2N718A	1.08	.75
2N720A	1.32	.92
2N834	3.05	2.11
2N914	1.57	1.09
2N917	6.19	4.28
2N918	7.01	4.85
2N955	4.31	2.98
2N955A	4.82	3.33
2N1010	2.89	2.00
2N1023	2.72	1.88
2N1066	1.98	1.37
2N1090	1.11	.77
2N1091	1.41	.97
2N1092	10.75	7.40
2N1099	4.31	2.98
2N1100	5.02	3.47
2N1177	.83	.57
2N1178	.81	.56
2N1179	.81	.56
2N1180	.68	.47
2N1183	1.82	1.25
USA2N1183	2.64	1.82
2N1183A	2.31	1.60
USA2N1183A	3.30	2.28
2N1183B	$2.89	$2.00
USA2N1183B	3.88	2.68
2N1184	2.48	1.71
USA2N1184	3.71	2.57
2N1184A	2.81	1.94
USA2N1184A	4.04	2.79
2N1184B	4.13	2.85
USA2N1184B	5.36	3.71
2N1224	1.24	.86
USA2N1224	1.41	.97
2N1225	1.41	.97
USA2N1225	1.57	1.09
2N1226	1.49	1.03
2N1285	1.22	1.19
2N1300	.91	.63
2N1301	1.08	.75
2N1302	.50	.35
USN2N1302	.52	.36
JAN2N1302	.52	.36
2N1303	.50	.35
USN2N1303	.52	.36
JAN2N1303	.52	.36
2N1304	.61	.43
USN2N1304	.65	.45
JAN2N1304	.65	.45
2N1305	.63	.44
USN2N1305	.65	.44
JAN261305	.65	.45
2N1306	.80	.55
USN2N1306	.86	.60
JAN2N1306	.86	.60
2N1307	.80	.55
USN2N1307	.86	.60
JAN2N1307	.86	.60
2N1308	1.11	.77
USN2N1308	1.19	.82
JAN2N1308	1.19	.82
2N1309	1.08	.75
USN2N1309	1.19	.82
JAN2N1309	1.19	.82
2N1358	4.59	3.17
2N1384	2.06	1.43
2N1395	1.49	1.03
2N1396	1.65	1.14
2N1397	2.15	1.48
2N1412	5.76	3.98
USN2N1412	6.52	4.50
2N1479	2.15	1.48
USA2N1479	2.56	1.77
2N1480	2.31	1.60
USA2N1480	2.72	1.88
2N1481	2.48	1.71
USA2N1481	2.89	2.00
2N1482	3.30	2.28
USA2N1482	3.71	2.57
2N1483	2.89	2.00
USA2N1483	3.71	2.57
2N1484	3.63	2.51
USA2N1484	4.46	3.08
2N1485	4.46	3.08
USA2N1485	5.28	3.65
2N1486	6.77	4.67
USA2N1486	7.59	5.24
2N1487	4.54	3.14
USA2N1487	5.36	3.71
2N1488	4.95	3.42
USA2N1488	5.75	3.99
2N1489	7.43	5.13
USA2N1489	8.25	5.70
2N1490	8.25	5.70
USA2N1490	9.08	6.25
2N1491	4.13	2.85
2N1492	6.60	4.56
2N1493	9.90	6.85
USA2N1493	8.17	5.64

Prices shown do not include any state or local taxes. All prices are subject to change or withdrawal without notice.

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SEMICONDUCTOR PRODUCTS

Type	RCA Equipment Manufacturers Price 1-99	100-999
2N1511	$ 8.25	$ 5.70
USA2N1511	10.31	7.15
2N1512	9.90	6.85
USA2N1512	11.96	8.25
2N1513	12.40	8.55
USA2N1513	14.44	10.00
2N1514	16.50	11.40
USA2N1514	18.56	12.85
2N1524	.40	.28
2N1525	.43	.30
2N1526	.43	.30
2N1527	.47	.32
2N1605	1.24	.86
2N1605A	1.51	1.04
2N1613	1.08	.74
2N1631	.53	.37
2N1632	.50	.35
2N1637	.52	.36
2N1638	.45	.31
2N1639	.48	.34
2N1683	1.65	1.14
2N1700	1.90	1.31
2N1701	2.31	1.60
2N1702	4.54	3.14
2N1703	5.78	3.99
2N1708	3.30	2.28
2N1711	1.16	.80
2N1768	8.25	5.70
2N1769	10.73	7.40
2N1770	5.36	3.71
2N1771	5.78	3.99
2N1772	7.43	5.13
2N1773	9.49	6.55
2N1774	11.96	8.25
2N1775	14.03	9.70
2N1776	16.09	11.10
2N1777	20.65	14.25
2N1778	24.75	17.10
2N1842A	7.75	5.36
2N1843A	8.50	5.85
2N1844A	9.40	6.50
2N1845A	11.45	7.90
2N1846A	13.50	9.35
2N1847A	16.10	11.10
2N1848A	18.75	12.95
2N1849A	23.60	16.30
2N1850A	27.00	18.65
2N1853	1.32	.92
USN2N1853	1.32	.92
2N1854	1.65	1.14
USN2N1854	1.65	1.14
2N1893	1.32	.92
2N1905	4.13	2.85
2N1906	6.60	4.56
2N2015	9.08	6.25
USA2N2015	9.90	6.85
2N2016	9.90	6.85
USA2N2016	10.73	7.40
2N2102	1.61	.97
S2N2102	18.94	13.10
2N2147	2.06	1.43
2N2148	1.24	.86
2N2205	1.24	.86
2N2206	3.71	2.57
2N2208	1.54	1.06
2N2210	10.13	7.00
2N2270	1.16	.80
2N2273	2.31	1.60
USA2N2273	2.06	1.43
2N2304	4.29	2.96
2N2305	6.44	4.45
2N2338	6.60	4.56
2N2339	4.95	3.42
2N2405	2.06	1.43
2N2475	5.94	4.10
2N2476	2.89	2.00
2N2477	3.30	2.28
2N2482	6.19	4.28
2N2594	1.98	1.37
2N2613	.55	.3

Type	RCA Equipment Manufacturers Price 1-99	100-999
2N2614	$ .50	$ .35
2N2631	21.45	14.80
2N2708	5.78	3.99
2N2857	24.75	17.10
2N2869/2N301	1.52	1.05
2N2870/2N301A	3.15	2.18
2N2876	29.70	20.50
2N2895	1.41	.97
2N2896	2.06	1.43
2N2897	1.16	.80
2N2898	2.48	1.71
2N2899	3.30	2.28
2N2900	1.90	1.31
2N2938	2.15	1.48
2N2953	.50	.35
2N3053/40053	.99	.69
2N3054	2.06	1.43
2N3055	2.89	2.00
2N3118	4.95	3.42
2N3119	5.36	3.71
2N3228	1.62	1.12
2N3229	46.20	31.90
2N3230	66.00	45.60
2N3231	99.00	68.40
2N3241	.73	.51
2N3242	.96	.67
2N3261	3.30	2.28
2N3262	9.90	6.85
2N3263	99.00	68.40
2N3264	66.00	45.60
2N3265	99.00	68.40
2N3266	66.00	45.60
2N3375	33.00	22.80
2N3435	7.43	5.13
2N3439	4.13	2.85
2N3440	2.06	1.43
2N3441	2.89	2.00
2N3442	4.95	3.42
2N3478	2.06	1.43
2N3512	3.71	2.57
2N3525	2.64	1.82
2N3528	1.63	1.12
2N3529	2.64	1.82
2N3553	11.55	8.00
2N3583	3.30	2.28
2N3584	6.60	4.56
2N3585	13.20	9.10
2N3600	6.60	4.56
2N3632	49.50	34.20
2N3668	2.89	2.00
2N3669	3.27	2.26
2N3670	4.92	3.40
2N3730	1.65	1.14
2N3731	2.48	1.71
2N3733	66.00	45.60
2N3771	5.78	3.99
2N3772	5.78	3.99
2N3773	7.84	5.42
2N3866	4.95	3.42
3907/2N404	(Price information below 2N404A)	
3N98	27.00	18.65
3N99	27.00	18.65
40004	1.65	1.14
40005	1.82	1.25
40006	3.30	2.28
40022	.83	.57
40050	1.13	.78
40051	1.29	.89
40054	14.00	9.70
40055	16.00	11.05
40056	18.00	12.45
40057	20.00	13.70
40058	9.90	6.85
40059	8.66	6.00
40060	9.90	6.85
40061	8.66	6.00
40062	9.90	6.85
40063	8.66	6.00
40064	9.90	6.85
40065	8.66	6.00

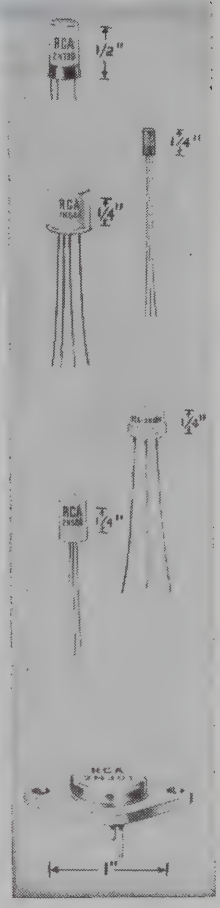
Type	RCA Equipment Manufacturers Price 1-99	100-999
40076	$100.00	$ 69.10
40077	24.75	17.10
40078	7.00	4.85
40080	1.08	.75
40081	1.65	1.14
40082	9.82	6.80
40084	.99	.69

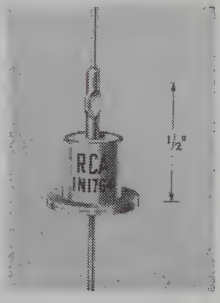
MEMORY PLANES

N7097-1	160.00
N7165-1	65.00
N7166-1	75.00
N7190-1	175.00
N7412-1	125.00

SILICON RECTIFIERS

1N248C; RC	1.65	1.14
USA1N249B	2.89	2.00
1N294C; RC	2.06	1.43
USA1N250B	3.55	2.45
1N250C; RC	2.72	1.88
1N440B	.66	.46
1N441B	.70	.48
1N442B	.80	.55
1N443B	.98	.68
1N444B	1.06	.73
1N445B	1.42	.98
1N536	.45	.31
1N537	.50	.35
1N538	.53	.37
JAN1N538	.91	.63
1N539	.60	.41
1N540	.68	.47
JAN1N540	1.23	.85
1N547	.96	.67
JAN1N547	1.46	1.01
1N1095	.88	.61
USAF1N1183	3.30	2.28
1N1183; RA	2.15	1.48
USAF1N1184	3.75	2.59
1N1184A; RA	2.48	1.17
USAF1N1185	4.79	3.31
USAF1N1186	5.20	3.59
1N1186A; RA	3.55	2.45
USAF1N1187	6.60	4.56
1N1187; A R; RA	4.95	3.42
USAF1N1188	7.84	5.42
1N1188; A; R; RA	6.19	4.28
USAF1N1189	9.50	6.55
1N1189; A; R; RA	7.43	5.13
USAF1N1190	11.55	8.00
1N1190; A; R; RA	8.65	6.00
1N1195A; RA	3.88	2.68
1N1196A; RA	4.95	3.42
1N1197A; RA	5.94	4.10
1N1198A; RA	7.01	4.85
1N1199A; RA	1.24	.86
USAF1N1199	1.90	1.31
1N1200A; RA	1.41	.97
USAF1N1200	2.15	1.48
USAF1N201	2.64	1.82
1N1202A; RA	2.48	1.71
USAF1N1202	3.14	2.17
1N1203A; RA	3.47	2.39
USAF1N1203	4.29	2.96
1N1204A; RA	4.46	3.08
USAF1N1204	5.25	3.65
1N1205A; RA	5.36	3.71
USAF1N1205	6.19	4.28
1N1206A; RA	6.19	4.28
USAF1N1206	7.01	4.85
1N1341B; RB	1.16	.80
1N1342B; RB	1.32	.92
1N1344B; RB	2.15	1.48
1N1345B; RB	3.05	2.11
1N1346B; RB	3.96	2.74
1N1347B; RB	4.79	3.31
1N1348B; RB	5.78	3.99
1N1612 ; R	1.07	.75
1N1613 ; R	1.24	.86
1N1614 ; R	1.90	1.31







SEMICONDUCTOR PRODUCTS

Type	RCA Equipment Manufacturers Price 1-99	100-999
1N1615 ; R	$ 3.71	$ 2.57
1N1616 ; R	5.36	3.71
1N1763	.42	.29
1N1764	.58	.40
USA1N2135A	6.11	4.22
40108 ; R	.99	.69
40109 ; R	1.16	.80
40110 ; R	1.57	1.09
40111 ; R	2.15	1.48
40112 ; R	2.48	1.71
40113 ; R	3.14	2.17
40114 ; R	3.71	2.57
40115 ; R	6.60	4.56
40116 ; R	9.50	6.55
40208	.99	.69
40208 ; R	1.19	.83
40209 ; R	1.32	.92
40210 ; R	1.78	1.23
40211 ; R	2.39	1.65
40212 ; R	2.89	2.00
40213 ; R	3.63	2.51
40214 ; R	4.21	2.91
40216	48.00	33.15
40217	.99	.69
40218	1.19	.82
40219	1.32	.92
40220	3.05	2.11
40221	1.57	1.09
40222	1.24	.86
40231	.55	.38
40232	.60	.41
40233	.66	.46
40234	.47	.32
40235	.98	.68
40236	.90	.62
40237	.83	.57
40238	.83	.57
40239	.81	.56
40240	.80	.55
40242	.93	.64
40243	.86	.60
40244	.83	.57
40245	.81	.56
40246	.80	.55
40250	1.57	1.09
40251	2.89	2.00
40253	.53	.37
40254	.78	.54
40255	4.79	3.31
40256	2.72	1.88
40258	.78	.54
40259	14.10	9.75
40261	.43	.30
40262	.40	.28
40263	.42	.29
40264	1.21	.84
40265	.35	.24
40266	.29	.20
40267	.33	.23
40268	5.36	3.71
40269	.40	.28
40273	.42	.29
40278	181.50	125.40
30279	SEE Pricing at end of Group 1	
40280	11.55	8.00
40281	33.00	22.80
40282	49.50	34.20
40283	3.71	2.57
40285	42.90	29.65
40287	24.75	17.10
40290	9.90	6.85
40291	24.75	17.10
40292	33.00	22.80
40294	33.40	23.10

Type	RCA Equipment Manufacturers Price 1-99	100-999
40295	$14.85	$10.25
40296	48.70	33.65
40299	5.78	3.99
40305	SEE Pricing at end of Group 1	
40306	SEE Pricing at end of Group 1	
40307	SEE Pricing at end of Group 1	
40309	.70	.48
40310	1.21	.84
40311	.73	.51
40312	1.26	.87
40313	2.23	1.54
40314	.78	.54
40315	.75	.52
40316	1.21	.84
40317	.78	.54
40318	2.10	1.45
40319	1.32	.92
40320	.78	.54
40321	1.24	.86
40322	2.15	1.48
40323	.70	.48
40324	1.21	.84
40325	2.48	1.71
40326	.78	.54
40327	1.24	.86
40328	2.19	1.52
40329	.38	.27
40330	9.90	6.85
40331	24.75	17.10
40332	33.00	22.80
40333	6.60	4.56
40334	6.60	4.56
40337	8.00	5.53
40340	33.00	22.80
40341	33.00	22.80
40342	SEE Pricing at end of Group 1	
40343	SEE Pricing at end of Group 1	

NOTE WELL: THE FOLLOWING GROUP 1 PRODUCTS CAN ONLY BE SHIPPED DIRECT TO THE END USER DUE TO TECHNICAL SPECIFICATIONS OF THE UNIT.

40279	125.00	Use Sch. D
40305	33.00	22.80
40306	66.00	45.60
40307	99.00	68.40
40342	135.00	Use Sch. D
40343	145.00	Use Sch. D

Type	1-29	30 & Up
SILICON RECTIFIER ASSEMBLIES		
CR101	5.75	5.47
CR102	7.20	6.85
CR103	8.15	7.75
CR104	9.60	9.70
CR105	10.55	10.05
CR106	12.00	11.40
CR107	12.95	12.30
CR108	13.90	12.20
CR109	15.35	14.60
CR110	16.30	15.50
CR201	3.10	2.96
CR203	4.80	4.56
CR204	5.75	5.47
CR206	6.95	6.60
CR208	8.40	8.00
CR210	10.10	9.60
CR212	12.00	11.40
CR301	28.00	26.55
CR302	40.00	37.95

Type	RCA Equipment Manufacturers Price 1-99	100-999
CR303	$51.00	$48.00
CR304	62.00	58.90
CR305	73.00	69.35
CR306	83.00	78.85
CR307	93.00	88.35
CR311	30.00	28.50
CR312	42.00	39.90
CR313	53.00	50.35
CR314	64.00	60.75
CR315	75.00	71.25
CR316	85.00	80.75
CR317	95.00	90.25
CR321	35.00	33.23
CR322	49.00	46.55
CR323	62.00	58.90
CR324	76.00	72.20
CR325	70.00	85.50
CR331	37.00	35.15
CR332	52.00	49.40
CR333	65.00	61.75
CR334	79.00	75.05
CR335	93.00	88.35
CR341	44.00	41.80
CR342	61.00	57.95
CR343	78.00	74.10
CR344	94.00	89.30
CR351	46.00	43.70
CR352	64.00	60.80
CR353	82.00	72.90
CR354	98.00	93.10
CR401	28.00	26.60
CR402	32.00	30.40
CR403	44.00	41.80
CR404	30.00	28.50
CR405	36.00	34.20
CR406	54.00	51.30
CR407	40.00	38.00
CR408	48.00	45.60
CR409	64.00	60.80
CR501	40.00	38.00
CR502	48.00	45.60
CR503	50.00	47.50
CR504	62.00	58.90
CR505	64.00	60.80
CR506	84.00	79.80
SILICON CONTROLLED RECTIFIERS		
2N681	8.60	5.95
2N682	9.40	6.50
2N683	10.50	7.25
2N684	12.70	8.80
2N685	14.85	10.25
2N686	18.00	12.45
2N687	20.95	14.50
2N688	26.25	18.15
2N689	31.85	22.00
2N1770	5.36	3.71
2N1771	5.78	3.99
2N1772	7.43	5.13
2N1773	9.49	6.55
2N1774	11.96	8.25
2N1775	14.03	9.70
2N1776	16.09	11.10
2N1777	20.65	14.25
2N1778	24.75	17.10
2N1842A	7.75	5.36
2N1843A	8.50	5.85
2N1844A	9.40	6.50
2N1845A	11.45	7.90
2N1846A	13.50	9.35
2N1847A	16.10	11.10
2N1849A	23.60	16.30
2N1850A	27.00	18.65
2N3228	1.62	1.12
40216	48.00	33.15

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INDEX TO RCA SEMICONDUCTOR DEVICES

D = Diode
FET = Field-Effect "MOS" Transistor
GaAs = Gallium Arsenide
Ge = Germanium
R = Rectifier
RB = High-Voltage Rectifier Bridge
RS = High-Voltage Rectifier Stack
SCR = Silicon Controlled Rectifier (Thyristor)
Si = Silicon
T = Transistor
TD = Tunnel Diode
TR = Tunnel Rectifier

Type	Class	Data Starts on Page 504 See Line No.
1N248C (R)	R,Si	557,558
1N249B (+)	R,Si	
1N249C (R)	R,Si	559,560
1N250B (+)	R,Si	
1N250C (R)	R,Si	561,562
1N440B	R,Si	477
1N441B	R,Si	479
1N442B	R,Si	481
1N443B	R,Si	483
1N444B	R,Si	474
1N445B	R,Si	475
1N536	R,Si	476
1N537	R,Si	478
1N538 (+)	R,Si	480
1N539	R,Si	482
1N540 (+)	R,Si	484
1N547 (+)	R,Si	486
1N1095	R,Si	485
1N1183 (+)	R,Si	
1N1183A (R)	R,Si	571,572
1N1184 (+)	R,Si	
1N1184A (R)	R,Si	573,574
1N1185 (+)	R,Si	
1N1186 (+)	R,Si	
1N1186A (R)	R,Si	757,576
1N1187 (+)	R,Si	
1N1187A (R)	R,Si	577,578
1N1188 (+)	R,Si	
1N1188A (R)	R,Si	579,580
1N1189 (+)	R,Si	
1N1189A (R)	R,Si	581,582
1N1190 (+)	R,Si	
1N1190A (R)	R,Si	583,584
1N1195A (R)	R,Si	563,564
1N1196A (R)	R,Si	565,566
1N1197A (R)	R,Si	567,568
1N1198A (R)	R,Si	569,570
1N1199 (+)	R,Si	
1N1199A (R)	R,Si	529,530
1N1200 (+)	R,Si	
1N1200A (R)	R,Si	531,532
1N1201 (+)	R,Si	
1N1202 (+)	R,Si	
1N1202A (R)	R,Si	533,534
1N1203 (+)	R,Si	
1N1203A (R)	R,Si	535,536
1N1204 (+)	R,Si	
1N1204A (R)	R,Si	537,538
1N1205 (+)	R,Si	
1N1205A (R)	R,Si	539,540
1N1206 (+)	R,Si	
1N1206A (R)	R,Si	541,542
1N1341B (R)	R,Si	497,498
1N1342B (R)	R,Si	499,500
1N1344B (R)	R,Si	501,502
1N1345B (R)	R,Si	503,504
1N1346B (R)	R,Si	505,506
1N1347B (R)	R,Si	507,508
1N1348B (R)	R,Si	509,510
1N1612 (R)	R,Si	487,488
1N1613 (R)	R,Si	489,490
1N1614 (R)	R,Si	491,492
1N1615 (R)	R,Si	493,494
1N1616 (R)	R,Si	495,496
1N1763	R,Si	470
1N1764	R,Si	471
1N2135A (+)	R,Si	
1N2326	CD,Ge	201
1N2858	R,Si	454
1N2859	R,Si	455
1N2860	R,Si	458
1N2861	R,Si	459
1N2862	R,Si	462
1N2863	R,Si	463
1N2864	R,Si	464
1N3128	TD,Ge	402
1N3129	TD,Ge	391
1N3130	TD,Ge	384
1N3193	R,Si	456
1N3194	R,Si	460
1N3195	R,Si	465
1N3196	R,Si	467
1N3253	R,Si	457
1N3254	R,Si	461
1N3255	R,Si	466
1N3256	R,Si	468
1N3563	R,Si	469
1N3754	R,Si	450
1N3755	R,Si	451
1N3756	R,Si	452
1N3847	TD,Ge	400
1N3848	TD,Ge	395
1N3849	TD,Ge	389
1N3850	TD,Ge	383
1N3851	TD,Ge	380
1N3852	TD,Ge	401
1N3853	TD,Ge	396
1N3854	TD,Ge	390
1N3855	TD,Ge	385
1N3856	TD,Ge	381
1N3857	TD,Ge	403
1N3858	TD,Ge	398
1N3859	TD,Ge	393
1N3860	TD,Ge	387
1N3861	TR,Ge	412
1N3862	TR,Ge	413
1N3863	TR,Ge	409
2N104	T-PNP-Ge	1
2N109	T-PNP-Ge	33
2N139	T-PNP-Ge	173
2N140	T-PNP-Ge	195
2N173	T-PNP-Ge	343 60
2N174 (+)	T-PNP-Ge	344 61
2N175	T-PNP-Ge	1
2N176	T-PNP-Ge	45
2N215	T-PNP-Ge	8
2N217	T-PNP-Ge	34
2N218	T-PNP-Ge	174
2N219	T-PNP-Ge	196
2N220 (+)	T-PNP-Ge	2
2N269 (X)	T	243
2N270	T-PNP-Ge	36
2N274 (+)	T-PNP-Ge	165
2N277	T-PNP-Ge	339 62
2N278	T-PNP-Ge	341 63
2N301	T	56
2N301A	T	57
2N307 (X)	T	
2N351	T-PNP-Ge	46
2N370	T-PNP-Ge	163
2N371	T-PNP-Ge	188
2N372	T-PNP-Ge	189
2N374 (X)	T	194
2N376	T-PNP-Ge	47
2N384 (+)	T-PNP-Ge	156
2N388 (+)	T-NPN-Ge	258
2N388A	T-NPN-Ge	259
2N395	T-PNP-Ge	231
2N396	T-PNP-Ge	237
2N396A	T-PNP-Ge	238
2N397	T-PNP-Ge	241
2N398 (+)	T-PNP-Ge	227
2N398A	T-PNP-Ge	228
2N398B	T-PNP-Ge	229
2N404 (+)	T-PNP-Ge	234
2N404A	T-PNP-Ge	235
2N405	T-PNP-Ge	9
2N406	T-PNP-Ge	10
2N407	T-PNP-Ge	31
2N408	T-PNP-Ge	32
2N409	T-PNP-Ge	175
2N410	T-PNP-Ge	176
2N411	T-PNP-Ge	197
2N412	T-PNP-Ge	198
2N414	T-PNP-Ge	240
2N441	T-PNP-Ge	340 64
2N442	T-PNP-Ge	342 65
2N443	T-PNP-Ge	345 66
2N578 (X)	T	
2N581	T-PNP-Ge	236
2N582	T-PNP-Ge	244
2N583 (X)	T	
2N584 (X)	T	
2N585	T-PNP-Ge	253
2N586	T-PNP-Ge	230

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Type	Class	Data Starts on Page 504 See Line No.
2N591	T-PNP-Ge	3
2N643 (X)	T	
2N644 (X)	T	
2N645 (X)	T	
2N646**	T	
2N647	T-NPN-Ge	71
2N649	T-NPN-Ge	72
2N681	SCR	439
2N682	SCR	440
2N683	SCR	441
2N684	SCR	442
2N685	SCR	443
2N686	SCR	444
2N687	SCR	445
2N688	SCR	446
2N689	SCR	447
2N690	SCR	448
2N697	T-NPN-Si	294
2N699	T-NPN-Si	226 74
2N705	T-PNP-Ge	287
2N706	T-NPN-Si	264
2N706A	T-NPN-Si	266
2N708	T-NPN-Si	276
2N709	T-NPN-Si	282
2N710	T-PNP-Ge	288
2N711	T-PNP-Ge	286
2N718A	T-NPN-Si	292 18
2N720A	T-NPN-Si	293 19
2N794 (X)	T	
2N795 (X)	T	
2N796 (X)	T	
2N828	T-PNP-Ge	289
2N834	T-NPN-Si	278
2N914	T-NPN-Si	274
2N917	T-NPN-Si	146
2N918	T-NPN-Si	145
2N934 (X)	T	248
2N955	T-NPN-Ge	290
2N955A	T-NPN-Ge	291
2N960 (X)	T	
2N961 (X)	T	
2N962 (X)	T	
2N963 (X)	T	
2N964 (X)	T	
2N965 (X)	T	
2N966 (X)	T	
2N967 (X)	T	
2N1010	T-NPN-Ge	11
2N1023	T-PNP-Ge	153
2N1066	T-PNP-Ge	154
2N1067 (X)	T	
2N1068 (X)	T	
2N1069 (X)	T	
2N1070 (X)	T	
2N1090	T-PNP-Ge	257
2N1091	T-PNP-Ge	261
2N1092 (X)	T	
2N1099	T-PNP-Ge	346 67
2N1100	T-PNP-Ge	347 68
2N1169	T-NPN-Si	
2N1170	T-NPN-Si	
2N1177	T-PNP-Ge	152
2N1178	T-PNP-Ge	148 186
2N1179	T-PNP-Ge	149 187
2N1180	T-PNP-Ge	168
2N1183 (+)	T-PNP-Ge	310 39
2N1183A (+)	T-PNP-Ge	312 40
2N1183B (+)	T-PNP-Ge	314 41
2N1184 (+)	T-PNP-Ge	311 42
2N1184A (+)	T-PNP-Ge	313 43
2N1184B (+)	T-PNP-Ge	315 44
2N1213 (X)	T	
2N1214 (X)	T	
2N1215 (X)	T	
2N1216 (X)	T	
2N1224 (+)	T-PNP-Ge	166
2N1225 (+)	T-PNP-Ge	160
2N1226	T-PNP-Ge	164
2N1300	T-PNP-Ge	247
2N1301	T-PNP-Ge	249
2N1302 (+)	T-NPN-Ge	254
2N1303 (+)	T-PNP-Ge	232
2N1304 (+)	T-NPN-Ge	260
2N1305 (+)	T-PNP-Ge	239
2N1306 (+)	T-NPN-Ge	262
2N1307 (+)	T-PNP-Ge	242
2N1308 (+)	T-NPN-Ge	263
2N1309 (+)	T-PNP-Ge	245
2N1319 (X)	T	
2N1358	T-PNP-Ge	348 69
2N1384	T-PNP-Ge	246
2N1395	T-PNP-Ge	167
2N1396	T-PNP-Ge	161
2N1397	T-PNP-Ge	155
2N1412 (+)	T-PNP-Ge	349 70
2N1450 (X)	T	
2N1479 (+)	T-NPN-Si	300 77
2N1480 (+)	T-NPN-Si	305 78
2N1481 (+)	T-NPN-Si	301 79
2N1482 (+)	T-NPN-Si	306 80
2N1483 (+)	T-NPN-Si	324 95
2N1484 (+)	T-NPN-Si	328 96
2N1485 (+)	T-NPN-Si	325 97
2N1486 (+)	T-NPN-Si	329 98
2N1487 (+)	T-NPN-Si	350 114
2N1488 (+)	T-NPN-Si	356 115
2N1489 (+)	T-NPN-Si	351 116
2N1490 (+)	T-NPN-Si	357 117
2N1491	T-NPN-Si	221
2N1492	T-NPN-Si	220
2N1493 (+)	T-NPN-Si	219
2N1511 (+)	T-NPN-Si	352 118
2N1512 (+)	T-NPN-Si	358 119
2N1513 (+)	T-NPN-Si	353 120
2N1514 (+)	T-NPN-Si	359 121
2N1524	T-PNP-Ge	178
2N1525	T-PNP-Ge	179
2N1526	T-PNP-Ge	192
2N1527	T-PNP-Ge	193
2N1605	T-NPN-Ge	255
2N1605A	T-NPN-Ge	256
2N1613	T-NPN-Si	370 295
2N1631	T-PNP-Ge	169
2N1632	T-PNP-Ge	170
2N1637	T-PNP-Ge	171
2N1638	T-PNP-Ge	180
2N1639	T-PNP-Ge	194
2N1683	T-PNP-Ge	252
2N1700	T-NPN-Si	302 81
2N1701	T-NPN-Si	326 99
2N1702	T-NPN-Si	354 122
2N1703	T-NPN-Si	355 123
2N1708	T-NPN-Si	268
2N1711	T-NPN-Si	75
2N1768	T-NPN-Si	336 111
2N1769	T-NPN-Si	338 112
2N1770	SCR	418
2N1771	SCR	419
2N1772	SCR	420
2N1773	SCR	421
2N1774	SCR	422
2N1775	SCR	423
2N1776	SCR	424
2N1777	SCR	425
2N1778	SCR	426
2N1842A	SCR	430
2N1843A	SCR	431
2N1844A	SCR	432
2N1845A	SCR	433
2N1846A	SCR	434
2N1847A	SCR	435
2N1848A	SCR	436
2N1849A	SCR	437
2N1850A	SCR	438
2N1853 (+)	T-PNP-Ge	250
2N1854 (+)	T-PNP-Ge	251
2N1893	T-NPN-Si	296
2N1905	T-PNP-Ge	318 58
2N1906	T-PNP-Ge	319 59
2N2015 (+)	T-NPN-Si	368 132
2N2016 (+)	T-NPN-Si	369 133
2N2037**		
2N2102	T-NPN-Si	372 307 27
2N2147	T-PNP-Ge	50
2N2148	T-PNP-Ge	51
2N2205	T-NPN-Si	269
2N2206	T-NPN-Si	271
2N2208**	T	
2N2210**	T	
2N2270	T-NPN-Si	371 28 303
2N2273 (+)	T-PNP-Ge	150
2N2304**	T	
2N2305**	T	
2N2338	T-NPN-Si	134 367
2N2339	T-NPN-Si	113 337
2N2305	T-NPN-Si	29 304
2N2475	T-NPN-Si	283
2N2476	T-NPN-Si	272
2N2477	T-NPN-Si	273
2N2482	T-NPN-Ge	162
2N594**	T	
2N2613	T-PNP-Ge	4
2N2614	T-PNP-Ge	5
2N2631	T-NPN-Si	224
2N2708	T-NPN-Si	142
2N2857	T-NPN-Si	139
2N2869/2N301	T-PNP-Ge	56 316
2N2870/2N301A	T-PNP-Ge	57 317
2N2873 (X)	T	
2N2876	T-NPN-Si	223
2N2895	T-NPN-Si	20
2N2896	T-NPN-Si	21
2N2897	T-NPN-Si	22
2N2898	T-NPN-Si	23
2N2899	T-NPN-Si	24
2N2900	T-NPN-Si	25
2N2938	T-NPN-Si	284
2N2953	T-PNP-Ge	37
2N3053/40053	T-NPN-Si	30 299
2N3054	T-NPN-Si	100 327
2N3055	T-NPN-Si	126 362
2N3118	T-NPN-Si	225
2N3119	T-NPN-Si	297
2N3228	SCR	416
2N3229	T-NPN-Si	222
2N3230	T-NPN-Si	330
2N3231	T-NPN-Si	323
2N3241	T-NPN-Si	12
2N3242	T-NPN-Si	13
2N3261	T-NPN-Si	285
2N3262	T-NPN-Si	320
2N3263	T-NPN-Si	124 360
2N3264	T-NPN-Si	125 361
2N3265	T-NPN-Si	130 365
2N3266	T-NPN-Si	131 366
2N3375	T-NPN-Si	203
2N3435**	T-NPN-Si	
2N3439	T-NPN-Si	308 373
2N3440	T-NPN-Si	309 374
2N3441	T-NPN-Si	331
2N3442	T-NPN-Si	127 363
2N3478	T-NPN-Si	138
2N3512	T-NPN-Si	280
2N3525	SCR	417
2N3528	SCR	414

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Type	Class	Data Starts on Page 504 See Line No.
2N3529	SCR	415
2N3553	T-NPN-Si	208
2N3583	T-NPN-Si	94 333
2N3584	T-NPN-Si	93 334
2N3585	T-NPN-Si	82 335
2N3600	T-NPN-Si	144
2N3632	T-NPN-Si	206
2N3668	SCR	427
2N3669	SCR	428
2N3670	SCR	429
2N3733	T-NPN-Si	202
3N98	FET	136 377
3N99	FET	137 378
3907/2N404	T-PNP-Ge	Note
40004	T-PNP-Ge	157
40005	T-PNP-Ge	158
40006	T-PNP-Ge	159
40022	T-PNP-Ge	52
40050	T-PNP-Ge	53
40051	T-PNP-Ge	54
40054	TR-Ga-As	410
40055	TR-Ga-As	407
40056	TR-Ga-As	411
40057	TR-Ga-As	408
40058	TD-Ga-As	386
40059	TD-Ga-As	382
40060	TD-Ga-As	392
40061	TD-Ga-As	388
40062	TD-Ga-As	397
40063	TD-Ga-As	394
40064	TD-Ga-As	404
40065	TD-Ga-As	399
40076	TD-Ga-As	379
40077	TD,Ge	406
40078	TD,Ge	405
40080	T-NPN-Si	181
40081	T-NPN-Si	182
40082	T-NPN-Si	183 298
40084	T-NPN-Si	26 73
40108 (R)	R,Si	511,512
40109 (R)	R,Si	513,514
40110 (R)	R,Si	515,516
40111 (R)	R,Si	517,518
40112 (R)	R,Si	519,520
40113 (R)	R,Si	521,522
40114 (R)	R,Si	523,524
40115 (R)	R,Si	525,526
40116 (R)	R,Si	527,528
40208 (R)	R,Si	543,544
40209 (R)	R,Si	545,546
40210 (R)	R,Si	547,548
40211 (R)	R,Si	549,550
40212 (R)	R,Si	551,552
40213 (R)	R,Si	553,554
40214 (R)	R,Si	555,556
40216	SCR	449
40217	T-NPN-Si	265
40218	T-NPN-Si	267
40219	T-NPN-Si	277
40220	T-NPN-Si	279
40221	T-NPN-Si	275
40222	T-NPN-Si	270
40231	T-NPN-Si	14
40232	T-NPN-Si	15
40233	T-NPN-Si	16
40234	T-NPN-Si	17
40242	T-NPN-Si	147
40243	T-NPN-Si	199
40244	T-NPN-Si	200
40245	T-NPN-Si	184
40246	T-NPN-Si	185
40250	T-NPN-Si	102 332
40251	T-NPN-Si	101 128 364
40253	T-PNP-Ge	38
40254	T-PNP-Ge	55
40255	T-NPN-Si	321 375
40256	T-NPN-Si	322 376
40261	T-PNP-Ge	190
40262	T-PNP-Ge	172
40263	T-PNP-Ge	6
40264	T-NPN-Si	76
40265	R,Si	453
40266	R,Si	472
40267	R,Si	473
40268	T-PNP-Ge	151
40269	T-PNP-Ge	233
40279	T-NPN-Si	205
40280	T-NPN-Si	212
40281	T-NPN-Si	211
40282	T-NPN-Si	210
40283	T-NPN-Si	281
40290	T-NPN-Si	217
40291	T-NPN-Si	218
40292	T-NPN-Si	214
40294	T-NPN-Si	140
40295	T-NPN-Si	143
40296	T-NPN-Si	141
40305	T-NPN-Si	209
40306	T-NPN-Si	204
40307	T-NPN-Si	207
40309	T-NPN-Si	83
40310	T-NPN-Si	103
40311	T-NPN-Si	94
40312	T-NPN-Si	104
40313	T-NPN-Si	107
40314	T-NPN-Si	85
40315	T-NPN-Si	86
40316	T-NPN-Si	105
40317	T-NPN-Si	87
40318	T-NPN-Si	108
40319	T-PNP-Si	135
40320	T-NPN-Si	88
40321	T-NPN-Si	89
40322	T-NPN-Si	109
40323	T-NPN-Si	90
40324	T-NPN-Si	106
40325	T-NPN-Si	129
40326	T-NPN-Si	91
40327	T-NPN-Si	92
40328	T-NPN-Si	110
40329	T-PNP-Ge	35
40330	T-NPN-Si	215
40331	T-NPN-Si	216
40332	T-NPN-Si	213
CR101	RS	585
CR102	RS	587
CR103	RS	594
CR104	RS	602
CR105	RS	610
CR106	RS	611
CR107	RS	619
CR108	RS	624
CR109	RS	628
CR110	RS	631
CR201	RS	586
CR203	RS	595
CR204	RS	603
CR206	RS	612
CR208	RS	625
CR210	RS	632
CR212	RS	633
CR301	RS	588
CR302	RS	596
CR303	RS	604
CR304	RS	613
CR305	RS	620
CR306	RS	626
CR307	RS	629
CR311	RS	589
CR312	RS	597
CR313	RS	605
CR314	RS	614
CR315	RS	621
CR316	RS	627
CR317	RS	630
CR321	RS	590
CR322	RS	598
CR323	RS	606
CR324	RS	615
CR325	RS	622
CR331	RS	591
CR332	RS	599
CR333	RS	607
CR334	RS	616
CR335	RS	623
CR341	RS	592
CR342	RS	600
CR343	RS	608
CR344	RS	617
CR351	RS	593
CR352	RS	601
CR353	RS	609
CR354	RS	618
CR401	RB	634
CR402	RB	635
CR403	RB	636
CR404	RB	637
CR405	RB	638
CR406	RB	639
CR407	RB	640
CR408	RB	641
CR409	RB	642
CR501	RB	643
CR502	RB	644
CR503	RB	645
CR504	RB	646
CR505	RB	647
CR506	RB	648

+ Military Version Available. (See Page 16) (R) Reverse Polarity Version. ** Contact Your RCA Field Office. (X) Not Recommended for New Equipment Design.

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APPLICATION GUIDE FOR RCA TRANSISTORS

AUDIO-FREQUENCY APPLICATIONS

Small-Signal -- Class A Types

Germanium PNP

2N104	2N220	2N591	40263
2N175	2N405	2N2613	
2N215	2N406	2N2614	

Germanium NPN

2N1010

Silicon NPN

2N718A	2N2896	2N3053	40232
2N720A	2N2897	2N3241	40233
2N2102	2N2898	2N3242	40234
2N2270	2N2899	40084	3N98*
2N2405	2N2900	40231	3N99*
2N2895			

Large-Signal Power Amplifier Types -- Classes A & B

Germanium PNP

Dissipation up to 50 watts

2N109	2N407	2N1184B	40022□
2N176	2N408	2N2147Ø	40050□
2N217	2N1183	2N2148Ø	40051□
2N270	2N1183A	2N2869□	40253
2N351	2N1184	2N2870□	40254□
2N376	2N1184A	2N2953	40329

Dissipation 50 watts and higher

2N173	2N441	2N1099	2N1412
2N174	2N442	2N1100	2N1905
2N277	2N443	2N1358	2N1906
2N278			

Germanium NPN — **Silicon PNP**

2N647	2N649	40319

Silicon NPN

Dissipation up to 5 watts

2N1479	2N1711	40311	40321
2N1480	2N3585	40314	40323
2N1481	40084	40315	40326
2N1482	40264□	40317	40327
2N1700	40309	40320	

Dissipation 5 to 50 watts

2N1483	2N1769	40250	40318
2N1484	2N2339	40251	40322
2N1485	2N3054	40310	40324
2N1486	2N3583	40313	40328
2N1701	2N3584	40316	
2N1768			

Dissipation 50 watts and higher

2N1487	2N1513	2N2016	2N3265
2N1488	2N1514	2N2338	2N3266
2N1488	2N1702	2N3055	2N3442
2N1489	2N1703	2N3263	40251
2N1490	2N2015	2N3264	40325
2N1512			

RADIO-FREQUENCY APPLICATIONS

Small-Signal UHF & VHF Types

Germanium PNP

2N384	2N1178	2N2273	40268
2N1023	2N1179	40004	
2N1066	2N1225	40005	
2N1177	2N1397	40006	

Germanium NPN

2N2482

Silicon NPN

2N917	2N2857	40242	40296
2N918	2N3478	40294	
2N2708	2N3600	40295	

Large-Signal UHF & VHF Types

Silicon NPN

2N699	2N3229	40280	40305
2N1491	2N3375	40281	40306
2N1492	2N3553	40282	40307
2N1493	2N3632	40290	40330
2N2631	2N3733	40291	40331
2N2876			

High-Frequency Types

Germanium PNP

2N274	2N1066	2N1395	2N1632
2N370	2N1224	2N1396	2N1637
2N384	2N1225	2N1397	2N2273
2N1023	2N1226	2N1631	

Silicon NPN

40243	40245	40080	40082
40244	40246	40081	

Mixer, Oscillator, and Converter Types

Germanium PNP

2N140	2N384	2N1179	2N1397
2N219	2N411	2N1224	2N1426
2N274	2N412	2N1225	2N1526
2N371	2N1023	2N1226	2N1527
2N372	2N1066	2N1395	2N1639
2N374	2N1178	2N1396	40261

Silicon NPN

40243	40244

IF Amplifier Types

Germanium PNP

2N139	2N410	2N1225	2N1524
2N218	2N1023	2N1226	2N1525
2N274	2N1066	2N1395	2N1638
2N384	2N1180	2N1396	40262
2N409	2N1224	2N1397	

Silicon NPN

40245	40246

Video-Amplifier Types

Germanium PNP

2N274	2N1023	2N1225	2N1396
2N384	2N1066	2N1226	2N1397
2N699	2N1224	2N1395	

Silicon NPN

2N1491	2N2102	2N2857	40245
2N1492	2N2708	2N3118	40246
2N1493			

POWER SWITCHING APPLICATIONS

Dissipation up to 5 watts

Silicon NPN Medium-Voltage Type (< 100 volts)

2N697	2N720A	2N1613	2N3119

* N-Channel Depletion Type.

□ High-Fidelity Power-Amplifier Type.

Ø High-Power Extended Frequency Range Type.

APPLICATION GUIDE FOR RCA TRANSISTORS

POWER SWITCHING APPLICATIONS (Cont'd)

Silicon NPN High-Voltage Type (> 100 volts)

2N718A	2N1893		

Dissipation 5 to 50 watts

Germanium PNP Medium-Voltage Types (< 100 volts)

2N1183	2N1183B	2N1184A	2N2869
2N1183A	2N1184	2N1184B	2N2870

Silicon NPN Medium-Voltage Types (< 100 volts)

2N1479	2N1700	2N2339	2N3230
2N1481	2N1701	2N3053	40082
2N1483	2N1768	2N3054	40250
2N1485	2N2270		

Silicon NPN High-Voltage Types (> 100 volts)

2N1480	2N1486	2N2405	2N3262
2N1482	2N1769	2N3231	2N3441
2N1484	2N2102		

Silicon NPN Very-High-Voltage Types (> 250 volts)

2N3439	2N3583	2N3585	40256
2N3440	2N3584	40255	

Dissipation 50 watts and higher

Germanium PNP Medium-Voltage Types (< 100 volts)

2N173	2N278	2N443	2N1358
2N174	2N441	2N1099	2N1412
2N277	2N442	2N1100	2N1905

Germanium PNP High-Voltage Type (> 100 volts)

2N1906

Silicon NPN Medium-Voltage Types (< 100 volts)

2N1487	2N1511	2N1702	2N2338
2N1488	2N1512	2N1703	2N3055
2N1489	2N1513	2N2015	40251
2N1490	2N1514		

Silicon NPN High-Voltage Types (> 100 volts)

2N2016	2N3264	2N3266	2N3442
2N3263	2N3265		

Types for: DC-to-DC Converters -- Inverters -- Choppers -- Relay Controls

Voltage and Current Regulators -- Servo Amplifiers

Germanium PNP

2N173	2N442	2N1183	2N1184A
2N174	2N443	2N1183A	2N1184B
2N277	2N1099	2N1183B	2N1358
2N278	2N1100	2N1184	2N1412
2N441			

Silicon NPN

2N1487	2N1701	2N2339	2N3441
2N1488	2N1702	2N3054	2N3442
2N1489	2N1703	2N3055	40255
2N1490	2N1768	2N3263	40256
2N1511	2N1769	2N3264	2N3583
2N1512	2N2015	2N3265	2N3584
2N1513	2N2016	2N3266	2N3585
2N1514	2N2338	2N3439	3N98*
2N1700		2N3440	3N99*

Differential and Operational Amplifier Types

Silicon NPN

2N1613	2N3439	40255	3N98*
2N2102	2N3440	40256	3N99*
2N2270			

COMPUTER APPLICATIONS

Core-Driver Types

Silicon NPN

2N2476	2N3262	2N3512	40283
2N2477			

Switching Types

High-Voltage

Germanium PNP

2N398	2N398A	2N398B	2N586

Medium-Speed

Germanium PNP

2N269	2N404A	2N1301	2N1384
2N395	2N414	2N1303	2N1683
2N396	2N581	2N1305	2N1853
2N396A	2N582	2N1307	2N1854
2N397	2N934	2N1309	40269
2N404	2N1300		

Germanium NPN

2N388	2N1090	2N1304	2N1605
2N388A	2N1091	2N1306	2N1605A
2N585	2N1302	2N1308	

High-Speed

Germanium PNP

2N705	2N710	2N711	2N828

Germanium NPN

2N955	2N955A

Silicon NPN

2N706	2N914	2N2938	40219
2N706A	2N1708	2N3261	40220
2N708	2N2205	40217	40221
2N709	2N2206	40218	40222
2N834	2N2475		

POWER CONTROL APPLICATIONS

Silicon Controlled Rectifiers (Thyristors)

For Low-Voltage Applications

2N681	2N1770	2N1842A	2N1845A
2N682	2N1771	2N1843A	2N3668
2N683	2N1772	2N1844A	40216
2N684	2N1773		

For 120-Volt Line Operation

2N685	2N1774	2N1847A	2N3528
2N686	2N1775	2N1848A	2N3669
2N687	2N1846A	2N3228	

For 240-Volt Line Operation

2N688	2N1777	2N1850A	2N3670
2N689	2N1778	2N3525	
2N1776	2N1849A	2N3529	

* N-Channel Depletion Type.

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RCA TRANSISTORS FOR AF APPLICATIONS

	RCA Type	Structure	Package	MAX. RATINGS P_T @ 25°C (mw)	V_{CB} (volts)	I_C (amp)	CHARACTERISTICS h_{fe} (typ.) @ I_C h_{fe}	@ I_C (amp)	I_{CBO} (max.) (μa)	f_T (typ.) (Mc)
	SMALL-SIGNAL TYPES (Class A)			P_T: to 150 mw						
	Germanium PNP									
1	2N175	Alloy	TO-40	20	10	2	65	0.5	12	0.85■
2	2N220	Alloy	TO-1	20	10	2	65	0.5	12	0.85■
3	2N591	Alloy	TO-1	50	32	20	70	2.0	7	0.7■
4	2N2613	Alloy	TO-1	100	30	50	200	0.5	5	10■
5	2N2614	Alloy	TO-1	100	40	50	160	1	5	10■
6	40263	Alloy	TO-1	120	20	50	160	1	-	10■
7	2N104	Alloy	TO-40	150	30	50	44	1	10	0.7■
8	2N215	Alloy	TO-1	150	30	50	44	1	10	0.7■
9	2N405	Alloy	TO-40	150	20	35	35	1	14	0.65■
10	2N406	Alloy	TO-1	150	20	35	35	1	14	0.65■
	Germanium NPN									
11	2N1010	Alloy	TO-1	20	10	2	35	0.3	10	2.0■
	Silicon NPN			P_T: to 5 watts						
12	2N3241	P	A	500	30	100	150	10	0.1	60
13	2N3242	P	A	500	30	200	150	10	0.01	60
14	40231	P	A	500	18	100	80	2	0.5	60
15	40232	P	A	500	18	100	175	2	0.5	60
16	40233	P	A	500	18	100	175	2	0.25	60
17	40234	P	A	500	18	100	80	2	0.25	60
18	2N718A	TDP	TO-18	1.8 watts	75	–	35 min.	5	0.01	100
19	2N720A	TDP	TO-18	1.8 watts	120	–	30 min.	1.0	0.01	100
20	2N2895	TDP	TO-18	1.8 watts	120	1 amp	50 min.	5	0.002	120 min.
21	2N2896	TDP	TO-18	1.8 watts	140	1	50 min.	5	0.01	120 min.
22	2N2897	TDP	TO-18	1.8 watts	60	1	50 min.	5	0.05	100 min.
23	2N2898	TDP	TO-46	1.8 watts	120	1	50 min.	5	0.002	120 min.
24	2N2899	TDP	TO-46	1.8 watts	140	1	50 min.	5	0.01	120 min.
25	2N2900	TDP	TO-46	1.8 watts	60	1	50 min.	5	0.05	100 min.
26	40084	TDP	TO-18	1.8 watts	60	1	5 min.	50	0.25	100 min.
27	2N2102	TDP	TO-5	5.0 watts	120	1	40 min.	1	0.002	120 min.
28	2N2270	TDP	TO-5	5.0 watts	60	1	30 min.	5	0.1	100 min.
29	2N2405	TDP	TO-5	5.0 watts	120	1	30 min.	1	0.01	120 min.
30	2N3053	TDP	TO-5	5.0 watts	60	0.7	5 min.	50	0.25	100 min.
	LARGE-SIGNAL TYPES (Classes A & B)			P_T: to 50 watts						
	Germanium PNP						h_{FE}			
31	2N407	Alloy	TO-40	0.15	20	0.07	65	0.05	14	-
32	2N408	Alloy	TO-1	0.15	20	0.07	65	0.05	14	-
33	2N109	Alloy	TO-40	0.165	35	0.15	75	0.05	14	1.0■
34	2N217	Alloy	TO-1	0.165	35	0.15	75	0.05	14	1.0■
35	40329	Alloy	TO-1	0.25	-	0.10	90	0.025	14	1.5
36	2N270	Alloy	TO-7	0.25	25	0.075	70	0.15	16	1

	RCA Type	Structure	Package	MAX. RATINGS P_T @ 25°C (mw)	V_{CB} (volts)	I_C (amp)	CHARACTERISTICS h_{FE} (typ.) @ I_C h_{FE}	@ I_C (amp)	I_{CBO} (max.) (μa)	f_T (typ.) (Mc)
	LARGE-SIGNAL TYPES (Classes A & B)			P_T: to 50 watts						
	Germanium PNP									
37	2N2953	Alloy	TO-1	0.30	30	0.15	350	0.01	5	1
38	40253	Alloy	TO-1	0.65	25	0.50	75	0.4	14	1
39	2N1183	Alloy	TO-8	7.5	45	3	40	0.4	30	0.5■ min.
40	2N1183A	Alloy	TO-8	7.5	60	3	40	0.4	30	0.5■ min.
41	2N1183B	Alloy	TO-8	7.5	80	3	40	0.4	30	0.5■ min.
42	2N1184	Alloy	TO-8	7.5	45	3	80	0.4	30	0.5■ min.
43	2N1184A	Alloy	TO-8	7.5	60	3	80	0.4	30	0.5■ min.
44	2N1184B	Alloy	TO-8	7.5	80	3	80	0.4	30	0.5■ min.
45	2N176	Alloy	TO-3	10	40	3	63	0.5	3 ma	-
46	2N351	Alloy	TO-3	10	40	3	65	0.7	3 ma	-
47	2N376	Alloy	TO-3	10	40	3	78	0.7	3 ma	-
48	2N301	See 2N2869/2N301								
49	2N301A	See 2N2870/2N301A								
50	2N2147	DF	TO-3	12.5	75	5	150	1	1 ma	4.0
51	2N2148	DF	TO-3	12.5	60	5	80	1	100	3.0
52	40022	Alloy	TO-3	12.5	32	5	50	1	500	0.3
53	40050	Alloy	TO-3	12.5	40	5	90	1	500	0.5
54	40051	Alloy	TO-3	12.5	50	5	90	1	1 ma	0.5
55	40254	Alloy	TO-3	12.5	32	5	70	1	3 ma	0.3
56	2N2869/ 2N301	Alloy	TO-3	30	60	10	90	1	500	0.45
57	2N2870/ 2N301A	Alloy	TO-3	30	80	10	90		500	0.45
58	2N1905	DF	TO-3	50	60	10	90	1	500	7.5
59	2N1906	DF	TO-3	50	100	10	125	5	500	7.5
60	2N173	Alloy	TO-36	150	60	15	25	12	100 (typ.)	-
61	2N174	Alloy	TO-36	150	80	15	20	12	100 (typ.)	-
62	2N277	Alloy	TO-36	150	40	15	25	12	100 (typ.)	-
63	2N278	Alloy	TO-36	150	50	15	25	12	100 (typ.)	-
64	2N441	Alloy	TO-36	150	40	15	20	12	100 (typ.)	-
65	2N442	Alloy	TO-36	150	50	15	20	12	100 (typ.)	-
66	2N443	Alloy	TO-36	150	60	15	20	12	100 (typ.)	-
67	2N1099	Alloy	TO-36	150	80	15	25	12	100 (typ.)	-
68	2N1100	Alloy	TO-36	150	100	15	20	12	100 (typ.)	-
69	2N1358	Alloy	TO-36	150	80	15	55	1.2	200	-
70	2N1412	Alloy	TO-36	150	100	15	20	12	100 (typ.)	-
	Germanium NPN									
71	2N647	Alloy	TO-1	0.1	25	0.05	70	0.050	-	-
72	2N649	Alloy	TO-1	0.1	20	0.05	65	0.050	-	-

■ f_{hfb} P = Planar DF = Drift Field TDP = Triple Diffused Planar

RCA TRANSISTORS FOR AF APPLICATIONS

	RCA Type	Structure	Package	MAX. RATINGS P_T @25°C watts	V_{CB} volts	I_C amp	CHARACTERISTICS h_{FE}(min.) @ I_C h_{fe}	amp	I_{CBO} (max.) μa	f_T (typ.) Mc
	LARGE-SIGNAL TYPES (Classes A & B) P_T: to 50 watts									
	Silicon NPN									
73	40084	P	TO-18	1.8	60	1.0	50	0.15	0.25	100 min.
74	2N699	P	TO-5	2	120	-	40	0.15	2	50
75	2N1711	TD	TO-5	3	75	1.0	100	0.15	0.01	70 min.
76	40264	DJ	E	4	300	0.05	60 typ.	0.1	100	25
77	2N1479	DJ	TO-5	5	60	1.5	20	0.2	10	-
78	2N1480	DJ	TO-5	5	100	1.5	20	0.2	10	-
79	2N1481	DJ	TO-5	5	60	1.5	35	0.2	10	-
80	2N1482	DJ	TO-5	5	100	1.5	35	0.2	10	-
81	2N1700	DJ	TO-5	5	60	1	20	0.1	75	-
82	2N3585	TD	TO-66	5	500	2	40	0.1	5 ma	10 min.
83	40309	TDP	TO-5	5	18▲	0.7	70	0.05	0.25	100
84	40311	TDP	TO-5	5	30▲	0.7	70	0.05	0.25	100
85	40314	TDP	TO-5	5	40▲	0.7	35	0.01	0.25	100
86	40315	TDP	TO-5	5	35▲	0.7	70	0.05	0.25	100
87	40317	TDP	TO-5	5	40▲	0.7	40	0.01	0.25	100
88	40320	TDP	TO-5	5	40▲	0.7	40	0.01	0.25	-
89	40321	TDP	TO-5	5	300▲	1	25	0.02	100	-
90	40323	TDP	TO-5	5	18▲	0.7	70	0.05	0.25	100
91	40326	TDP	TO-5	5	40▲	0.7	40	0.01	0.25	-
92	40327	TDP	TO-5	5	300▲	1	40	0.01	5	-
93	2N3584	DJ	TO-66	7.5	375	2	40	0.1	5 ma	10 min.
94	2N3583	DJ	TO-66	15	250	2	40	0.1	10 ma	10 min.
95	2N1483	DJ	TO-8	25	60	3	20	0.75	15	-
96	2N1484	DJ	TO-8	25	100	3	20	0.75	15	-
97	2N1485	DJ	TO-8	25	60	3	35	0.75	15	-
98	2N1486	DJ	TO-8	25	100	3	35	0.75	15	-
99	2N1701	DJ	TO-8	25	60	2.5	20	0.3	100	-
100	2N3054	DJ	TO-66	25	90	4	25	0.5	-	1.0
101	40251	DJ	TO-3	29	40▲	15	15	8	5 ma	-
102	40250	DJ	TO-66	29	40▲	4	25	1.5	1 ma	1
103	40310	DJ	TO-66	29	35▲	4	20	1.0	10	0.75
104	40312	DJ	TO-66	29	60	4	20	1.0	10	0.75
105	40316	DJ	TO-66	29	40	4	20	1.0	10	0.75
106	40324	DJ	TO-66	29	35	4	20	1.0	10	0.75
107	40313	TD	TO-66	35	300	2	40	0.1	5 ma	-
108	40318	TD	TO-66	35	300	2	50	0.5	-	-
109	40322	TD	TO-66	35	300	2	75	0.5	-	-
110	40328	TD	TO-66	35	300	2	20	0.2	-	-
111	2N1768	DJ	TO-57	40	40	3.5	35	0.75	15	-
112	2N1769	DJ	TO-57	40	55	3.5	35	0.7	15	-
113	2N2339	DJ	TO-57	40	40	2.5	20	0.3	100	-

	RCA Type	Structure	Package	MAX. RATINGS P_T @25°C watts	V_{CB} volts	I_C amp	CHARACTERISTICS h_{FE}(min.) @ I_C h_{fe}	amp	I_{CBO} (max.) μa	f_T (typ.) Mc
	LARGE-SIGNAL TYPES (Classes A & B) P_T: 50 to 150 watts									
	Silicon NPN									
114	2N1487	DJ	TO-3	75	40	6	15	1.5	25	-
115	2N1488	DJ	TO-3	75	55	6	15	1.5	25	-
116	2N1489	DJ	TO-3	75	40	6	25	1.5	25	-
117	2N1490	DJ	TO-3	75	55	6	25	1.5	25	-
118	2N1511	DJ	TO-36	75	40	6	15	1.5	25	-
119	2N1512	DJ	TO-36	75	55	6	15	1.5	25	-
120	2N1513	DJ	TO-36	75	40	6.0	25	1.5	25	-
121	2N1514	DJ	TO-36	75	55	6.0	25	1.5	25	-
122	2N1702	DJ	TO-3	75	40	5	15	0.8	200	-
123	2N1703	DJ	TO-36	75	40	5	15	0.8	200	-
124	2N3263	EX	C	75	90	25	25	15	4 ma	20 min.
125	2N3264	EX	C	75	60	25	20	15	10 ma	20 min.
126	2N3055	DJ	TO-3	115	60	15	20	4	-	0.5
127	2N3442	DJ	TO-3	117	140	10	-	-	5 ma	-
128	40251	DJ	TO-3	117	40	15	15	8	5 ma	0.5
129	40325	DJ	TO-3	117	35	15	12	8	5 ma	-
130	2N3265	EX	TO-63	125	90	25	25	15	4 ma	20 min.
131	2N3266	EX	TO-63	125	60	25	20	15	10 ma	20 min.
132	2N2015	DJ	TO-36	150	50	10	15	5	50	-
133	2N2016	DJ	TO-36	150	65	10	15	5	50	-
134	2N2338	DJ	TO-36	150	40	7.5	15	3	200	-
	Silicon PNP									
135	40319	DEP	TO-5	5	40	0.7	35	0.2	0.25	0.75

	RCA Type	Package	MAX. RATINGS V_{DS} volts	I_D ma	P_T mw	T °C	CHARACTERISTICS Typical R_{iss} ohms	g_{fs} μmhos	$I_{DS_{off}}$ pa	Max. C_{rss} pf	C_{iss} pf
	INSULATED-GATE FIELD EFFECT TRANSISTORS										
	Silicon N-Channel Depletion Types										
136	3N98	B	32	15	150	85	10^{15}	1500	50	0.5	7.0
137	3N99	B	32	15	150	85	10^{15}	2000	50	0.5	7.0

▲ $V_{CEO(sus)}$ P = Planar • TDP = Triple Diffused Planar EX = Epitaxial

DF = Drift Field DJ = Diffused Junction DEP = Double Diffused Epitaxial Planar TD = Triple Diffused

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RCA TRANSISTORS FOR RF APPLICATIONS

	RCA Type	Structure	Package	CHARACTERISTICS: G_p (Typ.) @ Operating Frequency (Mc)	G_p (Typ.) @ Operating Frequency (db)	f_{hfb} (Typ.) (Mc)	h_{fe} (Typ.) @ I_C (h_{fe})	h_{fe} (Typ.) @ I_C (ma)	V_{CB} (max.) (volts)
	UHF & VHF SMALL-SIGNAL TYPES								f_T: to 1000 Mc
	Silicon NPN								
138	2N3478	EXP	A	470	12 NF = 5	900●	9.0	2	30
139	2N2857	EXP	B	450	12.5 min. NF = 4	1000● min.	50 min.	2	30
140	40294	Like 2N2857, But Controlled & tested for use in critical aerospace and military applications.							
141	40296								
142	2N2708	EXP	B	200	12 NF = 7.5 max.	700● min.	30 min.	2	35
143	40295	Like 2N2708, but controlled & tested for use in critical aerospace and military applications.							
144	2N3600	EXP	B	200	17 min. NF = 4.5 max.	850● min.	40 min.	2	30
145	2N918	EXP	B	200	18	600● min.	-	-	30
146	2N917	EXP	B	200	11.5	500● min.	-	-	30
147	40242	P	B	100	38.5 NF = 2.5	For FM RF stages			35
	Germanium PNP								
148	2N1178	DF	TO-45	120	Local Oscillator Service	140	48	1	30
149	2N1179	DF	TO-45	100	17	140	80	1	30
150	2N2273	Mesa	TO-18	100	12	450●	20 min.	1	25
151	40268	Mesa	TO-18	100	12	-	20 min.	1	25
152	2N1177	DF	TO-45	100	14	140	100	1	30
153	2N1023	DF	TO-44	50	24	120	60	1.5	40
154	2N1066	DF	TO-33	50	24	30	60	1.5	40
155	2N1397	DF	TO-33	50	24	120	90	1.5	40
156	2N384	DF	TO-44	50	21	100	60	1.5	40
157	40004	TO-44 version of 2N1395							
158	40005	TO-44 version of 2N1396							
159	40006	TO-44 version of 2N1397							
160	2N1225	DF	TO-33	50	21	100	60	1.5	40
161	2N1396	DF	TO-33	50	21	100	90	1.5	40
	Germanium NPN								
162	2N2482	Mesa	TO-18	100	12	300● min.	25	2	20
	IF, RF, & VIDEO AMPLIFIER TYPES								f: to 30 Mc
	Germanium PNP								
163	2N370	DF	TO-7	20	17	30	100	1	24
164	2N1226	DF	TO-33	12.5	22	30	60	1.5	60
165	2N274	DF	TO-44	12.5	27	30	60	1.5	40
166	2N1224	DF	TO-33	12.5	27	30	60	1.5	40
167	2N1395	DF	TO-33	12.5	27	30	90	1.5	40

	RCA Type	Structure	Package	CHARACTERISTICS: G_p (Typ.) @ Operating Frequency (Mc)	G_p (Typ.) @ Operating Frequency (db)	f_{hfb} (Typ.) (Mc)	h_{fe} (Typ.) @ I_C (h_{fe})	h_{fe} (Typ.) @ I_C (ma)	V_{CB} (max.) (volts)
	IF, RF, & VIDEO AMPLIFIER TYPES								f: to 30 Mc
	Germanium PNP								
168	2N1180	DF	TO-45	10.7	36	100	80	1.5	30
169	2N1631	DF	TO-40	1.5	47.7	45	80	1.0	34
170	2N1632	DF	TO-1	1.5	47.7	45	80	1	34
171	2N1637	DF	TO-1	1.5	47.7	45	80	1	34
172	40262	DF	TO-1	0.455	56	30	150	1	50
173	2N139	Alloy	TO-40	0.455	37	4.7	48	1	16
174	2N218	Alloy	TO-1	0.455	37	4.7	48	1	16
175	2N409	Alloy	TO-40	0.455	37.8	6.7	48	1	13
176	2N410	Alloy	TO-1	0.455	37.8	6.7	48	1	13
177	2N1425	DF	TO-7	0.455	51	33	50	1	24
178	2N1524	DF	TO-1	0.455	54.4	33	60	1	24
179	2N1525	DF	TO-40	0.455	54.4	33	60	1	24
180	2N1638	DF	TO-1	0.262	61.5	40	75	1	34
	Silicon NPN								
181	40080	P	TO-39	27	0.1●	For CB Transmitters			
182	40081	P	TO-39	27	0.4●				
183	40082	P	TO-39	27	3.0●				
184	40245	P	A	10.7	33.2	For FM IF Amplifier Stages			35
185	40246	P	A	10.7	33.2				35
	CONVERTER, OSCILLATOR, & MIXER TYPES								f: to 120 Mc
	Germanium PNP								
186	2N1178	DF	TO-45	120	Local Oscillator Service	140	40	1	30
187	2N1179	DF	TO-45	100	17	140	80	1	30
188	2N371	DF	TO-7	23	Local Oscillator Service	30	80	1	24
189	2N372	DF	TO-7	10	26.2	30	80	1	24
190	40261	DF	TO-1	1.5	53	40	80	1	50
191	2N1426	DF	TO-7	1.5	43.5	33	130	1	24
192	2N1526	DF	TO-1	1.5	48.9	33	130	1	24
193	2N1527	DF	TO-40	1.5	48.9	33	130	1	24
194	2N1639	DF	TO-1	1.5	37	45	75	1	34
195	2N140	Alloy	TO-40	1	32	10	75	0.6	16
196	2N219	Alloy	TO-1	1	32	10	75	0.6	16
197	2N411	Alloy	TO-40	1	32	10	75	0.6	13
198	2N412	Alloy	TO-1	1	32	10	75	0.6	13
	Silicon NPN								
199	40243	P	A	100	37.6	For FM Mixer Stages			35
200	40244	P	A	120	Local Oscillator Service	For FM Oscillator Stages			35
	Germanium Compensating Diode								
201	1N2326	V_R(max.) = -1.0 volt		I_F(max.) = 100 ma		E_{FWD} @ 25° C = 135 mv			

EXP = Epitaxial Planar DF = Drift Field
P = Planar ●f_T ●P_O min. watts

RCA 8

RCA TRANSISTORS FOR RF APPLICATIONS

	Type	Structure	Package	CHARACTERISTICS: P_O (min) @ Operating Frequency (Mc)	P_O (min) @ Operating Frequency (watts)	f_T (Typ.) (Mc)	MAX. RATINGS: V_{CBO} (volts)	P_T (watts)
	UHF & VHF LARGE-SIGNAL (Power) TYPES						f_T: to 550 Mc	
	Silicon NPN							
202	2N3733	EXP	TO-60	400	10	400	65	23
203	2N3375	EXP	TO-60	400	3	500	65	11.6
204	40306		High Reliability Version of 2N3375					
205	40279	EXP	TO-60	400	3	500	65	11.6
206	2N3632	EXP	TO-60	260	10 Typ.	400	65	23
207	40307		High Reliability Version of 2N3632					
208	2N3553	EXP	TO-39	260	2.5 Typ.	500	65	7
209	40305		High Reliability Version of 2N3553					
210	40282	EXP	TO-60	175	12	350	36	23.2
211	40281	EXP	TO-60	175	4	400	36	11.6
212	40280	EXP	TO-39	175	1	550	36	7
213	40332	-	TO-60	136	8	-	-	-
214	40292	EXP	TO-60	135	6	300	-	23.2
215	40330	-	TO-39	136	3	-	-	-
216	40331	-	TO-60	136	3	-	-	-
217	40290	EXP	TO-39	135	2	500	-	7
218	40291	EXP	TO-60	135	2	500	-	11.6
219	2N1493	TD	TO-39	70	0.5 Typ.	180 min.	100	3
220	2N1492	TD	TO-39	70	0.1 Typ.	180 min.	60	3
221	2N1491	TD	TO-39	70	0.01 Typ.	180 min.	30	3
222	2N3229	TDP	TO-60	50	15	200	105	17.5
223	2N2876	TDP	TO-60	50	10	200	80	17.5
224	2N2631	TDP	TP-39	50	7.5	200	80	8.75
225	2N3118	TDP	TO-5	50	1	250	-	4
226	2N699	TDP	TO-5	-	-	50 min.	120	2

■ f_{hfb}
EXP = Epitaxial Planar
P = Planar
DF = Drift Field
TD = Triple Diffused
TDP = Triple Diffused Planar

RCA TRANSISTORS FOR COMPUTER SWITCHING APPLICATIONS

	Type	Structure	Package	CHARACTERISTICS: f_T (min.) (Mc)	h_{FE}(min) @ I_C: h_{FE}	I_C (Ma)	C_{ob} (max.) (pf)	MAX. RATINGS: P_T (mw)	V_{CB} (volts)
	HIGH-VOLTAGE TYPES								V_{CB} to 105 volts
	Germanium PNP								
227	2N398	Alloy	TO-5	-	20	5	-	50	105
228	2N398A	Alloy	TO-5	-	20	5	-	150	105
229	2N398B	Alloy	TO-5	1■	20	5	-	250	105
230	2N586	Alloy	TO-7	-	30	250	-	250	45
	MEDIUM-SPEED TYPES								f_T: to 50 Mc
	Germanium PNP								
231	2N395	Alloy	TO-5	3■	20	10	20	150	30
232	2N1303	Alloy	TO-5	3■	20	10	20	150	30
233	40269	Alloy	TO-5	4■	50	12	-	150	25
234	2N404	Alloy	TO-5	4■	24	24	20	150	25
235	2N404A	Alloy	TO-5	4■	24	24	20	150	40
236	2N581	Alloy	TO-5	4■	20	20	20	150	18
237	2N396	Alloy	TO-5	5■	30	10	20	150	30
238	2N396A	Alloy	TO-5	5■	30	10	20	200	30
239	2N1305	Alloy	TO-5	5■	40	10	20	150	30
240	2N414	Alloy	TO-5	8■ typ.	80	1	11	150	30
241	2N397	Alloy	TO-5	10■	40	10	20	150	30
242	2N1307	Alloy	TO-5	10■	60	10	20	150	30
243	2N269	Alloy	TO-5	13■ typ.	24	24	20	120	25
244	2N582	Alloy	TO-5	14■	40	24	20	150	25
245	2N1309	Alloy	TO-5	15■	80	10	20	150	30
246	2N1384	DF	TO-11	20	20	200	-	240	30
247	2N1300	Mesa	TO-5	25	30	10	12	150	13
248	2N934	Mesa	TO-18	35	40	40	12	150	13
249	2N1301	Mesa	TO-5	35	30	10	12	150	13
250	2N1853	Mesa	TO-5	-	30	6	-	150	18
251	2N1854	Mesa	TO-5	40	40	20	12	150	18
252	2N1683	Mesa	TO-5	50	50	10	12	150	13
	Germanium NPN								
253	2N585	Alloy	TO-5	3■	20	20	25	120	25
254	2N1302	Alloy	TO-5	3■	20	10	20	150	25
255	2N1605	Alloy	TO-5	4■	24	24	20	150	25
256	2N1605A	Alloy	TO-5	4■	24	24	20	200	40
257	2N1090	Alloy	TO-5	5■	30	20	25	120	25
258	2N388	Alloy	TO-5	5■	30	200	20	150	25
259	2N388A	Alloy	TO-5	5■	30	200	20	150	40
260	2N1304	Alloy	TO-5	5■	40	10	20	150	25
261	2N1091	Alloy	TO-5	10■	40	20	25	120	25
262	2N1306	Alloy	TO-5	10■	60	10	20	120	25
263	2N1308	Alloy	TO-5	15■	80	10	20	150	25
	HIGH-SPEED TYPES								f_T: to 600 Mc
	Silicon NPN								
264	2N706	Mesa	TO-18	200	20	10	6	300	25
265	40217	Electrically similar to 2N706 but with TO-52 pkg.							
266	2N706A	Mesa	TO-18	200	20	10	-	300	25

Note: "Premium" version of 2N404.

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RCA TRANSISTORS FOR COMPUTER SWITCHING APPLICATIONS

	RCA Type	Structure	Package	CHARACTERISTICS f_T (min.) Mc	h_{FE}(min.) @ I_C h_{FE}	@ I_C Ma	C_{ob} (max.) pf	MAX. RATINGS P_T mw	V_{CB} volts
	HIGH-SPEED TYPES								f_T: to 600 Mc
	Silicon NPN								
267	40218	Electrically similar to 2N706A but with TO-52 pkg.							
268	2N1708	EXP	TO-46	200	20	10	6	300	25
269	2N2205	EXP	TO-18	200	20	10	6	300	25
270	40222	Electrically similar to 2N2205 but with TO-52 pkg.							
271	2N2206	EXP	TO-46	200	40	10	6	300	25
272	2N2476	EXP	TO-5	250	20	150	10	600	60
273	2N2477	EXP	TO-5	250	40	150	10	600	60
274	2N914	EXP	TO-18	300	30	10	6	360	40
275	40221	Electrically similar to 2N914 but with TO-52 pkg.							
276	2N708	P	TO-18	-	30	10	6	360	40
277	40219	Electrically similar to 2N708 but with TO-52 pkg.							
278	2N834	EXP	TO-18	350	25	10	4	300	30 V_{CES}
279	40220	Electrically similar to 2N834 but with TO-52 pkg.							
280	2N3512	EXP	TO-5	375	10	500	10	800	60
281	40283	EXP	TO-46	375	10	500	10	400	60
282	2N709	EXP	TO-18	600	15	30	3	300	15
283	2N2475	EXP	TO-18	600	20	50	3	300	15
284	2N2938	EXP	TO-52	600	25	10	4	300	25
285	2N3261	EXP	TO-52	600	40	10	3.5	1000	40
	Germanium PNP								f_T: to 1000 Mc
286	2N711	Mesa	TO-18	200 typ.	20	10	5	150	12
287	2N705	Mesa	TO-5	300 typ.	25	10	5	150	15
288	2N710	Mesa	TO-18	300 typ.	25	10	5	150	15
289	2N828	Mesa	TO-18	300 typ.	25	10	6	150	15
	Germanium NPN								
290	2N955	Mesa	TO-18	1000 typ.	30	30	6	150	12
291	2N955A	EX	TO-18	1000 typ.	30	30	6	150	12

●● Two transistors and a diode internally connected to form a Darlington circuit. The diode is connected across the output transistor.

⊕ V_{CER}

★ BV_{CEO}

EX = Epitaxial
EXP = Epitaxial Planar
TD = Triple Diffused
TDP = Triple-Diffused Planar
DJ = Diffused Junction
DF = Drift Field

RCA 10

RCA TRANSISTORS FOR POWER SWITCHING APPLICATIONS

	RCA Type	Structure	Package	P_T (max.) @25°C watts	CHARACTERISTICS V_{CE} (min.) volts	$V_{CE(sus)}$ (min.) volts	h_{FE}(min.) @ I_C h_{FE}	@ I_C amp	$V_{CE(sat)}$ (max.) @ I_C v.	@ I_C amp	f_T (typ) f_{hfb} (typ) Mc
	MEDIUM-POWER TYPES										P_T: to 5 watts
	Silicon NPN										
292	2N718A	TDP	TO-18	1.8	50⊕	-	40	0.15	1.2	0.05	60 min.
293	2N720A	TDP	TO-18	1.8	100⊕	80	40	0.15	1.5	0.15	50 min.
294	2N697	DJ	TO-5	2	40⊕	-	40	0.15	1.5	0.15	100
295	2N1613	TDP	TO-5	3	50	-	35	0.01	1.5	0.15	60 min.
296	2N1893	TDP	TO-5	3	80★	80	40	0.15	1.2	0.05	50 min.
297	2N3119	TDP	TO-5	4	100	80	40	0.01	0.5	0.1	250 min.
298	40082	TDP	TO-39	5	60	-	-	-	-	-	-
299	2N3053/ 40053	TDP	TO-5	5	60	40	50	0.15	1.4	0.15	100 min.
300	2N1479	DJ	TO-5	5	60	40	20	0.2	1.4	0.2	*1.5*
301	2N1481	DJ	TO-5	5	60	40	35	0.2	1.4	0.2	*1.5*
302	2N1700	DJ	TO-5	5	60	40	20	0.1	1.0	0.1	-
303	2N2270	TDP	TO-5	5	60	45	35	0.001	0.9	0.15	60 min.
304	2N2405	TDP	TO-5	5	90★	90	60	0.15	0.2	0.05	120 min.
305	2N1480	DJ	TO-5	5	100	55	20	0.2	1.4	0.2	*1.5*
306	2N1482	DJ	TO-5	5	100	55	35	0.2	1.4	0.2	*1.5*
307	2N2102	TDP	TO-5	5	80	65	35	0.01	0.5	0.15	60 min.
308	2N3439	TD	TO-5	5	-	250	40	0.02	0.5	0.02	20 min.
309	2N3440	TD	TO-5	5	-	350	40	0.02	0.5	0.02	20 min.
	Germanium PNP										P_T: to 50 watts
310	2N1183	Alloy	TO-8	7.5	45	-	20	0.4	0.5	0.4	*0.5 min.*
311	2N1184	Alloy	TO-8	7.5	45	-	40	0.4	0.5	0.4	*0.5 min.*
312	2N1183A	Alloy	TO-8	7.5	60	-	20	0.4	0.5	0.4	*0.5 min.*
313	2N1184A	Alloy	TO-8	7.5	60	-	40	0.4	0.5	0.4	*0.5 min.*
314	2N1183B	Alloy	TO-8	7.5	80	-	20	0.4	0.5	0.4	*0.5 min.*
315	2N1184B	Alloy	TO-8	7.5	80	-	40	0.4	0.5	0.4	*0.5 min.*
316	2N2869	Alloy	TO-3	30	50	-	50	1	0.75	10	0.45
317	2N2870	Alloy	TO-3	30	50	-	50	1	0.75	10	0.45
318	2N1905	DF	TO-3	50	40★	-	50	1	1	1	7.5
319	2N1906	DF	TO-3	50	40★	-	75	5	1	5	7.5
	Silicon NPN										
320	2N3262	EXP	TO-39	8.75	100	80	40	0.5	0.6	1	-
321	40255	TD	D	10	-	350	40	0.02	0.5	0.05	20 min.
322	40256	TD	D	10	-	250	40	0.02	0.5	0.05	20 min.
323	2N3231 ●●	EXP	F	20	100	80	2000	2.0	2	2	40 min.
324	2N1483	DJ	TO-8	25	60	40	20	0.75	2	0.75	*1.25*
325	2N1485	DJ	TO-8	25	60	40	35	0.75	0.75	0.75	*1.25*
326	2N1701	DJ	TO-8	25	60	40	20	0.3	1.5	0.3	-
327	2N3054	TDP	TO-66	25	90	55	20	0.5	1.0	0.5	1.2 min.

RCA TRANSISTORS FOR POWER SWITCHING APPLICATIONS

	RCA Type	Structure	Package	P_T (max.) @25°C	CHARACTERISTICS						
					V_{CE} (min.)	$V_{CE(sus)}$ (min.)	h_{FE}(min.) @ I_C		$V_{CE(sat)}$ (max.) @ I_C		f_T (typ) f_{hfb} (typ)
				watts	volts	volts	h_{FE}	amp	v.	amp	Mc
	MEDIUM-POWER TYPES			P_T: to 50 watts							
	Silicon NPN										
328	2N1484	DJ	TO-8	25	100	55	20	0.75	2	0.75	1.25
329	2N1486	DJ	TO-8	25	100	55	35	0.75	0.75	0.75	1.25
330	2N3230 ●●	EXP	F	25	80	60	2000	2	2	2	40 min.
331	2N3441	DJ	TO-66	25	160	140	20	0.5	1	0.5	-
332	40250	DJ	TO-66	29	50	40	25	1.5	1.5	1.5	-
333	2N3583	TD	TO-66	35	-	175	10	1	-	-	10 min.
334	2N3584	TD	TO-66	35	-	250	25	1	0.75	1	10 min.
335	2N3585	TD	TO-66	35	-	300	25	1	0.75	1	10 min.
336	2N1768	DJ	TO-57	40	60	40	35	0.75	0.75	0.75	1.25
337	2N2339	DJ	TO-57	40	60	40	20	0.3	1.5	3	-
338	2N1769	DJ	TO-57	40	100	55	35	0.75	0.75	0.75	1.25
	HIGH-POWER TYPES			P_T: to 150 watts							
	Germanium PNP										
339	2N277	Alloy	TO-36	150	40▲▲	-	35	5	0.7	12	10♦
340	2N441	Alloy	TO-36	150	40▲▲	-	20	5	0.7	12	10♦
341	2N278	Alloy	TO-36	150	50▲▲	-	35	5	0.7	12	10♦
342	2N442	Alloy	TO-36	150	50▲▲	-	20	5	0.7	12	10♦
343	2N173	Alloy	TO-36	150	60▲▲	-	35	5	0.7	12	10♦
344	2N174	Alloy	TO-36	150	60▲▲	-	25	5	0.7	12	10♦
345	2N443	Alloy	TO-36	150	60▲▲	-	20	5	0.7	12	10♦
346	2N1099	Alloy	TO-36	150	80▲▲	-	35	5	0.3	12	10♦
347	2N1100	Alloy	TO-36	150	100▲▲	-	25	5	0.3	12	10♦
348	2N1358	Alloy	TO-36	150	80▲▲	-	25	0.5	0.7	12	100♦
349	2N1412	Alloy	TO-36	150	100▲▲	-	25	0.5	0.7	12	10♦
	Silicon NPN										
350	2N1487	DJ	TO-3	75	60	40	15	1.5	3	1.5	1
351	2N1489	DJ	TO-3	75	60	40	25	1.5	3	1.5	1
352	2N1511	DJ	TO-36	75	60	40	15	1.5	3	1.5	1
353	2N1513	DJ	TO-36	75	60	40	25	1.5	1	1.5	1
354	2N1702	DJ	TO-3	75	60	40	15	0.8	3.2	0.8	-
355	2N1703	DJ	TO-36	75	60	40	15	0.8	3.2	0.8	-
356	2N1488	DJ	TO-3	75	100	55	15	1.5	3	1.5	1
357	2N1490	DJ	TO-3	75	100	55	25	1.5	1	1.5	1
358	2N1512	DJ	TO-36	75	100	55	15	1.5	3	1.5	1
359	2N1514	DJ	TO-36	75	100	55	25	1.5	1	1.5	1
360	2N3263	EX	C	84	80	60	25	15	0.75	15	20 min.
361	2N3264	EX	C	84	120	60	20	15	1.2	15	20 min.
362	2N3055	DJ	TO-3	115	100	60	20	4.0	1.1	4	0.7 min.
363	2N3442	DJ	TO-3	117	160	140	-	-	1.0	0.3	0.8
364	40251	DJ	TO-3	117	50	40	15	8.0	1.5	8	0.5
365	2N3265	EX	TO-63	125	150	90	25	15	0.75	15	20 min.
366	2N3266	EX	TO-63	125	120	60	20	15	1.2	15	20 min.
367	2N2338	DJ	TO-36	150	60	40	15	3.0	1.5	3	-
368	2N2015	DJ	TO-36	150	100	50	15	5.0	1.25	5	25♦
369	2N2016	DJ	TO-36	150	130	65	15	5.0	1.25	5	25♦

	RCA Type	Structure	Package	P_T (max.) @25°C	CHARACTERISTICS						
					V_{CE} (min.)	$V_{CE(sus)}$ (min.)	h_{FE}(min.) @ I_C		$V_{CE(sat)}$ (max.) @ I_C		f_T (typ) f_{hfb} (typ)
				watts	volts	volts	h_{FE}	amp	v.	amp	Mc
	DIFFERENTIAL & OPERATIONAL AMPLIFIER TYPES										
	Silicon NPN										
370	2N1613	TDP	TO-5	3	50	-	35	0.01	1.5	0.15	60 min.
371	2N2270	TDP	TO-5	5	60	45	35	0.001	0.9	0.15	60 min.
372	2N2102	TDP	TO-5	5	80	65	35	0.01	0.5	0.15	60 min.
373	2N3439	TD	TO-5	5	-	350	40	0.02	0.5	0.02	20 min.
374	2N3440	TD	TO-5	5	-	250	40	0.02	0.5	0.02	20 min.
375	40255	TD	D	10	-	35	40	0.02	0.5	0.02	20 min.
376	40256	TD	D	10	-	250	40	0.02	0.5	0.02	20 min.

	RCA Type	Package	MAX. RATINGS				CHARACTERISTICS				
							Typical			Max.	
			V_{DS}	I_D	P_T	T	R_{iss}	g_{fs}	$I_{DS_{off}}$	C_{rss}	C_{iss}
			volts	ma	mw	°C	ohms	μmhos	pa	pf	pf
	INSULATED-GATE FIELD-EFFECT TRANSISTORS										
	Silicon N-Channel Depletion Types										
377	3N98	B	32	15	150	85	10^{15}	1500	50	0.5	7.0
378	3N99	B	32	15	150	85	10^{15}	2000	50	0.5	7.0

●● Two transistors and a diode internally connected to form a Darlington circuit. The diode is connected across the output transistor.

▲▲ V_{CBV}

♦ $f_{hfe(kc)}$

EX = Epitaxial

EXP = Epitaxial Planar

TD = Triple Diffused

TDP = Triple-Diffused Planar

DJ = Diffused Junction

DF = Drift Field

RCA 11

1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625

RCA TUNNEL DIODES
Special RCA Package (H)

	RCA Type	Material and Structure	CHARACTERISTICS: I_P ± Tolerance amp	%	Min. I_P/I_v	Max. C pf
	FOR SWITCHING AND MICROWAVE APPLICATIONS			I_P: 0.001 to 200 ma		
379	40076	GaAs	Alloy	0.2	10	15:1	25
380	1N3851	Ge	Epitaxial	0.1	10	6:1	40
381	1N3856	Ge	Epitaxial	0.1	5	8:1	25
382	40059	GaAs	Alloy	0.05	10	10:1	40
383	1N3850	Ge	Epitaxial	0.05	10	6:1	40
384	1N3130	Ge	-	0.05	5	8:1	25
385	1N3855	Ge	Epitaxial	0.05	5	8:1	25
386	40058	GaAs	Alloy	0.05	5	12:1	20
387	1N3860	Ge	Epitaxial	0.05	5	8:1	12
388	40061	GaAs	Alloy	0.02	10	9:1	30
389	1N3849	Ge	Epitaxial	0.02	10	6:1	30
390	1N3854	Ge	Epitaxial	0.02	5	8:1	20
391	1N3129	Ge	-	0.02	5	8:1	20
392	40060	GaAs	Alloy	0.02	5	11:1	15
393	1N3859	GE	Epitaxial	0.02	5	8:1	10
394	40063	GaAs	Alloy	0.01	10	9:1	25
395	1N3848	Ge	Epitaxial	0.01	10	6:1	25
396	1N3853	Ge	Epitaxial	0.01	5	8:1	15
397	40062	GaAs	Alloy	0.01	5	10:1	10
398	1N3858	Ge	Epitaxial	0.01	5	8:1	8
399	40065	GaAs	Alloy	0.005	10	8:1	20
400	1N3847	Ge	Epitaxial	0.005	10	6:1	25
401	1N3852	Ge	Epitaxial	0.005	5	8:1	15
402	1N3128	Ge	-	0.005	5	8:1	15
403	1N3857	Ge	Epitaxial	0.005	5	8:1	8
404	40064	GaAs	Alloy	0.005	5	10:1	8
405	40078	Ge	-	0.001	10	5:1	10
406	40077	Ge	-	0.001	10	6:1	5

TUNNEL RECTIFIERS
Special RCA Package (H)

	RCA Type	Material	CHARACTERISTICS: Max. I_P ma	Max. V_R mv: I_R = 5 ma	I_R = 10ma	Min. V_F @ I_F = 1 ma volts	Max. C pf
	FOR COUPLING APPLICATIONS			I_P: 0.5 & 1.0 Milliampere			
407	40055	GaAs	0.5	250	350	950	6
408	40057	GaAs	0.5	180	275	950	6
409	1N3863	Ge	0.5	300 (I_R = 30ma)	150	435	4
410	40054	GaAs	1.0	200	300	950	6
411	40056	GaAs	1.0	160	225	950	6
412	1N3861	Ge	1.0	-	170	400	6
413	1N3862	Ge	1.0	300 (I_R = 30ma)	150	420	4

SILICON CONTROLLED-RECTIFIERS (THYRISTORS)

	RCA Types	JEDEC Pkg.	Maximum Ratings: I_{FRMS} at case temperature (T_C) amp	°C	V_{RM} (non-rep) volts	V_{RM} (rep) volts	V_{FBOM} (rep) volts	i_{FM} (surge) amp	Characteristics: Max. V_{GT} volts	Max. I_{GT} ma (dc)
	TYPES FOR MILITARY AND INDUSTRIAL APPLICATIONS		I_{FRMS}: 2 to 25 Amperes		V_{RM} (non-rep): 35 to 720 Volts					
414	2N3528	TO-8	2	25 (T_{FA})	330	200	600	60	2	15
415	2N3529	TO-8	2	25 (T_{FA})	660	400	600	60	2	15
416	2N3228	TO-3	5	75	330	200	600	60	2	15
417	2N3525	TO-3	5	75	660	400	600	60	2	15
418	2N1770	TO-64	7.4	60	35	25	600	60	2	15
419	2N1771	TO-64	7.4	60	75	50	600	60	2	15
420	2N1772	TO-64	7.4	60	150	100	600	60	2	15
421	2N1773	TO-64	7.4	60	225	150	600	60	2	15
422	2N1774	TO-64	7.4	60	300	200	600	60	2	15
423	2N1775	TO-64	7.4	60	350	250	600	60	2	15
424	2N1776	TO-64	7.4	60	400	300	600	60	2	15
425	2N1777	TO-64	7.4	60	500	400	600	60	2	15
426	2N1778	TO-64	7.4	60	600	500	600	60	2	15
427	2N3668	TO-3	12.5	80	150	100	600	200	2	40
428	2N3669	TO-3	12.5	80	330	200	600	200	2	40
429	2N3670	TO-3	12.5	80	660	400	600	200	2	40
430	2N1842A	TO-48	16	80	35	25	25	125	3.5	45
431	2N1843A	TO-48	16	80	75	50	50	125	3.5	45
432	2N1844A	TO-48	16	80	150	100	100	125	3.5	45
433	2N1845A	TO-48	16	80	225	150	150	125	3.5	45
434	2N1846A	TO-48	16	80	300	200	200	125	3.5	45
435	2N1847A	TO-48	16	80	350	250	250	125	3.5	45
436	2N1848A	TO-48	16	80	400	300	300	125	3.5	45
437	2N1849A	TO-48	16	80	500	400	400	125	3.5	45
438	2N1850A	TO-48	16	80	600	500	500	125	3.5	45
439	2N681	TO-48	25	65	35	25	25	150	3	25
440	2N682	TO-48	25	65	75	50	50	150	3	25
441	2N683	TO-48	25	65	150	100	100	150	3	25
442	2N684	TO-48	25	65	225	150	150	150	3	25
443	2N685	TO-48	25	65	300	200	200	150	3	25
444	2N686	TO-48	25	65	350	250	250	150	3	25
445	2N687	TO-48	25	65	400	300	300	150	3	25
446	2N688	TO-48	25	65	500	400	400	150	3	25
447	2N689	TO-48	25	65	600	500	500	150	3	25
448	2N690	TO-48	25	65	720	600	600	150	3	25
449	40216	TO-48	900#	65	720	600	-	-	-	-

Pulsed

RCA-12

RCA SILICON (DIFFUSED-JUNCTION) RECTIFIERS

	RCA Type	JEDEC Pkg.	MAXIMUM RATINGS: PRV (volts)	I_F Avg. (Res or Ind) @ T_{FA} = °C: amp	T	I_F Peak Rep. (amp)	I_F Peak Surge (amp)	CHARACTERISTICS: Max. E_{FWD} (volts)	Max. I_R (Dynamic) (ma)
	TUBULAR SINGLE-ENDED TYPES FOR CONSUMER-PRODUCT APPLICATIONS		**PRV: to 400 volts**						
450	1N3754	~TO-1	100	0.125	65	1.3	30	1	0.3
451	1N3755	~TO-1	200	0.125	65	1.3	30	1	0.3
452	1N3756	~TO-1	400	0.125	65	1.3	30	1	0.3
453	40265	~TO-1	400	0.125	65	1.3	30	1	-0.4
	AXIAL-LEAD TYPES FOR INDUSTRIAL AND CONSUMER-PRODUCT APPLICATIONS		**PRV: to 1000 volts**						
454	1N2858	DO-1	50	0.75 / 0.5□	75	-	40	1.2	0.4
455	1N2859	DO-1	100	0.75 / 0.5□	75	-	40	1.2	0.4
456	1N3193	~TO-1	200	0.75 / 0.5□	75	6□	35□	1.2	0.2
457	1N3253		Insulated version of 1N3193						
458	1N2860	DO-1	200	0.75 / 0.5□	75	-	40	1.2	0.4
459	1N2861	DO-1	300	0.75 / 0.5□	75	-	40	1.2	0.3
460	1N3194	~TO-1	400	0.75 / 0.5□	75	6□	35□	1.2	0.2
461	1N3254		Insulated version of 1N3194						
462	1N2862	DO-1	400	0.75 / 0.5□	75	-	40	1.2	0.3
463	1N2863	DO-1	500	0.75 / 0.5□	75	-	40	1.2	0.3
464	1N2864	DO-1	600	0.75	75	-	40	1.2	0.3
465	1N3195	~TO-1	600	0.75 / 0.5□	75	6□	35□	1.2	0.2
466	1N3255		Insulated version of 1N3195						
467	1N3196	~TO-1	800	0.5 / 0.4□	75	5□	35□	1.2	0.2
468	1N3256		Insulated version of 1N3196						
469	1N3563	~TO-1	1000	0.4 / 0.3□	75	4□	35□	1.2	0.2

	RCA Type	JEDEC Pkg.	MAXIMUM RATINGS: I_F Avg. (Res or Ind) @ T_{FA} = °C: amp	T	PRV (volts)	I_F Peak Rep. (amp)	I_F Peak Surge (amp)	CHARACTERISTICS: Max. E_{FWD} (volts)	Max. I_R (Dynamic) (ma)
	AXIAL-LEAD TYPES FOR TV AND RADIO RECEIVER APPLICATIONS		**I_F: to 2 Amperes**						
470	1N1763	DO-1	0.75	75	400	5	35	3	0.1‡
471	1N1764	DO-1	0.75	75	500	5	35	3	0.1‡
472	40266	DO-1	2□	105	100	10	35	3	-10
473	40267	DO-1	2□	105	200	10	35	3	-10

	RCA Type	JEDEC Pkg.	MAXIMUM RATINGS: I_F Avg. (Res or Ind) @ T_{FA} = °C: amp	T	PRV (volts)	I_F Peak Rep. (amp)	I_F Peak Surge (amp)	CHARACTERISTICS: Max. E_{FWD} (volts)	Max. I_R (Dynamic) (ma)
	AXIAL-LEAD TYPES FOR MILITARY AND INDUSTRIAL APPLICATIONS		**I_F: to 0.75 Ampere**						
474	1N444B	DO-1	0.65	50	500	3.5	15	1.5	1.75μa‡
475	1N445B	DO-1	0.65	50	600	3.5	15	1.5	2μa‡
476	1N536	DO-1	0.75	50	50	-	15	1.1	5μa‡
477	1N440B	DO-1	0.75	50	100	3.5	15	1.5	0.3μa‡
478	1N537	DO-1	0.75	50	100	-	15	1.1	5μa‡
479	1N441B	DO-1	0.75	50	200	3.5	15	1.5	0.75μa‡
480	1N538	DO-1	0.75	50	200	-	15	1.1	5μa‡
481	1N442B	DO-1	0.75	50	300	3.5	15	1.5	1μa‡
482	1N539	DO-1	0.75	50	300	-	15	1.1	5μa‡
483	1N443B	DO-1	0.75	50	400	3.5	15	1.5	1.5μa‡
484	1N540	DO-1	0.75	50	400	-	15	1.1	5μa‡
485	1N1095	DO-1	0.75	50	500	-	15	1.2	5μa‡
486	1N547	DO-1	0.75	50	600	-	15	1.2	5μa‡

	RCA Type	JEDEC Pkg.	MAXIMUM RATINGS*: I_F Avg. @ T_C = °C: amp	°C	PRV (volts)	I_F Peak Rep. (amp)	I_F Peak Surge (amp)	CHARACTERISTICS: Max. E_{FWD} (volts)	Max. I_R (Dynamic) (ma)
	STUD-MOUNTED TYPES FOR MILITARY AND INDUSTRIAL APPLICATIONS		**I_F(Avg): to 40 Amperes**						
487	1N1612	DO-4	5	135	50	15	-	1.5	1
488	1N1612R	DO-4	5	135	50	15	-	1.5	1
489	1N1613	DO-4	5	135	100	15	-	1.5	1
490	1N1613R	DO-4	5	135	100	15	-	1.5	1
491	1N1614	DO-4	5	135	200	15	-	1.5	1
492	1N1614R	DO-4	5	135	200	15	-	1.5	1
493	1N1615	DO-4	5	135	400	15	-	1.5	1
494	1N1615R	DO-4	5	135	400	15	-	1.5	1
495	1N1616	DO-4	5	135	600	15	-	1.5	1
496	1N1616R	DO-4	5	135	600	15	-	1.5	1
497	1N1341B	DO-4	6	150	50	25	160	0.65	0.45
498	1N1341RB	DO-4	6	150	50	25	160	0.65	0.45
499	1N1342B	DO-4	6	150	100	25	160	0.65	0.45
500	1N1342RB	DO-4	6	150	100	25	160	0.65	0.45
501	1N1344B	DO-4	6	150	200	25	160	0.65	0.45
502	1N1344RB	DO-4	6	150	200	25	160	0.65	0.45
503	1N1345B	DO-4	6	150	300	25	160	0.65	0.45
504	1N1345RB	DO-4	6	150	300	25	160	0.65	0.45
505	1N1346B	DO-4	6	150	400	25	160	0.65	0.45
506	1N1346RB	DO-4	6	150	400	25	160	0.65	0.45

□ With capacitive load. ‡ Static characteristic. * With resistive or inductive load.

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RCA SILICON (DIFFUSED-JUNCTION) RECTIFIERS

	RCA Type	JEDEC Pkg.	MAXIMUM RATINGS*					CHARACTERISTICS	
			I_F Avg. @ T_C = °C		PRV	I_F Peak Rep.	I_F Peak Surge	Max. E_{FWD}	Max. I_R (Dynamic)
			amp	°C	volts	amp	amp	volts	ma
	STUD-MOUNTED TYPES FOR MILITARY AND INDUSTRIAL APPLICATIONS		I_F(Avg): to 40 Amperes						
507	1N1347B	DO-4	6	150	500	25	160	0.65	0.45
508	1N1347RB	DO-4	6	150	500	25	160	0.65	0.45
509	1N1348B	DO-4	6	150	600	25	160	0.65	0.45
510	1N1348RB	DO-4	6	150	600	25	160	0.65	0.45
511	40108	DO-4	10	150	50	40	140	0.60	2.0
512	40108R	DO-4	10	150	50	40	140	0.60	2.0
513	40109	DO-4	10	150	100	40	140	0.60	2.0
514	40109R	DO-4	10	150	100	40	140	0.60	2.0
515	40110	DO-4	10	150	200	40	140	0.60	1.5
516	40110R	DO-4	10	150	200	40	140	0.60	1.5
517	40111	DO-4	10	150	300	40	140	0.60	1.5
518	40111R	DO-4	10	150	300	40	140	0.60	1.5
519	40112	DO-4	10	150	400	40	140	0.60	1.0
520	40112R	DO-4	10	150	400	40	140	0.60	1.0
521	40113	DO-4	10	150	500	40	140	0.60	0.85
522	40113R	DO-4	10	150	500	40	140	0.60	0.85
523	40114	DO-4	10	150	600	40	140	0.60	0.75
524	40114R	DO-4	10	150	600	40	140	0.60	0.75
525	40115	DO-4	10	150	800	40	140	0.60	0.65
526	40115R	DO-4	10	150	800	40	140	0.60	0.65
527	40116	DO-4	10	150	1000	40	140	0.60	0.50
528	40116R	DO-4	10	150	1000	40	140	0.60	0.50
529	1N1199A	DO-4	12	150	50	50	240	0.55	3
530	1N1199RA	DO-4	12	150	50	50	240	0.55	3
531	1N1200A	DO-4	12	150	100	50	240	0.55	2.5
532	1N1200RA	DO-4	12	150	100	50	240	0.55	2.5
533	1N1202A	DO-4	12	150	200	50	240	0.55	2
534	1N1202RA	DO-4	12	150	200	50	240	0.55	2
535	1N1203A	DO-4	12	150	300	50	240	0.55	1.75
536	1N1203RA	DO-4	12	150	300	50	240	0.55	1.75
537	1N1204A	DO-4	12	150	400	50	240	0.55	1.5
538	1N1204RA	DO-4	12	150	400	50	240	0.55	1.5
539	1N1205A	DO-4	12	150	500	50	240	0.55	1.25
540	1N1205RA	DO-4	12	150	500	50	240	0.55	1.25
541	1N1206A	DO-4	12	150	600	50	240	0.55	1
542	1N1206RA	DO-4	12	150	600	50	240	0.55	1
543	40208	DO-5	18	150	50	72	250	0.65	3.0
544	40208R	DO-5	18	150	50	72	250	0.65	3.0
545	40209	DO-5	18	150	100	72	250	0.65	3.0
546	40209R	DO-5	18	150	100	72	250	0.65	3.0
547	40210	DO-5	18	150	200	72	250	0.65	2.5
548	40210R	DO-5	18	150	200	72	250	0.65	2.5
549	40211	DO-5	18	150	300	72	250	0.65	2.5
550	40211R	DO-5	18	150	300	72	250	0.65	2.5
551	40212	DO-5	18	150	400	72	250	0.65	2.0
552	40212R	DO-5	18	150	400	72	250	0.65	2.0
553	40213	DO-5	18	150	500	72	250	0.65	1.75
554	40213R	DO-5	18	150	500	72	250	0.65	1.75
555	40214	DO-5	18	150	600	72	250	0.65	1.5
556	40214R	DO-5	18	150	600	72	250	0.65	1.5
557	1N248C	DO-5	20	150	55	90	350	0.6	3.8
558	1N248RC	DO-5	20	150	55	90	350	0.6	3.8
559	1N249C	DO-5	20	150	110	90	350	0.6	3.6
560	1N249RC	DO-5	20	150	110	90	350	0.6	3.6
561	1N250C	DO-5	20	150	220	90	350	0.6	3.4
562	1N250RC	DO-5	20	150	220	90	350	0.6	3.4
563	1N1195A	DO-5	20	150	300	90	350	0.6	3.2
564	1N1195RA	DO-5	20	150	300	90	350	0.6	3.2
565	1N1196A	DO-5	20	150	400	90	350	0.6	2.5
566	1N1196RA	DO-5	20	150	400	90	350	0.6	2.5
567	1N1197A	DO-5	20	150	500	90	350	0.6	2.2
568	1N1197RA	DO-5	20	150	500	90	350	0.6	2.2
569	1N1198A	DO-5	20	150	600	90	350	0.6	1.5
570	1N1198RA	DO-5	20	150	600	90	350	0.6	1.5
571	1N1183A	DO-5	40	150	50	195	800	0.65	2.5
572	1N1183RA	DO-5	40	150	50	195	800	0.65	2.5
573	1N1184A	DO-5	40	150	100	195	800	0.65	2.5
574	1N1184RA	DO-5	40	150	100	195	800	0.65	2.5
575	1N1186A	DO-5	40	150	200	195	800	0.65	2.5
576	1N1186RA	DO-5	40	150	200	195	800	0.65	2.5
577	1N1187A	DO-5	40	150	300	195	800	0.65	2.5
578	1N1187RA	DO-5	40	150	300	195	800	0.65	2.5
579	1N1188A	DO-5	40	150	400	195	800	0.65	2.2
580	1N1188RA	DO-5	40	150	400	195	800	0.65	2.2
581	1N1189A	DO-5	40	150	500	195	800	0.65	2
582	1N1189RA	DO-5	40	150	500	195	800	0.65	2
583	1N1190A	DO-5	40	150	600	195	800	0.65	1.8
584	1N1190RA	DO-5	40	150	600	195	800	0.65	1.8

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For photographs of RCA Transistors and Rectifiers, see pages 17 and 18.

RCA SILICON RECTIFIER STACKS

	RCA Type	PRV (Rep) volts	PRV (Non-rep) volts	I_{FAV} @ T_{FA}=°C amp	°C	I_F (Peak surge) amp	Max. I_R (Dynamic) ma
	HIGH-VOLTAGE TYPES						**PRV: 1200 to 12000 Volts**
585	CR101	1200	1440	0.85	60	15	0.3
586	CR201	1500	1800	0.3	60	9	0.1
587	CR102	2000	2400	0.825	60	15	0.3
588	CR301	2400	2880	5	50	250	1.5
589	CR311	2400	2880	9	50	250	1.5
590	CR321	2400	2880	12	50	400	1.5
591	CR331	2400	2880	17	50	400	1.5
592	CR341	2400	2880	23	50	850	1.5
593	CR351	2400	2880	35	50	850	1.5
594	CR103	3000	3600	0.725	60	15	0.3
595	CR203	3000	3600	0.3	60	9	0.1
596	CR302	3600	4320	5	50	250	1.5
597	CR312	3600	4320	9	50	250	1.5
598	CR322	3600	4320	12	50	400	1.5
599	CR332	3600	4320	17	50	400	1.5
600	CR342	3600	4320	23	50	850	1.5
601	CR352	3600	4320	35	50	850	1.5
602	CR104	4000	4800	0.625	60	15	0.3
603	CR204	4500	5400	0.3	60	9	0.1
604	CR303	4800	5760	5	50	250	1.5
605	CR313	4800	5760	9	50	250	1.5
606	CR323	4800	5760	12	50	400	1.5
607	CR333	4800	5760	17	50	400	1.5
608	CR343	4800	5760	23	50	850	1.5
609	CR353	4800	5760	35	50	850	1.5
610	CR105	5000	6000	0.625	60	15	0.3
611	CR106	6000	7200	0.575	60	15	0.3
612	CR206	6000	7200	0.3	60	9	0.1
613	CR304	6000	7200	5	50	250	1.5
614	CR314	6000	7200	9	50	250	1.5
615	CR324	6000	7200	12	50	400	1.5
616	CR334	6000	7200	17	50	400	1.5
617	CR344	6000	7200	23	50	850	1.5
618	CR354	6000	7200	35	50	850	1.5
619	CR107	7000	8400	0.550	60	15	0.3
620	CR305	7200	8640	5	50	250	1.5
621	CR315	7200	8640	9	50	250	1.5
622	CR325	7200	8640	12	50	400	1.5
623	CR335	7200	8640	17	50	400	1.5
624	CR108	8000	9600	0.550	60	15	0.3
625	CR208	8000	9600	0.3	60	9	0.1
626	CR306	8400	10080	5	50	250	1.5
627	CR316	8400	10080	9	50	250	1.5
628	CR109	9000	10800	0.550	60	15	0.3
629	CR307	9600	11520	5	50	250	1.5
630	CR317	9600	11520	9	50	250	1.5
631	CR110	10000	12000	0.550	60	15	0.3
632	CR210	10000	12000	0.3	60	9	0.1
633	CR212	12000	14400	0.3	60	9	0.1

RCA RECTIFIER BRIDGES

	RCA Type	Average DC Output Amperes	Average DC Output Volts	RMS Supply Volts
634	CR401	18	200	222
635	CR402	18	4000	444
636	CR403	18	800	888
637	CR404	34	200	222
638	CR405	34	400	444
639	CR406	34	800	888
640	CR407	70	200	222
641	CR408	70	400	444
642	CR409	70	800	888
643	CR501	24	300	222
644	CR502	24	600	444
645	CR503	46	300	222
646	CR504	46	600	444
647	CR505	92	300	222
648	CR506	92	600	444

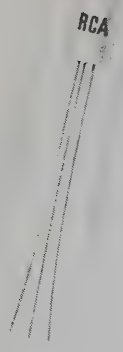
RCA MILITARY-SPECIFICATION TRANSISTORS AND RECTIFIERS

USA 1N249B	JAN 2N220	USA 2N1479
USA 1N250B	USA 2N274	USA 2N1480
JAN 1N538	JAN 2N384	USA 2N1481
JAN 1N540	JAN 2N388	USA 2N1482
JAN 1N547	USN 2N398	USA 2N1483
USAF 1N1183	JAN 2N404	USA 2N1484
USAF 1N1184	USA 2N1183	USA 2N1485
USAF 1N1185	USA 2N1183A	USA 2N1486
USAF 1N1186	USA 2N1183B	USA 2N1487
USAF 1N1187	USA 2N1184	USA 2N1488
USAF 1N1188	USA 2N1184A	USA 2N1489
USAF 1N1189	USA 2N1184B	USA 2N1490
USAF 1N1190	USA 2N1224	USA 2N1493
USAF 1N1199	USA 2N1225	USA 2N1511
USAF 1N1200	USN 2N1302	USA 2N1512
USAF 1N1201	USN 2N1303	USA 2N1513
USAF 1N1202	USN 2N1304	USA 2N1514
USAF 1N1203	USN 2N1305	USN 2N1853
USAF 1N1204	USN 2N1306	USN 2N1854
USAF 1N1205	USN 2N1307	USA 2N2015
USAF 1N1206	USN 2N1308	USA 2N2016
USA 1N2135A	USN 2N1309	USA 2N2273
JAN 2N174	USN 2N1412	

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OUTLINES

Outlines shown are approximately actual size.



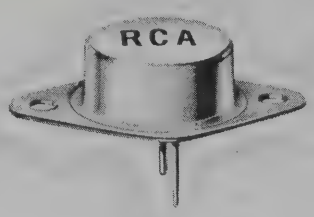
TO-1



TO-1
Size case



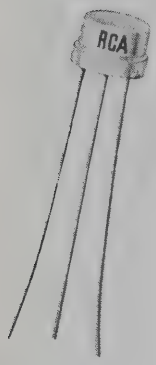
TO-1
Size case



TO-3



TO-3



TO-5



TO-8



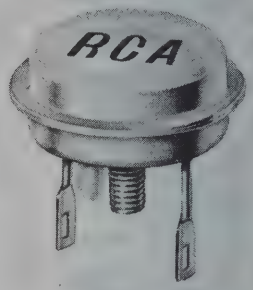
TO-11



TO-18



TO-33



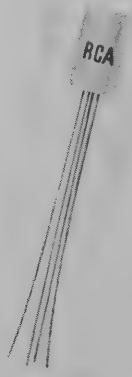
TO-36



TO-39



TO-40



TO-44



TO-45



TO-46



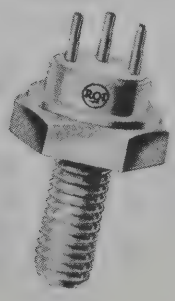
TO-48



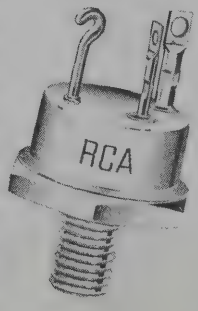
TO-52



TO-57



TO-60



TO-63



TO-64

RCA 16

OUTLINES

Outlines shown are approximately actual size.



TO-66



A



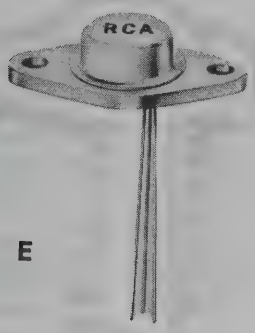
B



C



D



E



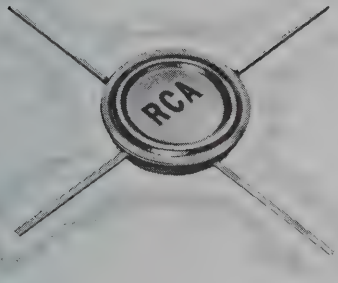
DO-1



DO-4



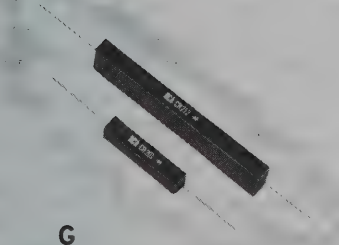
DO-5



F



H
5 X Actual Size



G
1/2 X Actual Size



I
1/2 X Actual Size



J
1/2 X Actual Size

RCA 17

Addendum Sheet

GUIDE TO RCA SEMICONDUCTOR PRODUCTS

RECENTLY ANNOUNCED TYPES

The following semiconductor devices have been announced since the GUIDE TO RCA SEMICONDUCTOR PRODUCTS, Form No. SPG-201/1L1147B was issued.

We have included a PAGE NUMBER and a LINE REFERENCE NUMBER for quick identification of each type listed on this Addendum Sheet. These page numbers and line reference numbers will be included in the Revised Product Guide.

INDEX

Type	Class	Data On Page	Line
1N1763A	R,Si	14-	471A
1N1764A	R,Si	14-	471B
1N2858A	R,Si	14-	454A
1N2859A	R,Si	14-	455A
1N2860A	R,Si	14-	456A
1N2861A	R,Si	14-	457A
1N2862A	R,Si	14-	458A
1N2863A	R,Si	14-	459A
1N2864A	R,Si	14-	460A
1N4785	R,Si	14-	469A
2N3730	T-PNP-Ge	8-	135B
2N3731	T-PNP-Ge	8-	135C
2N3732	T-PNP-Ge	8-	135D
2N3771	T-NPN-Si	12-	366A
2N3772	T-NPN-Si	12-	367A
2N3773	T-NPN-Si	12-	369A
2N3866	T-NPN-Si	10-	205A
2N3878	T-NPN-Si	12-	332A
2N3879	T-NPN-Si	12-	332B
40235	T-NPN-Si	9-	200A
40236	T-NPN-Si	9-	200B
40237	T-NPN-Si	9-	200C
40238	T-NPN-Si	9-	185A
40239	T-NPN-Si	9-	185B
40240	T-NPN-Si	9-	185C
40259	R,Si	15-	542A
40336	T-NPN-Si	9-	183A
40337	T-NPN-Si	9-	183B
40338	T-NPN-Si	9-	183C
40339	T-NPN-Si	9-	183D
40340	T-NPN-Si	10-	221A
40341	T-NPN-Si	10-	221B
40342	T-NPN-Si	10-	209A
40343	T-NPN-Si	10-	202A
40346	T-NPN-Si	12-	374A
40360	T-NPN-Si	8-	76A
40361	T-NPN-Si	8-	76B
40362	T-PNP-Si	8-	135A
40363	T-NPN-Si	8-	125A
40364	T-NPN-Si	8-	106A

	Type	Structure	Package	MAX. RATINGS P_T @25°C watts	V_{CB} volts	I_C amp	CHARACTERISTICS h_{FE}(min.) @ I_C h_{FE}	amp	I_{CBO} (max.) μa	f_T (typ.) Mc
	LARGE-SIGNAL TYPES (Classes A & B)									
	Silicon NPN									
76A	40360	DJ	TO-5	5	-	0.7	40	0.01	-	100
76B	40361	DJ	TO-5	5	-	0.7	70	0.05	-	100
106A	40364	DJ	TO-66	35	-	7	20	2.5	-	15
125A	40363	DJ	TO-3	115	-	15	20	4	-	0.7
	Silicon PNP									
135A	40362	DJ	TO-5	5	-	-0.7	35	-0.05	-	100

	Type	Structure	Package	MAX. RATINGS P_T @55°C watts	V_{CB} volts	I_C amp	CHARACTERISTICS V_{CE}(sat.) @ I_C volts	amp	I_{CBO} (max.) μa	T (max) °C
	TELEVISION DEFLECTION TYPES									
	Germanium PNP									
135B	2N3730	GB	TO-3	10	-200	-3	-2	-0.7	-200	85
135C	2N3731	GB	TO-3	5	-320	-10	-1.5	-6	-200	85
135D	2N3732	GB	TO-3	3	-100	-3	-2	-0.7	-200	85

GB = Graded Base Transistors ● f_T

	Type	Structure	Package	CHARACTERISTICS G_p (Min.) @ Operating Frequency Mc	watts	f_{hfb} (Typ.) Mc	h_{fe} (Typ.) @ I_C h_{fe}	ma	V_{CB} (max.) volts	
	IF, RF, & VIDEO AMPLIFIER TYPES									
	Silicon NPN									
183D	40339	P	TO-60	27	3.5	500				For CB Transmitters
183C	40338	P	TO-60	27	3.0	500				
183B	40337	P	TO-39	27	2.5	500				
183A	40336	P	TO-39	27	0.25	350				

	Type	Structure	Package	CHARACTERISTICS G_p (Typ.) @ Operating Frequency Mc	db	f_{hfb} (Typ.) Mc	h_{fe} (Typ.) @ I_c h_{fe}	ma	V_{CB} (max.) volts	
	UHF & VHF SMALL-SIGNAL TYPES									
	Silicon NPN									
185A	40238	P	A	45	45.3	900●			35	For TV IF Amp. Service
185B	40239	P	A	45	45.3	900●			35	
185C	40240	P	A	45	45.3	900●			35	
200A	40235	P	A	216	29.1	1200●			35	For TV Tuner Use
200B	40236	P	A	216	19	1200●			35	
200C	40237	P	A	-	-	1200●			35	

RADIO CORPORATION OF AMERICA
Electronic Components and Devices
RCA 18

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	RCA Type	Structure	Package	CHARACTERISTICS: P_O (min) @ Operating Frequency (Mc)	P_O (min) @ Operating Frequency (watts)	f_T (Typ.) (Mc)	MAX. RATINGS: V_{CBO} (volts)	P_T (watts)
	UHF & VHF LARGE-SIGNAL (Power) TYPES							
	Silicon NPN							
202A	40343	EX	TO-60	400	13.5	-	65	23
205A	2N3866	EXP	TO-39	400	1	800	55	5
209A	40342	EX	TO-60	175	13.5	-	65	23
221A	40340	EXP	TO-60	50	25	-	60	70
221B	40341	EXP	TO-60	50	30	-	80	70

	RCA Type	JEDEC Pkg.	MAXIMUM RATINGS: I_F Avg. (Res or Ind) @ T_{FA} = °C (amp)	@ T_{FA} = °C (T)	PRV (volts)	I_F Peak Rep. (amp)	I_F Peak Surge (amp)	CHARACTERISTICS: Max. E_{FWD} (volts)	Max. I_R (Dynamic) (ma)
	AXIAL-LEAD TYPES FOR TV AND RADIO RECEIVER APPLICATIONS								
471A	1N1763A	DO-1	1	75	400	5	35	280	0.1
471B	1N1764A	DO-1	1	75	500	5	35	350	0.1

	RCA Type	Structure	Package	P_T (max.) @25°C (watts)	CHARACTERISTICS: V_{CE} (min.) (volts)	$V_{CE(sus)}$ (min.) (volts)	h_{FE} (min.) @ I_C (h_{FE})	h_{FE} (min.) @ I_C (amp)	$V_{CE(sat)}$ (max.) @ I_C (v.)	$V_{CE(sat)}$ (max.) @ I_C (amp)	f_T (min) (Mc)
	HIGH POWER TYPES										
	Silicon NPN										
332A	2N3878	EX	TO-66	35	65⊕	50	50	0.5	2	4	40
332B	2N3879	EX	TO-66	35	90⊕	75	40	0.5	1.2	4	40
366A	2N3771	DJ	TO-3	150	50	40	15	8	2	15	-
367A	2N3772	DJ	TO-3	150	100	60	15	10	1.4	10	-
369A	2N3773	DJ	TO-3	150	160	140	15	15	1.4	8	-
	DIFFERENTIAL & OPERATIONAL AMPLIFIER TYPES										
	Silicon NPN										
374A	40346	TDP	TO-5	5	-	-	25	0.001	0.5	0.001	-

	RCA Type	JEDEC Pkg.	MAXIMUM RATINGS: PRV (volts)	I_F Avg. (Res or Ind) @ T_{FA} = °C (amp)	@ T_{FA} = °C (T)	I_F Peak Rep. (amp)	I_F Peak Surge (amp)	CHARACTERISTICS: Max. E_{FWD} (volts)	Max. I_R (Dynamic) (ma)
	AXIAL-LEAD TYPES FOR INDUSTRIAL AND CONSUMER-PRODUCT APPLICATIONS								
454A	1N2858A	DO-1	50	1	75	5	35	35	0.1
455A	1N2859A	DO-1	100	1	75	5	35	70	0.1
456A	1N2860A	DO-1	200	1	75	5	35	140	0.1
457A	1N2861A	DO-1	300	1	75	5	35	210	0.1
458A	1N2862A	DO-1	400	1	75	5	35	280	0.1
459A	1N2863A	DO-1	500	1	75	5	35	350	0.1
460A	1N2864A	DO-1	600	1	75	5	35	420	0.1
	TV DAMPER SERVICE								
469A	1N4785	TO-3	320	7	85	10	-	-	‡0.15

	RCA Type	JEDEC Pkg.	MAXIMUM RATINGS: I_F Avg. @ T_C = °C (amp)	@ T_C = °C (°C)	PRV (volts)	I_F Peak Rep. (amp)	I_F Peak Surge (amp)	CHARACTERISTICS: Max. E_{FWD} (volts)	Max. I_R (Dynamic) (ma)
	STUD-MOUNTED TYPES FOR MILITARY AND INDUSTRIAL APPLICATIONS								
542A	40259	DO-4	12	150	600	50	250	0.55	0.6

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⊕ V_{CER} ‡ Static Characteristic

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SARKES TARZIAN

JEDEC Silicon Avalanche Rectifiers

All of the silicon rectifiers listed below are supplied with avalanche characteristics as standard. They are direct replacements, electrically and physically, for ordinary silicon rectifiers, yet they provide important benefits to you and your products, **at no** extra cost.

Overvoltage protection is built into the rectifier. Transient voltage induced failures are virtually eliminated because these units avalanche at voltages well below the destruction point. The overvoltage spike is dissipated through the junction at a point below the critical voltage stress across the edge of the junction.

Lower circuit costs are readily achieved. When avalanche rectifiers are used suppressor and balancing devices, such as resistors, capacitors, R-C networks, etc., are no longer needed. In addition, their elimination improves circuit reliability, due to a reduction in number of components and interconnections.

Dependable performance is assured. Over 10,000,000 of these devices already have been delivered and are in actual use in the field. They are now routinely available from high volume production lines.

All Tarzian Silicon Rectifiers are supplied with avalanche protection at no extra cost. For additional types, not necessarily covered by JEDEC numbers, see the following pages.

Jedec No.	Net Each, Lots of 1-24	25-99	100 up
1N248	2.60	2.22	2.06
1N248A	2.60	2.22	2.06
1N248B	2.60	2.22	2.06
1N248C	2.60	2.22	2.06
1N249	2.60	2.22	2.06
1N249A	2.60	2.22	2.06
1N249B	2.60	2.22	2.06
1N249C	3.10	2.66	2.48
1N250	3.10	2.66	2.48
1N250A	3.10	2.66	2.48
1N250B	3.10	2.66	2.48
1N250C	3.10	2.66	2.48
1N253	1.20	1.03	.96
1N254	1.25	1.07	1.00
1N255	1.95	1.67	1.56
1N256	2.70	2.32	2.16
1N332	1.95	1.67	1.56
1N333	1.95	1.67	1.56
1N334	1.55	1.33	1.24
1N335	1.55	1.33	1.24
1N336	1.25	1.07	1.00
1N337	1.25	1.07	1.00
1N338	1.20	1.03	.96
1N339	1.20	1.03	.96
1N340	1.20	1.03	.96
1N341	1.95	1.67	1.56
1N342	1.95	1.67	1.56
1N343	1.55	1.33	1.24
1N344	1.55	1.33	1.24
1N345	1.25	1.07	1.00
1N346	1.25	1.07	1.00
1N347	1.20	1.03	.96
1N348	1.20	1.03	.96
1N349	1.20	1.03	.96
1N532	.44	.39	.36
1N533	.45	.40	.37
1N534	.50	.43	.40
1N535	.55	.45	.42
1N536	.35	.33	.31
1N537	.35	.33	.31
1N538	.40	.36	.33
1N539	.44	.39	.36
1N540	.45	.40	.37
1N547	.55	.45	.42
1N560	.95	.80	.75
1N599	.35	.33	.31
1N600	.35	.33	.31
1N601	.40	.36	.33
1N602	.40	.36	.33
1N603	.44	.39	.36
1N604	.45	.40	.37
1N605	.50	.43	.40
1N606	.55	.45	.42
1N607	1.20	1.03	.96
1N608	1.20	1.03	.96
1N609	1.25	1.07	1.00
1N610	1.25	1.07	1.00
1N611	1.55	1.33	1.24
1N612	1.95	1.67	1.56
1N613	2.35	2.10	1.88
1N614	2.70	2.32	2.16

Jedec No.	Net Each, Lots of 1-24	25-99	100 up
1N1081	.60	.55	.51
1N1082	.65	.57	.53
1N1083	.70	.61	.57
1N1084	.75	.63	.59
1N1095	.50	.43	.40
1N1096	.55	.45	.42
1N1100	.35	.33	.31
1N1101	.40	.36	.33
1N1102	.44	.39	.36
1N1103	.45	.40	.37
1N1104	.50	.43	.40
1N1105	.55	.45	.42
1N1115	1.20	1.03	.96
1N1116	1.25	1.07	1.00
1N1117	1.55	1.33	1.24
1N1118	1.95	1.67	1.56
1N1119	2.35	2.10	1.88
1N1120	2.70	2.32	2.16
1N1124	1.25	1.07	1.00
1N1125	1.55	1.33	1.24
1N1126	1.95	1.67	1.56
1N1127	2.35	2.10	1.88
1N1128	2.70	2.32	2.16
1N1133	3.35	2.86	2.67
1N1134	3.35	2.86	2.67
1N1135	3.75	3.22	3.00
1N1136	3.75	3.22	3.00
1N1137	4.15	3.58	3.34
1N1138	4.15	3.58	3.34
1N1139	5.40	4.64	4.33
1N1140	5.40	4.64	4.33
1N1141	7.50	6.43	6.00
1N1142	7.50	6.43	6.00
1N1143	8.75	7.50	7.00
1N1143A	8.75	7.50	7.00
1N1144	10.00	8.58	8.00
1N1145	10.00	8.58	8.00
1N1146	10.85	9.30	8.66
1N1147	15.00	12.89	12.00
1N1148	17.10	14.65	13.65
1N1149	19.10	16.45	15.31
1N1150A	12.00	10.30	9.60
1N1169	.45	.40	.37
1N1169A	.45	.40	.37
1N1183	2.60	2.22	2.06
1N1184	2.60	2.22	2.06
1N1185	3.10	2.66	2.48
1N1186	3.10	2.66	2.48
1N1187	3.55	3.04	2.84
1N1188	4.45	3.82	3.56
1N1188	5.35	4.59	4.27
1N1189	6.40	5.50	5.14
1N1191	2.60	2.22	2.06
1N1191A	2.60	2.22	2.06
1N1192	2.60	2.22	2.06
1N1192A	2.60	2.22	2.06
1N1193	3.10	2.66	2.48
1N1193A	3.10	2.66	2.48
1N1194	3.10	2.66	2.48
1N1194A	3.10	2.66	2.48
1N1195	3.55	3.04	2.84

Jedec No.	Net Each, Lots of 1-24	25-99	100 up
1N1195A	3.55	3.04	2.84
1N1196	4.45	3.82	3.56
1N1196A	4.45	3.82	3.56
1N1197	5.35	4.59	4.27
1N1197A	5.35	4.59	4.27
1N1198	6.40	5.50	5.14
1N1198A	6.40	5.50	5.14
1N1199	1.45	1.26	1.17
1N1199A	1.45	1.26	1.17
1N1200	1.45	1.26	1.17
1N1200A	1.45	1.26	1.17
1N1201	1.55	1.32	1.23
1N1201A	1.55	1.32	1.23
1N1202	1.55	1.32	1.23
1N1202A	1.55	1.32	1.23
1N1203	1.85	1.59	1.48
1N1203A	1.85	1.59	1.48
1N1204	2.35	2.00	1.87
1N1204A	2.35	2.00	1.87
1N1205	2.60	2.20	2.06
1N1205A	2.60	2.20	2.06
1N1206	3.30	2.83	2.64
1N1206A	3.30	2.83	2.64
1N1217	.35	.33	.31
1N1217A	.35	.33	.31
1N1218	.35	.33	.31
1N1218A	.35	.33	.31
1N1219	.40	.36	.33
1N1219A	.40	.36	.33
1N1220	.40	.36	.33
1N1220A	.40	.36	.33
1N1221	.44	.39	.36
1N1221A	.44	.39	.36
1N1222	.45	.40	.37
1N1222A	.45	.40	.37
1N1223	.50	.43	.40
1N1223A	.50	.43	.40
1N1224	.55	.45	.42
1N1224A	.55	.45	.42
1N1237	12.00	10.30	9.60
1N1238	12.00	10.30	9.60
1N1239	18.10	15.50	14.45
1N1262	18.10	15.50	14.45
1N1341	1.20	1.03	.96
1N1341A	1.20	1.03	.96
1N1342	1.20	1.03	.96
1N1342A	1.20	1.03	.96
1N1343	1.25	1.07	1.00
1N1343A	1.25	1.07	1.00
1N1344	1.25	1.07	1.00
1N1344A	1.25	1.07	1.00
1N1345	1.55	1.33	1.24
1N1345A	1.55	1.33	1.24
1N1346	1.95	1.67	1.56
1N1346A	1.95	1.67	1.56
1N1347	2.35	2.10	1.88
1N1347A	2.35	2.10	1.88
1N1348	2.70	2.32	2.16
1N1348A	2.70	2.32	2.16
1N1488	.40	.36	.33
1N1489	.44	.39	.36

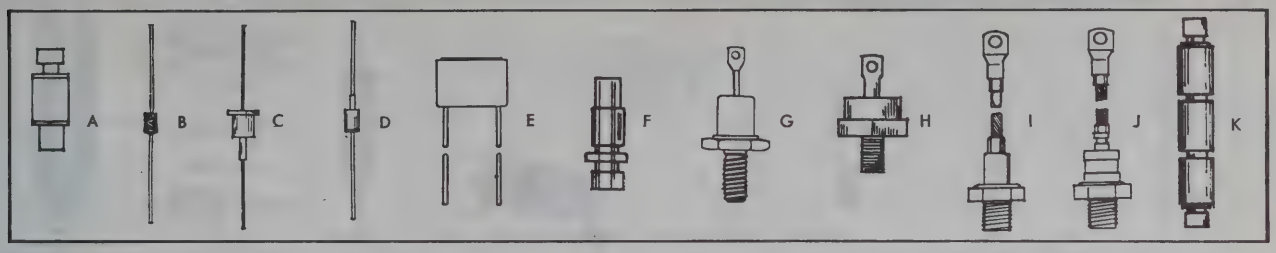
Jedec No.	Net Each, Lots of 1-24	25-99	100 up
1N1490	.45	.40	.37
1N1491	.50	.43	.40
1N1492	.55	.45	.42
1N1537	1.20	1.03	.96
1N1538	1.20	1.03	.96
1N1539	1.25	1.07	1.00
1N1540	1.25	1.07	1.00
1N1541	1.55	1.33	1.24
1N1542	1.95	1.67	1.56
1N1543	2.35	2.10	1.88
1N1544	2.70	2.32	2.16
1N1581	1.40	1.21	1.02
1N1582	1.40	1.21	1.02
1N1583	2.70	2.34	2.16
1N1584	3.70	3.17	2.97
1N1585	4.50	3.84	3.60
1N1586	4.95	4.25	3.97
1N1587	5.80	4.85	4.64
1N1612	1.20	1.03	.96
1N1612A	1.20	1.03	.96
1N1613	1.20	1.03	.96
1N1613A	1.20	1.03	.96
1N1614	1.25	1.07	1.00
1N1614A	1.25	1.07	1.00
1N1615	1.95	1.67	1.56
1N1615A	1.95	1.67	1.56
1N1616	2.70	2.32	2.16
1N1616A	2.70	2.32	2.16
1N1692	.35	.33	.31
1N1693	.40	.36	.33
1N1694	.44	.39	.36
1N1695	.45	.40	.37
1N1696	.50	.43	.40
1N1697	.55	.45	.42
1N1730	2.10	1.79	1.67
1N1731	2.10	1.79	1.67
1N1732	2.90	2.50	2.33
1N1733	4.15	3.57	3.34
1N1734	5.00	4.29	4.00
1N1763	.45	.40	.37
1N1764	.50	.43	.40
1N2069	.35	.32	.29
1N2070	.40	.36	.33
1N2071	.45	.40	.37
1N2154	2.60	2.22	2.06
1N2155	2.60	2.22	2.06
1N2156	3.10	2.66	2.48
1N2157	3.55	3.04	2.84
1N2158	4.45	3.82	3.56
1N2159	5.35	4.59	4.27
1N2160	6.40	5.50	5.14
1N2373	1.25	1.07	1.00
1N2374	2.10	1.79	1.67
1N2375	2.10	1.79	1.67
1N2376	2.90	2.50	2.33
1N2377	3.35	2.86	2.66
1N2378	4.20	3.58	3.34
1N2379	5.00	4.30	4.00
1N2380	7.10	6.08	5.66
1N2381	11.40	9.65	9.00
1N2382	5.00	4.29	4.00

Jedec No.	Net Each, Lots of 1-24	25-99	100 up
1N2383	7.10	6.08	5.66
1N2384	7.50	6.43	6.00
1N2385	9.15	7.86	6.00
1N2389	6.10	5.23	4.87
1N2482	.35	.32	.29
1N2483	.40	.36	.33
1N2484	.45	.40	.37
1N2485	.40	.36	.33
1N2486	.44	.39	.36
1N2487	.45	.40	.37
1N2488	.50	.43	.40
1N2489	.55	.45	.42
1N2490	12.00	10.30	9.60
1N2610	.35	.33	.31
1N2611	.40	.36	.33
1N2612	.44	.39	.36
1N2613	.45	.40	.37
1N2614	.50	.43	.40
1N2615	.55	.45	.42
1N3161	14.20	12.19	11.36
1N3162	14.20	12.19	11.36
1N3163	15.80	13.50	12.60
1N3164	15.80	13.50	12.60
1N3165	17.10	15.00	14.00
1N3166	17.10	15.00	14.00
1N3167	24.40	20.95	19.52
1N3168	24.40	20.95	19.52
1N3169	32.60	27.95	26.10
1N3170	42.40	36.20	33.80
1N3260	12.90	11.09	10.32
1N3261	12.90	11.09	10.32
1N3262	14.50	12.40	11.58
1N3263	14.50	12.40	11.58
1N3264	15.80	13.50	12.60
1N3265	15.80	13.50	12.60
1N3266	20.80	17.80	16.60
1N3267	20.80	17.80	16.60
1N3268	28.45	24.38	22.75
1N3269	34.60	29.60	27.65
1N3289	12.20	10.45	9.79
1N3290	13.40	11.76	10.95
1N3291	18.80	16.07	15.00
1N3292	24.25	20.78	19.40
1N3293	28.50	24.40	22.80
1N3569	1.20	1.03	.96
1N3570	1.25	1.07	1.00
1N3571	1.55	1.33	1.24
1N3572	1.95	1.67	1.56
1N3573	2.35	2.10	1.88
1N3574	2.70	2.32	2.16
1N3639	.40	.36	.33
1N3640	.45	.40	.37
1N3641	.55	.45	.42
1N3642	.95	.80	.75
1N3736	15.80	13.50	12.60
1N3737	17.10	15.00	14.00
1N3738	24.40	20.95	19.52
1N3739	32.60	27.95	26.10
1N3740	42.40	36.20	33.80

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SARKES TARZIAN

Silicon Avalanche Rectifiers



Tarzian Silicon Rectifiers with avalanche characteristics are available from 0.5 to 350 amps.
For information on the benefits and advantages of avalanche characteristics, see the previous page. A brochure describing these in detail is available directly from Sarkes-Tarzian, Inc., Semiconductor Division, Bloomington, Indiana.

LOW CURRENT AVALANCHE RECTIFIERS

M SERIES 0.5 AMP (FIG. A)

S-T No.	JEDEC No.	Max. PIV	Max. RMS Volts	Max. Cur., Amps at 100° C* DC Load	Recur. Peak	4MS Surge	Net Each, Lots of 1-24	25-99	100 Up
10M	1N1081	100	70	0.5	5.0	30	$0.60	$0.55	$0.51
20M	1N1082	200	140	0.5	5.0	30	.65	.57	.53
30M	1N1083	300	210	0.5	5.0	30	.70	.61	.57
40M	1N1084	400	280	0.5	5.0	30	.75	.63	.59
M-500	1N1084	400	280	0.5	5.0	30	.75	.63	.59
50M	.....	500	350	0.5	5.0	30	.80	.69	.64
60M	.....	600	420	0.5	5.0	30	.85	.70	.66

F SERIES 0.75 AMP (FIG. B)

F-2	1N2482	200	140	0.75	5.0	75	$0.35	$0.32	$0.29
F-4	1N2483	400	280	0.75	5.0	75	.40	.36	.33
F-6	1N2484	600	420	0.75	5.0	75	.45	.40	.37
F-8	.....	800	560	0.75	5.0	75	.60	.49	.46

H SERIES 0.75 AMP (FIG. C)

10H	.....	100	70	0.75	5.0	75	$0.35	$0.33	$0.31
20H	1N2485	200	140	0.75	5.0	75	.40	.36	.33
30H	1N2486	300	210	0.75	5.0	75	.44	.39	.36
40H	1N2487	400	280	0.75	5.0	75	.45	.40	.37
50H	1N2488	500	350	0.75	5.0	75	.50	.43	.40
60H	1N2489	600	420	0.75	5.0	75	.55	.45	.42
80H	.....	800	560	0.75	5.0	75	.95	.80	.75

C SERIES 0.75 AMP (FIG. D)

10C	1N2610	100	70	0.75	.....	.....	$0.35	$0.33	$0.31
20C	1N2611	200	140	0.75	.....	.....	.40	.36	.33
30C	1N2612	300	210	0.75	.....	.....	.44	.39	.36
40C	1N2613	400	280	0.75	.....	.....	.45	.40	.37
50C	1N2614	500	350	0.75	.....	.....	.50	.43	.40
60C	1N2615	600	420	0.75	.....	.....	.55	.45	.42
80C	1N2616	800	560	0.75	.....	.....	.95	.80	.75

ST1 SERIES 0.625 AMP (FIG. E)

ST12	.....	200	140	0.625	5	75	$0.35	$0.32	$0.29
ST14	.....	400	280	0.625	5	75	.40	.36	.33
ST16	.....	600	420	0.625	5	75	.45	.40	.37
ST18	.....	800	560	0.625	.....	.....	.60	.49	.46

*In most cases based on proper heat sink to limit case temperature rise to 60° C.

MEDIUM CURRENT AVALANCHE RECTIFIERS

B SERIES 1.6 AMPS (FIG. C)

S-T No.	JEDEC No.	Max. PIV	Max. RMS Volts	DC Load, Amps	Recur. Peak, Amps	Net Each, Lots of 1-24	25-99	100 Up
20B	.....	200	140	1.6	9.6	$1.05	$0.89	$0.83
40B	.....	400	280	1.6	9.6	1.25	1.07	1.00
60B	.....	600	420	1.6	9.6	1.50	1.27	1.19
80B	.....	800	560	1.6	9.6	1.80	1.55	1.44

LA SERIES 2 AMPS (FIG. F)

10LA	1N1085A	100	70	2.0	30	$3.34	$2.86	$2.66
20LA	1N1086A	200	140	2.0	30	4.00	3.43	3.20
30LA	1N1087A	300	210	2.0	30	4.67	4.00	3.73
40LA	1N1088A	400	280	2.0	30	5.35	4.67	4.27
50LA	.....	500	350	2.0	30	5.87	5.03	4.70
60LA	.....	600	420	2.0	30	6.45	5.52	5.15

H3 SERIES 6 AMPS (FIG. G)

Add suffix N for negative or P for positive base. Add R to JEDEC type for negative base.

10H3	1N1342	100	70	6	35	$1.20	$1.03	$0.96
20H3	1N1344	200	140	6	35	1.25	1.07	1.00
30H3	1N1345	300	210	6	35	1.55	1.33	1.24
40H3	1N1346	400	280	6	35	1.95	1.67	1.56
50H3	1N1347	500	350	6	35	2.35	2.10	1.88
60H3	1N1348	600	420	6	35	2.70	2.32	2.16
80H3	.....	800	560	6	35	3.20	2.76	2.58

ST2 SERIES 12 AMP (FIG. G)

Add suffix N for negative base or P for positive base.

ST210	1N1200	100	70	12	70	$1.45	$1.26	$1.17
ST220	1N1202	200	140	12	70	1.55	1.32	1.23
ST230	1N1203	300	210	12	70	1.85	1.59	1.48
ST240	1N1204	400	280	12	70	2.35	2.00	1.87
ST250	1N1205	500	350	12	70	2.60	2.20	2.06
ST260	1N1206	600	420	12	70	3.30	2.83	2.64
ST280	.....	800	560	12	70	3.95	3.40	3.18

HIGH CURRENT, HERMETICALLY SEALED AVALANCHE RECTIFIERS

Stud base, hermetically sealed rectifiers. Add suffix N for negative base (anode) or suffix P for positive base (cathode).

ST3 SERIES 25 AMP (FIG. H)

S-T No.	JEDEC No.	Max. PIV	Max. RMS Volts	DC Amps	Net Each, Lots of 1-24	25-99	100 Up
ST3A10	.....	100	70	25	$2.20	$1.90	$1.73
ST3A20	.....	200	140	25	2.45	2.10	1.96
ST3A30	.....	300	210	25	2.85	2.44	2.28
ST3A40	.....	400	280	25	3.15	2.70	2.52
ST3A50	.....	500	350	25	3.50	2.98	2.78
ST3A60	.....	600	420	25	3.80	3.28	3.06
ST3A80	.....	800	560	25	4.55	3.90	3.62

ST4 SERIES 35 AMP (FIG. H)

ST410	1N1184	100	70	35	$2.60	$2.22	$2.06
ST420	1N1186	200	140	35	3.10	2.66	2.48
ST430	1N1187	300	210	35	3.55	3.04	2.84
ST440	1N1188	400	280	35	4.45	3.82	3.56
ST450	1N1189	500	350	35	5.35	4.59	4.27
ST460	1N1190	600	420	35	6.40	5.50	5.14
ST480	.....	800	560	35	8.65	7.40	6.90

ST5 SERIES 50 AMP (FIG. I)

ST510	.....	100	70	50	$ 9.00	$ 7.71	$ 7.20
ST520	.....	200	140	50	9.95	8.54	7.97
ST530	.....	300	210	50	13.35	11.42	10.68
ST540	.....	400	280	50	15.80	13.50	12.60
ST550	.....	500	350	50	18.30	15.70	14.65
ST560	.....	600	420	50	20.20	17.31	16.19
ST580	.....	800	560	50	23.60	20.20	18.82

ST6 SERIES 100 AMP (FIG. I)

ST610	.....	100	70	100	$11.20	$ 9.60	$ 8.96
ST620	.....	200	140	100	12.20	10.45	9.79
ST630	.....	300	210	100	13.40	11.76	10.95
ST640	.....	400	280	100	18.80	16.07	15.00
ST650	.....	500	350	100	24.25	20.78	19.40
ST660	.....	600	420	100	28.50	24.40	22.80
ST680	.....	800	560	100	34.00	29.10	27.20

ST7 SERIES 160 AMP (FIG. J)

ST710	1N3261	100	70	160	$12.90	$11.09	$10.32
ST720	1N3263	200	140	160	14.50	12.40	11.58
ST730	1N3265	300	210	160	15.80	13.50	12.60
ST740	1N3267	400	280	160	20.20	17.80	16.60
ST750	1N3268	500	350	160	28.45	24.38	22.75
ST760	1N3269	600	420	160	34.60	29.60	27.65
ST770	1N3270	700	490	160	38.00	32.50	29.00
ST780	1N3271	800	560	160	41.50	35.50	33.05

ST9 SERIES 250 AMP (FIG. J)

ST910	1N3162	100	70	250	$14.20	$12.19	$11.36
ST920	1N3164	200	140	250	15.80	13.50	12.60
ST930	1N3166	300	210	250	17.10	15.00	14.00
ST940	1N3168	400	280	250	24.40	20.95	19.52
ST950	1N3169	500	350	250	32.60	27.95	26.10
ST960	1N3170	600	420	250	42.40	36.20	33.80
ST970	1N3171A	700	490	250	50.80	43.50	40.51
ST980	1N3172A	800	560	250	61.90	53.00	49.40

ST20 SERIES 350 AMP (FIG. J)

ST2010	.....	100	70	350	$33.40	$28.60	$26.65
ST2020	.....	200	140	350	47.35	40.50	37.80
ST2030	.....	300	210	350	56.70	48.60	45.40
ST2040	.....	400	280	350	68.20	58.50	54.50
ST2050	.....	500	350	350	81.50	69.90	65.20
ST2060	.....	600	420	350	98.00	84.00	78.40
ST2070	.....	700	490	350	111.25	95.50	89.00
ST2080	.....	800	560	350	134.00	114.80	107.00

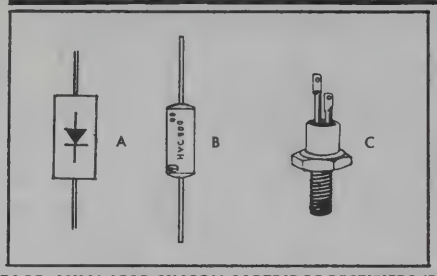
HIGH VOLTAGE SM SERIES (FIG. K)

S-T No.	JEDEC No.	Max. PIV	Max. RMS Volts	DC Load Amps	Recur. Peak, Amps	Net Each, Lots of 1-24	25-99	100 Up
80SM	1N1108	800	560	.45	4.5	$3.15	$2.71	$2.54
120SM	1N1109	1200	840	.425	4.25	4.00	3.43	3.20
160SM	1N1110	1600	1120	.4	4.0	4.75	4.15	3.86
200SM	1N1111	2000	1400	.375	3.75	5.65	4.86	4.53
240SM	1N1112	2400	1680	.35	3.5	6.50	5.57	5.20
280SM	1N1113	2800	1960	.325	3.25	7.35	6.30	5.87

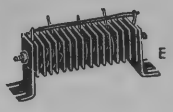
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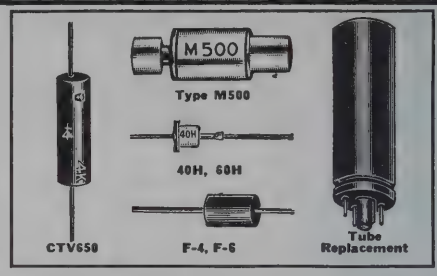
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Silicon & Selenium Rectifiers




D


E



HIGH VOLTAGE, AXIAL LEAD SILICON CARTRIDGE RECTIFIERS (FIG. A)

JEDEC No.	S-T No.	PIV	Max. RMS Volts*	Max. Avg. Rect. Current, Ma at 25°C	Max. Avg. Rect. Current, Ma at 100°C	Size, In. Lgth. x Dia.	Lead Lgth., In.	Net Each, Lots of 1-24	Net Each, Lots of 25-99	Net Each, Lots of 100 Up
1N1730	S-5518	1000	700	200	100	.5 x .375	2½	$2.10	$1.79	$1.67
1N1731	S-5519	1500	1050	200	100	.5 x .375	2½	2.10	1.79	1.67
1N1732	S-5520	2000	1400	200	100	1 x .375	2½	2.90	2.50	2.33
1N1733	S-5521	3000	2100	150	75	1 x .375	2½	4.15	3.57	3.34
1N1734	S-5522	5000	3500	100	50	1 x .375	2½	5.00	4.29	4.00
1N2373	S-5523	600	420	250	100	.5 x .375	2½	1.25	1.07	1.00
1N2374	S-5524	1000	700	250	100	.5 x .375	2½	2.10	1.79	1.67
1N2375	S-5525	1500	1050	200	100	.5 x .375	2½	2.10	1.79	1.67
1N2376	S-5526	2000	1400	200	100	.9 x .375	2½	2.90	2.50	2.33
1N2377	S-5527	2400	1680	150	75	.9 x .375	2½	3.35	2.86	2.66
1N2378	S-5528	3000	2100	150	75	1 x .375	2½	4.20	3.58	3.34
1N2379	S-5529	4000	2800	100	50	1.25 x .375	2½	5.00	4.30	4.00
1N2380	S-5530	6000	4200	100	50	2.5 x .375	2½	7.10	6.08	5.66
1N2381	S-5531†	10000	7000	75	25	2.5 x .375	2½	11.40	9.65	9.00
1N2382	S-5532	4000	2800	150	75	1 x .375	2½	5.00	4.29	4.00
1N2383	S-5533†	6000	4200	100	50	1.5 x .375	2½	7.10	6.08	5.66
1N2384	S-5534†	8000	5600	70	35	1.5 x .375	2½	7.50	6.43	6.00
1N2385	S-5535†	10000	7000	70	35	2 x .375	2½	9.15	7.86	6.00

*Derate 50% for capacitive load in half-wave circuits. †Ferrule mounting.

HVC SERIES HIGH VOLTAGE, AXIAL LEAD SILICON CARTRIDGE RECTIFIERS (FIG. B)

Epoxy-sealed phenolic tube construction with 2″ lg. (min.) axial leads.

S-T No.	Max. PIV	Max. Avg. Rect. Cur. (55°C), mA	Max. Fwd. V Drop at Rtd. Cur.	Body Size, In. Dia. x Lgth.	Net Each, Lots of 1-24	Net Each, Lots of 25-99	Net Each, Lots of 100 Up
HVC180	1800	250	4 VDC	.375 x 7/16	$ 3.35	$ 2.86	$ 2.66
HVC240	2400	250	5 VDC	.375 x 11/16	3.60	3.08	2.87
HVC300	3000	200	6 VDC	.375 x ¾	3.85	3.28	3.07
HVC400	4000	200	8 VDC	.375 x ⅞	4.00	3.44	3.20
HVC500	5000	200	10 VDC	.375 x 1	4.15	3.67	3.34
HVC600	6000	150	12 VDC	.375 x 1 1/16	4.55	3.92	3.66
HVC650	6500	150	13 VDC	.375 x 1 3/16	5.00	4.29	4.00
HVC750	7500	150	15 VDC	.375 x 1 5/16	5.40	4.64	4.34
HVC840	8400	100	16 VDC	.375 x 1⅜	5.85	5.00	4.66
HVC960	9600	100	18 VDC	.375 x 1½	6.65	5.72	5.34
HVC1000	10000	100	20 VDC	.375 x 1¾	7.10	6.07	5.66
HVC1200	12000	75	22 VDC	.375 x 1 15/16	8.35	7.15	6.66
HVC1500	15000	75	25 VDC	.375 x 2 5/16	10.40	8.94	8.34
HVC1600	18000	75	30 VDC	.375 x 2 5/8	12.50	10.70	10.00
HVC2100	21000	50	35 VDC	.375 x 3	14.60	12.50	11.67
HVC2500	25000	50	40 VDC	.375 x 3½	17.50	15.00	14.00
HVC3000	30000	50	50 VDC	.375 x 4¼	20.80	17.90	16.70

SILICON CONTROLLED RECTIFIERS (FIG. C)

Four-layer, three-junction devices for switching and power control. Size, 1¼″ overall l. Series 3TCR, 3 amps DC; Series 5TCR, 5 amps DC.

S-T No.	Max. PIV	Net Each, Lots of 1-24	Net Each, Lots of 25-99	Net Each, Lots of 100 Up	S-T No.	Max. PIV	Net Each, Lots of 1-24	Net Each, Lots of 25-99	Net Each, Lots of 100 Up
3TCRA	25	$2.80	$2.39	$2.22	5TCRA	25	$4.00	$3.43	$3.20
3TCRB	50	2.90	2.46	2.30	5TCRB	50	4.70	4.05	3.77
3TCRC	100	3.00	2.55	2.39	5TCRC	100	4.85	4.15	3.86
3TCRD	150	3.05	2.62	2.44	5TCRD	150	4.95	4.23	3.94
3TCRE	200	3.25	2.80	2.60	5TCRE	200	5.10	4.38	4.08
3TCRF	250	4.05	3.50	3.25	5TCRF	250	5.95	5.10	4.24
3TCRG	300	4.20	3.58	3.33	5TCRG	300	6.05	5.16	4.81
3TCRH	400	4.65	3.98	3.70	5TCRH	400	6.50	5.57	5.18
3TCRI	500	6.95	5.97	5.55	5TCRI	500	8.80	7.55	7.03

GATE TURNOFF TYPE

Class X and Y prices available on request.

3GCRGZ	100	$ 7.35	$ 6.27	$ 5.86	3GCRFZ	250	$17.90	$15.36	$14.35
3GCRDZ	150	10.10	8.63	8.07	3GCRGZ	300	24.60	21.10	19.69
3GCREZ	200	13.75	11.79	11.00	3GCRHZ	400	31.50	27.00	25.20

REPLACEMENT KITS

See Standard Replacement Types, below, for full specifications.

Sarkes Tarzian Type M500 Kit—Two Type M rectifiers in voltage doubler circuit, dual mounting clip, base and hardware. Net Each..... $1.86

Sarkes Tarzian Type M150 Kit—Single 150 mA, max., rectifier and one 10-ohm resistor in half wave circuit. Net Each..... 87c

Sarkes Tarzian Type F-4 Kit—Two F-4 rectifiers in voltage doubler circuit kit. Net Each..... $1.08

Sarkes Tarzian Model F-6 Kit—Two F-6 rectifiers in voltage doubler circuit kit. Net Each..... $1.20

Sarkes Tarzian Model 40H Kit—Two 40H rectifiers in voltage doubler circuit kit. Net Each..... $1.41

Sarkes Tarzian Model 60H Kit—Two 60H rectifiers in voltage doubler circuit kit. Net Each..... $1.38

SPECIAL SILICON COLOR TV FOCUS RECTIFIER

Permanent "cure" for loss of control in color TV sets due to aging of original selenium rectifier. Delivers full performance for the life of the set. **Replaces:** RCA 1440977-1; Magnavox B530096-1; Philco 34-8053-2; Emerson 817123; Packard Bell 72110; Sylvania 16106-1; Zenith 212-48; Airline 66X0035-001; DuMont 1440977-1; Olympic 1440977-1; Silvertone 86-44-3. **Max. Voltage:** 6500 PIV; 4550 V rms. **Current:** 60 mADC max. **Size:** Phenolic tube, 1¼″ l. x ¾″ O.D.; axial leads, 2″ lg. min.
Sarkes Tarzian Type CTV650—Net Each..... $5.00

VACUUM TUBE REPLACEMENT SERIES

These silicon rectifier tube replacements are the preferred way to reduce tube replacement costs. Although more expensive than rectifier tubes, they will outlast many times their cost in rectifier tubes.

S-T No.	JEDEC No.	Max. PIV	Max. VRms	Replaces Tube Type	Net Each
S-5011A	1N1150A	1600	1100	80, 82, 83, 83V, 5Z3	$12.00
S-5017	1N1237	1600	1100	0Z4, 5X4, 5Y4, 6AX5, 6X5	12.00
S-5018	1N1238	1600	1100	5AU4, 5AW4, 5AZ4, 5T4, 5U4, 5Y3	12.00
S-5019†	1N1239	2800	1950	5R4	18.10
S-5033‡	1N1262	4500	3200§	6AU4, 6AX4, 6BL4, 6W4, 12AX4, 25W4	18.10
S-5130‡	.....	10400	7400§	866, 866A, 3B28	22.50
S-5162	.....	2800	1950	5R4	16.10
S-5207†	1N2490	1600	1100	6X4	12.00
S-5251	1N2389	1600	1100	5AU4, 5AW4, 5AZ4, 5T4, 5U4, 5Y3	6.10
S-5343‡	.....	7000	5000§	816, 836, 3B28*	18.10
S-5344	.....	10000	7000§	872A	31.70
S-5347†	.....	1600	1100	12BW4, 6BW4	8.65
S-5367	.....	19000	13300§	8020	31.70
S-5373	.....	10000	7000§	8008	42.00
S-5449	.....	15000	10500§	575A	58.30
S-5451	.....	7200	5040§	872A*	31.70
S-5991	.....	1600	1100	5AU4, 5AW4, 5AZ4, 5T4, 5U4, 5Y3	3.50

*At reduced voltage. †Hermetically sealed. ‡Half-wave circuit; all others full wave. §Derate input voltage 50% for capacitive load.

STANDARD SILICON REPLACEMENT TYPES

Approximate voltage drop for all types listed below is 2 volts. Minimum series resistance required is 5 ohms for F-4, F-6, 40H and 60H; 10 ohms for M150 and 7.5 ohms for M500.

S-T Number	JEDEC Number	PIV	Max.‡ Rmc Volts	Max. Current, Amps DC at 100°C	Max. Current, Amps Recur. Peak	Max. Current, Amps 4MS Surge	Size, Inches Lgth. x Dia.	Min. Lead Lgth., In.	Net Each†
F-4	1N2483	400	280	0.75#	7.5	75	.250 x .200	1¼	$0.60
F-6	1N2484	600	420	0.75#	7.5	75	.250 x .200	1¼	.63
40H*	1N2487	400	280	0.75#	7.5	75	.687 x .375	1	.63
60H*	1N2489	600	420	0.75#	7.5	75	.687 x .375	1	.72
M150	.....	360	260	0.15	1.5	20	1 x 13/32	¼ O.D.	.84
M500	1N1084	400	280	0.5	5	30	1 x 13/32	¼ O.D.	.96

*Hermetically sealed. †Available bulk packed or in handy 10-pak, same price. ‡Derate 50% for ½-wave cap. load #At85°C.

SELENIUM RECTIFIERS

"CONDENSED-STACK" SELENIUM RECTIFIERS (FIG. D)

Approximate rectifier drop, 5 V. Max. plate temperature, 85°C operating. Resistance, shown, 16 series.

Sarkes Model	Max. Volts Input Rms	Max. Volts PIV	Max. Current Peak mA	Max. Current Rms mA	Max. Current mA DC	Min. Series Resist.*	Plate Size, Inches W. x H. x D.	Max. Hole Ctr.	Net Each
50-75	130	380	750	187	75	22	1/16 sq. x 25/64	.149″ dia.	$0.48
100-150	130	380	1500	375	150	22	1 sq. x 13/16	#8	.72
200-250	130	380	2500	625	250	15	1¼ sq. x 1¼	#8	1.08
300-500	130	380	5000	1250	500	5	1.6 sq. x 1 3/16	#2	1.32

*Ohms

SELENIUM "CENTRE-SEAL'D" RECTIFIERS

These standard power type rectifier stacks are used in a broad range of power supply applications, such as DC filament supplies, electro-plating equipment, etc.

Sarkes Tarzian "Centre-Seal" rectifiers have high thermal stability. They will operate efficiently at temperatures from −55°C to +100°C.

Sarkes Tarzian No.	DC Output‡ Volts	DC Output‡ Max. Amps	Max. AC Input Volts	Dimensions Plate Height	Dimensions Stack Length	Dimensions Plate Width	Net Each
D-10*	6-10	2	13	3″	2½″	3″	$3.75
D-11*	6-10	4	13	4″	2½″	4″	4.45
D-12*	6-10	6	13	4″	2⅞″	4″	4.80
D-13*	6-10	8	13	5″	2½″	6″	5.35
D-14*	6-10	12	13	5″	2⅞″	6″	5.80
D-15*	6-10	15	13	4¼″	2½″	12″	8.75
D-16*	6-10	22.5	13	4¼″	2⅞″	12″	9.55
D-52†	6-20	1.5	26	2″	1 13/16″	2″	4.00
D-17†	6-20	2	26	3″	3 3/16″	3″	5.25
D-18†	6-20	4	26	4″	3 3/16″	4″	6.40
D-19†	6-20	6	26	4″	4″	4″	7.05
D-20†	6-20	8	26	5″	3 3/16″	6″	7.95
D-21†	6-20	12	26	5″	4″	6″	$ 8.80
D-22†	6-20	15	26	4¼″	3 3/16″	12″	13.40
D-23†	6-20	22.5	26	4¼″	4″	12″	15.00
D-24†	20-40	2	52	3″	4 3/16″	3″	8.25
D-25†	20-40	4	52	4″	4 3/16″	4″	10.30
D-26†	20-40	6	52	4″	6 3/16″	4″	11.70
D-27†	20-40	8	52	5″	4 3/16″	6″	13.00
D-28†	20-40	12	52	5″	6 3/16″	6″	14.85
D-29†	20-40	15	52	4¼″	4 3/16″	12″	22.80
D-30†	20-40	22.5	52	4¼″	6 3/16″	12″	26.00
D-31†	40-60	2	78	3″	6″	3″	10.50
D-32†	40-60	4	78	4″	6″	4″	14.20
D-33†	40-60	6	78	4″	8 3/16″	4″	16.35
D-34†	40-60	8	78	5″	5 13/16″	6″	18.10
D-35†	40-60	12	78	5″	8 3/16″	6″	20.80
D-36†	40-60	15	78	4¼″	6″	12″	32.20
D-37†	40-60	22.5	78	4¼″	8 3/16″	12″	37.00
D-38†	60-100	.5	130	1.6″	5¼″	1.6″	7.95
D-39†	60-100	1	130	2″	5¼″	2″	12.00
D-40†	60-100	2	130	3″	8 3/16″	3″	17.30
D-41†	60-100	4	130	4″	8 3/16″	4″	22.00
D-42†	60-100	6	130	4″	13 3/16″	4″	25.55
D-43†	60-100	8	130	5″	8 3/16″	6″	28.40
D-44†	60-100	12	130	5″	13 3/16″	6″	32.90
D-45†	100-120	.5	156	1.6″	5 13/16″	1.6″	9.20
D-46†	100-120	1	156	2″	5 13/16″	2″	14.00
D-47†	100-120	2	156	3″	10 3/16″	3″	20.30
D-48†	100-120	4	156	4″	10 3/16″	4″	25.65
D-49†	100-120	6	156	4″	15½″	4″	30.00
D-50†	100-120	8	156	5″	10 3/16″	6″	33.40
D-51†	100-120	12	156	5″	15½″	6″	38.80

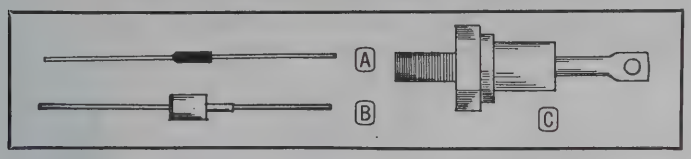
*Center-tap circuit. †Bridge circuit. ‡At 35°C ambient.

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SARKES TARZIAN

Silicon Regulators, Suppressors

SILICON ZENER VOLTAGE REGULATORS



One series covers many JEDEC types. Meet or exceed all JEDEC requirements. Tolerance ±5%; available in ±10% and ±20%. To order, add voltage and tolerance letter to S-T No. (i.e.: .25T5.6A).

S-T Series	Fig.	Tol. ±5%	W.	Net Each, Lots of 1-24	25-99	100 Up
.25T	F	A	.25	$2.25	$1.93	$1.80
.4T	F	A, B	.4	2.50	2.15	2.00
1TA	G	A, B	1	1.95	1.67	1.56
10T	....	A, B	10	5.33	4.58	4.26

JEDEC NUMBERS AND VOLTAGES AVAILABLE

.25T (250 Mw)		.4T (400 Mw)		1TA Series (1 Watt)				10T Series (10 Watt)					
JEDEC No.	Zener Volts	JEDEC No.	Zener Volts	JEDEC No.	Zener Volts	JEDEC No.	Zener Volts	JEDEC No.	Zener Volts	JEDEC No.	Zener Volts	JEDEC No.	Zener Volts
1N708A	5.6	1N769A	23.5	1N3016B	6.8	1N1774A	13	1N1351A	10	1N1823A	27	1N2993B	43
1N709A	6.2	1N752A	5.6	1N3017B	7.5	1N1775A	15	1N1352A	11	1N1824A	30	1N2994B	45
1N710A	6.8	1N753A	6.2	1N3018B	8.2	1N1776A	16	1N1353A	12	1N1825A	33	1N2995B	47
1N711A	7.5	1N754A	6.8	1N3019B	9.1	1N1778A	20	1N1354A	13	1N1826A	36	1N2996B	50
1N712A	8.2	1N755A	7.5	1N3020B	10	1N1779A	22	1N1355A	15	1N1827A	39	1N2997B	51
1N713A	9.1	1N756A	8.2	1N3021B	11	1N1780A	24	1N1356A	16	1N1828A	43	1N2998B	52
1N714A	10	1N757A	9.1	1N3022B	12	1N1781A	27	1N1357A	18	1N1829A	47	1N2999B	56
1N715A	11	1N758A	10	1N3023B	13	1N1782A	30	1N1358A	20	1N1830A	51	1N3000B	62
1N716A	12	1N759A	12	1N3024B	15	1N1783A	33	1N1359A	22	1N1831A	56	1N3001B	68
1N717A	13	1N957B	6.8	1N3025B	16	1N1784A	36	1N1360A	24	1N1832A	62	1N3002B	75
1N718A	15	1N958B	7.5	1N3026B	18	1N1785A	39	1N1361A	27	1N1833A	68	1N3003B	82
1N719A	16	1N959B	8.2	1N3027B	20	1N1786A	43	1N1362A	30	1N1834A	75	1N3004B	91
1N720A	18	1N960B	9.1	1N3028B	22	1N1787A	47	1N1363A	33	1N1835A	82	1N3005B	100
1N721A	20	1N961B	10	1N3029B	24	1N1788A	51	1N1364A	36	1N1836A	91	1N3006B	105
1N722A	22	1N962B	11	1N3030B	27	1N1789A	56	1N1365A	39	1N2008A	100	1N3007B	110
1N723A	24	1N963B	12	1N3031B	30	1N1790A	62	1N1366A	43	1N2009A	110	1N3008B	120
1N724A	27	1N964B	13	1N3032B	33	1N1791A	68	1N1367A	47	1N2010A	120	1N3009B	130
1N725A	30	1N965B	15	1N3033B	36	1N1792A	75	1N1368A	51	1N2011A	130	1N3010B	140
1N726A	33	1N966B	16	1N3034B	39	1N1793A	82	1N1369A	56	1N2012A	150	1N3011B	150
1N727A	36	1N967B	18	1N3035B	43	1N1794A	91	1N1370A	62	1N2498A	10	1N3012B	160
1N728A	39	1N968B	20	1N3036B	47	1N1795A	100	1N1371A	68	1N2499A	11	1N3013B	175
1N729A	43	1N969B	22	1N3037B	51	1N1796A	110	1N1372A	75	1N2500A	12	1N3014B	180
1N730A	47	1N970B	24	1N3038B	56	1N1797A	120	1N1373A	82	1N2970B	6.8	1N3015B	200
1N731A	51	1N971B	27	1N3039B	62	1N1798A	130	1N1374A	91	1N2971B	7.5		
1N732A	56	1N972B	30	1N3040B	68	1N1799A	150	1N1375A	91	1N2972B	8.2		
1N733A	62	1N973B	33	1N3041B	75	1N1800A	160	1N1803A	5.6	1N2973B	9.1		
1N734A	68	1N974B	36	1N3042B	82	1N1801A	180	1N1804A	6.2	1N2974B	10		
1N735A	75	1N975B	39	1N3043B	91	1N1802A	200	1N1805A	6.8	1N2975B	11		
1N736A	82	1N976B	43	1N3044B	100			1N1806A	7.5	1N2976B	12		
1N737A	91	1N977B	47	1N3045B	110			1N1807A	8.2	1N2977B	13		
1N738A	100	1N978B	51	1N3046B	120			1N1808A	9.1	1N2978B	14		
1N739A	110	1N979B	56	1N3047B	130			1N1809A	110	1N2979B	15		
1N740A	120	1N980B	62	1N3048B	150			1N1810A	120	1N2980B	16		
1N741A	130	1N981B	68	1N3049B	160			1N1811A	130	1N2981B	17		
1N742A	150	1N982B	75	1N3050B	180			1N1812A	150	1N2982B	18		
1N743A	160	1N983B	82	1N3051B	200			1N1813A	160	1N2983B	19		
1N744A	180	1N984B	91	1N1765A	5.6			1N1814A	180	1N2984B	20		
1N745A	200	1N985B	100	1N1766A	6.2			1N1815A	200	1N2985B	22		
1N762A	5.8	1N986B	110	1N1767A	6.8			1N1816A	13	1N2986B	24		
1N763A	7.1	1N987B	120	1N1768A	7.5			1N1817A	15	1N2987B	25		
1N764A	8.8	1N988B	130	1N1769A	8.2			1N1818A	16	1N2988B	27		
1N765A	10.5	1N989B	150	1N1770A	9.1			1N1819A	18	1N2989B	30		
1N766A	12.8	1N990B	160	1N1771A	10			1N1820A	20	1N2990B	33		
1N767A	15.8	1N991B	180	1N1772A	11			1N1821A	22	1N2991B	36		
1N768A	19	1N992B	200	1N1773A	12			1N1822A	24	1N2992B	39		

VR SERIES ECONOMY ZENER REGULATORS

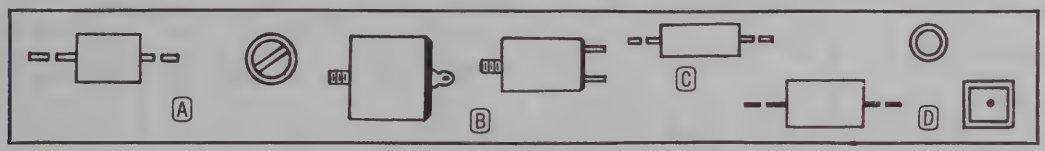
One watt zener regulators in rugged plastic case, recommended for use in all ¼, 0.4, ½ and 1 watt applications. Add suffix A for ±5% tolerance, B for ±20% (±10% standard).

S-T No.	Zener Volts*	S-T No.	Zener Volts*	S-T No.	Zener Volts*	S-T No.	Zener Volts*	S-T No.	Zener Volts*
VR6	6	VR14	14	VR33	33	VR80	80	VR130	130
VR7	7	VR18	18	VR39	39	VR90	90	VR150	150
VR8.5	8.5	VR20	20	VR47	47	VR105	105	VR160	160
VR10	10	VR24	24	VR56	56	VR110	110	VR180	180
VR12	12	VR28	28	VR67	67	VR120	120	VR200	200

*Avalanche volts.



Pre-Fix	Tol.	Suf-fix	Net Each, Lots of 1-24	25-99	100 Up
VR	±5%	A	$1.00	$0.86	$0.80
	±10%	....	.95	.80	.75
	±20%	B	.85	.73	.68



KLIPVOLT TRANSIENT VOLTAGE SUPPRESSORS

POLARIZED TYPE

A—Max. DC Blocking Volts, B—Max. Discharge Current (Amps), C—Min. DC Volts, D—Figure.

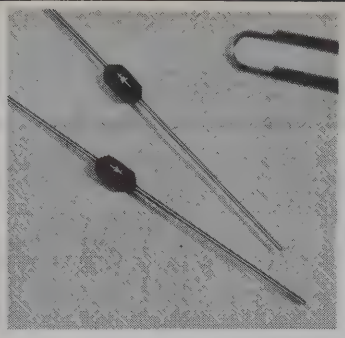
A	B	C	S-T No.	D	Net Each, Lots of 1-9	10-99	100 Up	S-T No.	D	Net Each, Lots of 1-9	10-99	100 Up
22	.250	15	S-235	A	$0.36	$0.33	$0.29	S-235C	C	$0.81	$0.73	$0.65
22	.850	15	S-236	B	.55	.50	.44	S-236C	D	1.60	1.44	1.28
44	.250	23	S-237	A	.36	.33	.29	S-237C	C	.81	.73	.65
44	.850	23	S-238	B	.55	.50	.44	S-238C	D	1.60	1.44	1.28
66	.250	45	S-239	A	.39	.35	.31	S-239C	C	.84	.76	.67
66	.850	45	S-240	B	.50	.45	.40	S-240C	D	1.55	1.40	1.24
88	.250	67	S-241	A	.42	.38	.34	S-241C	C	.87	.78	.70
88	.850	67	S-242	B	.55	.50	.44	S-242C	D	1.60	1.44	1.28
110	.250	89	S-243	A	.45	.41	.36	S-243C	C	.90	.81	.72
110	.850	89	S-244	B	.60	.55	.48	S-244C	D	1.65	1.49	1.32
132	.250	111	S-245	A	.48	.43	.38	S-245C	C	.93	.84	.74
132	.850	111	S-246	B	.65	.59	.52	S-246C	D	1.70	1.53	1.36
154	.250	133	S-247	A	.51	.46	.41	S-247C	C	.96	.86	.77
154	.850	133	S-248	B	.70	.63	.56	S-248C	D	1.75	1.58	1.40

Can handle transient peak voltages at least double steady state rating. Non-polarized, AC or DC; polarized, DC only. Higher voltage and 3-ph. models available. Figs. C and D are sealed types.

NON-POLARIZED TYPE

A—Max. rms Volts, B—Max. Discharge Current (Amps), C—Min. rms Volts, D—Figure.

S-T No.	A	B	C	D	Net Each, Lots of 1-9	10-99	100 Up
S-249	52	.200	27	A	$0.42	$0.38	$0.34
S-249C	52	.200	27	C	.87	.78	.70
S-250	52	.700	27	B	.55	.50	.44
S-250C	52	.700	27	D	1.60	1.44	1.28
S-251	78	.200	53	A	.48	.43	.38
S-251C	78	.200	53	C	.93	.84	.74
S-252	78	.700	53	B	.65	.59	.53
S-252C	78	.700	53	D	1.70	1.53	1.36
S-253	104	.200	79	A	.54	.49	.43
S-253C	104	.200	79	C	.99	.89	.79

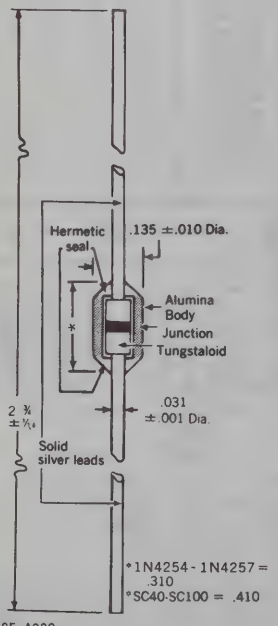


ALSO AVAILABLE FROM SEMTECH

- 1 Amp Silicon Rectifiers — 50 to 1000 Volts
- Sub-Miniature High Voltage Rectifiers — 1500 to 10000 Volts
- Stabistors For Many Applications
- Fast Recovery Controlled Avalanche 1 Amp Silicon Rectifiers
- Medium Recovery Controlled Avalanche Silicon Rectifiers
- High Voltage Silicon Rectifiers
- High Voltage Silicon Cartridge Rectifiers
- "ADD-A-STACK" High Voltage Rectifiers
- ½ Amp Silicon Rectifiers — 50 to 1000 Volts
- ¾ Amp Silicon Rectifiers — 200 to 600 Volts
- High Current Silicon Stud Rectifiers
- 3 Amp Silicon Rectifiers
- High Voltage High Current Rectifiers
- Multi Purpose Bridge Rectifiers
- Sub-Miniature 1 Amp Full Wave Bridges
- Doublers and Center Taps
- Sub-Miniature High Current 3 Phase Full Wave Bridge

Semtech also has immediate capability to produce special high voltage bridges or rectifier assemblies up to and exceeding 100,000 volts, high voltage fast switching rectifier stacks and temperature compensated Voltage Regulators (Zeners) above 50 volts.

Please contact our representative for further details.



CASE A38C

Semtech sub-miniature high voltage silicon rectifiers

Semtech Corporation introduces the first multipurpose 1 Amp Hermetic Seal Silicon Rectifier incorporating advance design and engineering techniques never before available to the electronic industry at a nominal cost. This new rectifier utilizes a solid junction to lead construction with a package combining high mechanical strength, superior thermal shock resistance, improved hermetic seal, high dielectric strength with excellent thermal conductivity properties.

TYPE NO.	PEAK INVERSE VOLTAGE	RMS (SINE WAVE) VOLTAGE	DC BLOCKING VOLTAGE	*AVERAGE RECTIFIED CURRENT			TYPICAL STATIC FORWARD VOLTAGE @ 1A	MAXIMUM STATIC REVERSE CURRENT @ PIV		RE-CURRENT SURGE	ONE CYCLE SURGE	CASE	DATA SHEET NO.
				55°C	100°C	150°C	25°C	25°C	125°C				
	VOLTS	VOLTS	VOLTS	MA	MA	MA	VOLTS	UA	UA	AMPS	AMPS		
1N4245	200	140	200	1000	750	250	1.0	1	20	10	50	A38C	R42
1N4246	400	280	400	1000	750	250	1.0	1	20	10	50	A38C	R42
1N4247	600	420	600	1000	750	250	1.0	1	20	10	50	A38C	R42
1N4248	800	560	800	1000	750	250	1.0	1	20	10	50	A38C	R42
1N4249	1000	700	1000	1000	750	250	1.0	1	20	10	50	A38C	R42

Operating & Storage Temperature —65°C to +175°C

* The 1 Amp rating @ 55°C requires no heat sinking. Full area contacts to both sides of the junction and solid silver leads give these units extremely low thermal impedance from junction to mounting terminals. Proper mounting to a suitable heat sink can allow reliable operation to 6 amps average rectified current. Consult factory for details.

TYPE NO.	PEAK INVERSE VOLTAGE	RMS (SINE WAVE) VOLT.	DC BLOCKING VOLTAGE	AVERAGE RECTIFIED CURRENT			MAX. STATIC FWD. VOLTAGE @		MAX. STATIC REVERSE CURRENT @ PIV		RE-CURRENT SURGE	ONE CYCLE SURGE	CASE	DATA SHEET NO.
				55°C	100°C	150°C	100 MA 25°C	60 MA 100°C	25°C	100°C				
	VOLTS	VOLTS	VOLTS	MA	MA	MA	VOLTS	VOLTS	UA	UA	AMPS	AMPS		
1N4254	1500	1050	1500	250	150	50	4	3.6	1	20	2.5	10	A38D	R47
1N4255	2000	1400	2000	250	150	50	4	3.6	1	20	2.5	10	A38D	R47
1N4256	2500	1750	2500	250	150	50	4	3.6	1	20	2.5	10	A38D	R47
1N4257	3000	2100	3000	250	150	50	4	3.6	1	20	2.5	10	A38E	R47

Operating & Storage Temperature —55°C to +175°C

TYPE NO.	PEAK INVERSE VOLTAGE	RMS (SINE WAVE) VOLTAGE	DC BLOCKING VOLTAGE	AVERAGE RECTIFIED CURRENT			MAXIMUM STATIC FWD. VOLTAGE @		MAXIMUM STATIC REVERSE CURRENT @ PIV		RE-CURRENT SURGE	ONE CYCLE SURGE	CASE	DATA SHEET NO.
				55°C	100°C	150°C	100 MA 25°C	60 MA 100°C	25°C	100°C				
	VOLTS	VOLTS	VOLTS	MA	MA	MA	VOLTS	VOLTS	UA	UA	AMPS	AMPS		
SC 40	4000	2800	4000	100	60	20	10.0	9.0	1	20	1.0	4	A38E	R46
SC 50	5000	3500	5000	100	60	20	10.0	9.0	1	20	1.0	4	A38E	R46
SC 75	7500	5250	7500	100	60	20	10.0	9.0	1	20	1.0	4	A38E	R46
SC 100	10000	7000	10000	100	60	20	10.0	9.0	1	20	1.0	4	A38E	R46

Operating and Storage Temperature —55°C to+175°C

Semtech fast recovery controlled avalanche rectifiers

TYPE NO.	MAX PIV & DC BREAK-DOWN VOLTAGE	AVALANCHE VOLTAGE BREAKDOWN @ 50 UV 25°C		MAX. AVERAGE RECTIFIED CURRENT		TYPICAL STATIC FORWARD VOLTAGE @ 1A DC	MAX STATIC REVERSE CURRENT @ PIV		TYP JUNC-TION CAPACI-TANCE	MAX RE-CURRENT PEAK CURRENT	MAX. ONE CYCLE SURGE	*RECOVERY TIME		CASE	DATA SHEET NO.
		V_B MIN	V_B MAX	55°C	100°C	25°C	25°C	125°C	12V DC	55°C	55°C	MAX.	TYP		
	VOLTS	VOLTS	VOLTS	AMPS	AMPS	VOLTS	UA	UA	Pico-farads	AMPS	AMPS	NSEC.	NSEC.		
SF3	300	330	500	1.0	.75	1.1	0.1	30	35	6	25	150	100	A38C	R44
SF4	400	440	600	1.0	.75	1.1	0.1	30	30	6	25	150	100	A38C	R44
SF5	500	550	700	1.0	.75	1.1	0.1	30	25	6	25	150	100	A38C	R44
SF6	600	660	950	1.0	.75	1.1	0.1	30	20	6	25	150	100	A38C	R44
SF8	800	880	1200	1.0	.75	1.1	0.1	30	15	6	25	250	175	A38C	R44
SF10	1000	1100	1400	1.0	.75	1.1	0.1	30	10	6	25	500	250	A38C	R44

Operating and storage temperature —65°C to +175°C.

* Recovery conditions: 0.5 amp forward current to 1.0 amp reverse current. Recovery time measured when rectifier recovers to .25 amp.

SEMTECH CORPORATION

Transitron SEMICONDUCTORS

TYPE	UNIT PRICE 1-99	100-999
1N34	.30	.23
1N34A	.30	.23
1N36	.30	.21
1N38	.49	.38
1N38A	.49	.38
1N38B	.49	.38
*1N38B	.80	.65
1N40	5.00	3.50
1N42	6.00	4.50
1N44	.49	.38
1N45	.42	.31
1N46	.28	.20
1N48	.30	.22
1N49	.35	.26
1N50	.41	.32
1N51	.30	.22
1N52	.53	.40
1N52A	.36	.27
1N54	.42	.32
1N54A	.42	.32
1N56	.39	.31
1N56A	.44	.36
1N57	.40	.30
1N57A	.40	.30
1N58	.55	.41
1N58A	.55	.41
1N60	.30	.23
1N60A	.40	.29
1N61	.65	.47
1N62	.70	.52
1N63	.36	.28
1N63A	.90	.60
1N65	.48	.35
1N66	.30	.21
1N66A	.30	.21
1N67	.60	.46
1N67A	.60	.46
1N67B	1.03	.78
1N68	.70	.55
1N68A	.70	.55
↓1N69	.30	.23
↓1N69A	.30	.23
1N70	.48	.38
1N70A	.48	.38
*1N70A	.48	.38
1N71	5.00	3.50
1N73	5.00	3.50
1N74	5.00	3.50
1N75	.90	.60
1N81	.48	.38
1N81A	.48	.38
*1N81A	.48	.38
1N84	.32	.23
1N86	.35	.26
1N87	.35	.26
1N87A	.35	.26
1N88	.92	.65
1N89	.60	.45
1N90	.33	.22
1N95	.51	.34

TYPE	UNIT PRICE 1-99	100-999
1N96	.59	.44
1N96A	.59	.44
1N97	.69	.52
1N97A	.71	.54
1N98	.48	.38
1N98A	.48	.38
1N99	.50	.39
1N99A	.54	.43
1N100	.51	.40
1N100A	.51	.40
1N103	.28	.19
1N104	.31	.22
1N107	.95	.72
1N108	.78	.70
1N111	.95	.75
1N112	.87	.65
1N113	1.13	.85
1N114	.87	.65
1N115	.64	.50
1N116	.53	.40
1N117	.55	.40
1N118	.60	.46
1N118A	.60	.47
1N119	.51	.40
1N120	.46	.36
1N126	.30	.24
*1N126A	.30	.24
1N127, A	.42	.28
*1N127A	.42	.28
*1N128	.32	.25
1N135	.35	.26
1N139(T1)	.27	.20
1N140(T2)	.38	.29
1N144(T6)	.68	.51
1N145(S62)	.70	.52
1N175	.84	.69
1N191	.35	.28
1N192	.34	.26
1N198	.35	.28
*1N198	.35	.28
1N198A	.35	.28
1N198B	1.03	.78
*1N198M	.70	.54
↓1N248	1.35	.90
↓1N248A	1.35	.90
↓1N248B	1.35	.90
↓1N249	1.75	1.15
↓1N249A	1.75	1.15
↓1N249B	1.75	1.15
*1N249B	3.25	2.10
↓1N250	2.45	1.65
↓1N250A	2.45	1.65
↓1N250B	2.45	1.65
*1N250B	4.50	2.95
*1N251	2.00	1.50
1N252	1.25	.90
1N253	1.05	.70
*1N253	2.21	1.47
↓1N254	1.12	.75
↓1N255	1.72	1.15

TYPE	UNIT PRICE 1-99	100-199
↓1N256	2.40	1.60
1N265	.35	.26
1N266	.28	.19
1N267	.26	.17
1N270(T7G)	.32	.25
*1N270	.32	.25
1N273(T11G)	.66	.50
1N274	2.00	1.50
1N275	1.70	1.25
1N276(T16G)	.31	.24
*1N276	.31	.24
1N277 (T17G)	.34	.26
*1N277	.34	.26
*1N277M	.85	.65
1N278(T18G)	.88	.65
1N279 (T6G)	.29	.22
1N280	1.25	.90
1N281	.31	.24
*1N281	.31	.24
1N282	1.25	.90
1N283(T25G)	.51	.40
1N287	.30	.21
1N288	.41	.32
1N289	.47	.38
1N290	.53	.44
1N291	.55	.46
1N294	.34	.26
1N294A	.45	.35
1N295	.35	.27
1N297	.42	.31
1N297A	.42	.31
1N298	.31	.23
1N298A	.39	.30
1N303	.79	.62
1N303A	.84	.67
1N304	.71	.56
1N305	.91	.73
1N306	1.15	.95
1N307	1.23	.99
1N308	.60	.48
1N309	.85	.72
1N310	.82	.70
1N312	.76	.58
1N313	1.05	.79
1N314	1.30	1.10
1N316	.85	.57
1N316A	.85	.57
1N317	1.00	.70
1N317A	1.00	.70
1N318	1.35	.85
1N318A	1.35	.85
1N319	1.75	1.15
1N319A	1.75	1.15
1N320	2.50	1.60
1N320A	2.50	1.60
1N321	3.20	2.45
1N321A	3.20	2.45
1N322	4.35	3.35
1N322A	4.35	3.35
1N323	.85	.57

*Denotes MIL Type
‡Breakdown is for quantities of 1-24 and 25-99
†Breakdown is for quantities of 1-99 and 100-499

↓ Denotes Price Reduction
● Denotes New Type
↑ Denotes Price Increase

TRANS I

481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351

Transitron SEMICONDUCTORS

TYPE	UNIT PRICE 1-99	100-999
1N323A	.85	.57
1N324	1.00	.70
1N324A	1.00	.70
1N325	1.35	.85
1N325A	1.35	.85
1N326	1.75	1.15
1N326A	1.75	1.15
1N327	2.50	1.60
1N327A	2.50	1.60
1N328	3.25	2.50
1N328A	3.25	2.50
1N329	4.60	3.50
1N329A	4.60	3.50
1N332	1.95	1.30
1N333	1.95	1.30
1N334	1.58	1.05
1N335	1.58	1.05
1N336	1.25	.83
1N337	1.25	.83
1N338	2.00	1.25
1N339	1.19	.79
1N340	1.19	.79
1N341	1.95	1.30
1N342	1.95	1.30
1N343	1.58	1.05
1N344	1.58	1.05
1N345	1.25	.83
1N346	1.25	.83
1N347	1.72	1.15
1N348	1.19	.79
1N349	1.19	.79
1N355	.52	.37
1N359	.85	.57
1N359A	.85	.57
1N360	1.00	.70
1N360A	1.00	.70
1N361	1.35	.85
1N361A	1.35	.85
1N362	1.75	1.15
1N362A	1.75	1.15
1N363	2.50	1.60
1N363A	2.50	1.60
1N364	3.00	2.25
1N364A	3.00	2.25
1N365	4.00	3.00
1N365A	4.00	3.00
1N417	.76	.57
1N418	.66	.43
1N419	.53	.39
↓1N429	5.45	4.10
*1N429	7.25	5.50
↓1N440	.66	.44
↓1N440B	.66	.44
↓1N441	.69	.46
↓1N441B	.69	.46
↓1N442	.79	.53
↓1N442B	.79	.53
↓1N443	.97	.65
↓1N443B	.97	.65
↓1N444	1.05	.70
↓1N444B	1.05	.70
↓1N445	1.42	.95
↓1N445B	1.42	.95
1N447	.40	.29
1N448	.43	.32
1N449	.48	.37
1N450	.56	.45
1N451	1.88	1.53
1N452	.60	.45
1N453	.63	.48
1N454	.73	.59
1N455	.85	.68
1N456	.37	.29
1N456A	.37	.29
1N457	.45	.36
*1N457	.45	.36
1N457A	.45	.36
1N458	.51	.40
*1N458	.51	.40
1N458A	.51	.40
1N459	.66	.51
*1N459	.66	.51
1N459A	.66	.51
1N461	.35	.28
1N461A	.35	.28
1N462	.38	.30
1N462A	.38	.30
1N463	.46	.36
1N463A	.46	.36
1N464	.45	.35
1N464A	.45	.35
1N476	.45	.33
1N477	.45	.33
1N478	.48	.35
1N479	.48	.35
1N482	.59	.45
1N482A	.59	.46
1N482B	.59	.46
1N483	.61	.47
1N483A	.61	.47
1N483B	.61	.47
*1N483B	.61	.47
1N484	.67	.50
1N484A	.70	.55
1N484B	.70	.55
↓1N485	.77	.60
↓1N485A	.77	.60
↓1N485B	.77	.60
*1N485B	.77	.60
↓1N486A	.85	.65
↓1N486B	.85	.65
*1N486B	1.25	.98
↓1N487	.90	.70
↓1N487A	1.20	.94
↓1N488	1.05	.78
↓1N488A	1.54	1.19
1N497	.39	.30
1N498	.44	.35
1N499	.49	.37
1N500	.53	.41
1N501	.69	.52
1N502	.83	.67
1N527	.43	.33
1N530	.50	.32
1N531	.53	.34
1N532	.59	.39
1N533	.68	.43
1N534	.76	.51
1N535	.96	.60
↓1N536	.45	.25
↓1N537	.50	.28
1N538	.53	.34
*1N538	.75	.50
1N539	.59	.39
1N540	.68	.43
*1N540	1.05	.70
1N547	.96	.60
*1N547	1.50	1.05
↓1N550	1.05	.70
↓1N551	1.12	.75
↓1N552	1.42	.95
↓1N553	1.72	1.15
↓1N554	1.80	1.20
↓1N555	2.40	1.60
↓1N560	1.50	1.00
↓1N561	2.40	1.80
1N562	5.00	3.35
1N563	7.50	5.00
1N571	.79	.58
1N588	6.50	5.30
1N589	8.50	7.00
↓1N599	.45	.25
↓1N599A	.54	.36
↓1N600	.50	.28
↓1N600A	.63	.42
↓1N601	.52	.30
↓1N601A	.65	.43
1N602	.53	.34
↓1N602A	.66	.44
1N603	.59	.39
↓1N603A	.79	.53
↓1N604	.81	.54
↓1N604A	1.28	.85
1N605	.76	.51
1N605A	1.52	1.02
1N606	.96	.60
1N606A	1.92	1.20
↓1N607A	1.05	.70
↓1N608A	1.05	.70
↓1N609A	1.05	.70
↓1N610, A	1.10	.75
↓1N611, A	1.42	.95
↓1N612, A	1.72	1.15
↓1N613, A	1.80	1.20
↓1N614, A	2.40	1.60
1N616	.43	.34
1N617	.49	.37
1N618	.54	.40
1N625	.54	.33
1N626	.59	.34

*Denotes MIL Type
‡Breakdown is for quantities of 1-24 and 25-99
†Breakdown is for quantities of 1-99 and 100-499

↓ Denotes Price Reduction
● Denotes New Type
↑ Denotes Price Increase

TRANS 2

Transitron SEMICONDUCTORS

TYPE	UNIT PRICE 1-99	100-999
1N627	.67	.39
1N628	.81	.47
1N629	.88	.59
1N631	.80	.63
1N632	.72	.56
1N633	.83	.65
1N634	.52	.41
1N636	.38	.27
1N643	1.45	1.12
*1N643	1.45	1.12
1N645	1.40	.93
1N645A	1.65	1.10
*1N645	1.50	1.00
*1N645M	2.40	1.60
1N646	1.65	1.10
*1N646	1.80	1.20
1N647	1.80	1.20
*1N647	1.95	1.30
*1N647M	4.00	2.70
1N648	1.95	1.30
*1N648	2.75	1.95
1N649	2.50	1.65
*1N649	3.50	2.40
*1N649M	5.25	3.50
1N658	1.80	1.20
*1N658	1.80	1.20
1N659	.85	.66
1N660	1.06	.83
1N661	1.75	1.30
1N662	1.00	.78
*1N662	1.00	.78
1N663	1.35	1.05
*1N663	1.35	1.05
1N676	.79	.62
1N677	1.05	.70
1N678	1.23	.82
1N679	1.35	.90
1N681	1.53	1.02
1N682	1.65	1.10
1N683	1.80	1.20
1N684	1.88	1.25
1N685	2.10	1.40
1N686	2.25	1.50
1N687	2.40	1.60
1N689	2.50	1.65
1N690	2.86	1.92
1N691	3.38	2.25
1N692	4.28	2.85
1N693	6.00	4.05
↓1N695	.30	.24
1N695A	.98	.74
1N696	2.10	1.55
1N699	1.00	.75
1N702 thru 1N721	2.00	1.50
1N702A thru 1N761A	2.05	1.55
1N717A thru 1N721A	2.80	2.10
1N746 thru 1N759	2.00	1.50
1N746A thru 1N759A	2.75	2.05
*1N746A thru 1N759A	2.95	2.25
1N761(SV5)	2.00	1.50
1N762(SV6)	2.00	1.50
1N763(SV7)	2.00	1.50
1N764(SV9)	2.00	1.50
1N765(SV11)	2.00	1.50
1N766(SV13)	2.00	1.50
1N767(SV15)	2.00	1.50
1N768(SV18)	2.00	1.50
1N769(SV24)	2.00	1.50
1N761-1 thru 1N769-1 (5% tol.)	2.80	2.10
1N761-2 thru 1N769-2 (5% tol.)	2.80	2.10
1N761-3 thru 1N769-3 (5% tol.)	2.80	2.10
1N770	.48	.38
1N771	.80	.66
1N771A	.88	.70
1N771B	1.30	1.00
1N772	.45	.36
1N772A	.53	.42
1N773	.40	.31
1N773A	.47	.37
1N774	.38	.29
1N774A	.44	.36
1N775	.36	.27
1N776	.30	.21
1N777	.90	.72
1N781	.92	.75
1N782	1.10	.87
1N805	.29	.20
1N806(SG268)	.95	.74
1N807(SG269)	1.05	.82
1N811(S4G)	1.15	.83
↓1N812(S5G)	2.20	1.55
1N813(S6G)	1.30	.91
↓1N814(S9G)	2.20	1.55
1N815(S10G)	1.55	1.05
1N816(SG22)	.45	.35
*1N816W	.45	.35

TYPE	UNIT PRICE 1-99	100-199
↓1N821	3.50	2.35
*1N821	5.85	4.50
↓1N821A	4.40	3.10
1N822	7.75	5.90
↓1N823	4.00	2.90
*1N823	7.10	5.85
↓1N823A	6.00	4.50
1N824	10.00	8.00
↓1N825	6.10	4.50
↓1N825A	9.00	6.75
1N827	12.30	9.20
*1N827	29.25	22.50
1N827A	17.50	12.25
1N829	25.00	19.00
1N846	.50	.38
1N847	.62	.47
1N848	.70	.52
1N849	.76	.56
1N850	1.70	1.25
1N851	2.35	1.70
1N852	2.45	1.85
1N853	2.75	2.00
1N854	3.25	2.40
1N855	3.90	2.90
1N856	4.60	3.40
1N857	.46	.35
1N858	.58	.44
1N859	.65	.50
1N860	.72	.55
1N861	1.40	1.10
1N862	2.00	1.50
1N863	2.15	1.60
1N864	2.35	1.75
1N865	2.75	2.10
1N866	3.25	2.45
1N867	3.90	2.90
1N868	.42	.32
1N869	.55	.40
1N870	.62	.46
1N871	.70	.52
1N872	1.15	.85
1N873	1.60	1.20
1N874	1.70	1.27
1N875	1.85	1.35
1N876	2.20	1.65
1N877	2.60	1.95
1N878	3.00	2.35
1N879	.40	.30
1N880	.50	.38
1N881	.60	.45
1N882	.65	.50
1N883	.90	.65
1N884	1.20	.90
1N885	1.30	.97
1N886	1.40	1.00
1N887	1.65	1.25
1N888	2.00	1.50
1N889	2.30	1.70
↓1N903	1.50	1.00
↓1N903A	1.80	1.20

*Denotes MIL Type
‡Breakdown is for quantities of 1-24 and 25-99
†Breakdown is for quantities of 1-99 and 100-499

↓ Denotes Price Reduction
● Denotes New Type
↑ Denotes Price Increase

1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625

Transitron SEMICONDUCTORS

TYPE	UNIT PRICE 1-99	100-999
↓1N904	1.35	.90
↓1N904A	1.80	1.20
↓1N905	1.35	.90
↓1N905A	1.80	1.20
↓1N906	1.35	.90
↓1N906A	1.80	1.20
↓1N907	1.35	.90
↓1N907A	1.80	1.20
↓1N908	1.50	1.00
↓1N908A	1.80	1.20
1N911	.95	.76
↓1N914	1.25	.65
↓*1N914	1.25	.65
↓1N914A	1.50	.90
↓1N914B	1.55	.95
↓1N916	1.40	.85
↓1N916A	1.49	.92
↓1N916B	1.55	.95
1N919(SG1535)	5.50	4.55
1N925	2.00	1.50
1N926	3.20	2.40
1N927	4.40	3.30
1N928	5.20	3.85
1N933	1.03	.78
●1N935	2.35	1.75
●1N935A	2.65	2.00
●1N935B	3.60	2.70
●1N936	2.80	2.10
●1N936A	3.60	2.70
●1N936B	4.25	3.20
●1N937	5.45	4.10
●1N937A	6.10	4.50
●1N937B	6.80	5.10
●1N938	7.10	5.35
●1N938A	7.70	5.75
●1N938B	11.30	8.50
●1N939	18.00	13.50
●1N939A	25.00	18.90
●1N939B	28.00	21.00
●1N940	37.00	28.75
●1N940A	46.00	34.75
●1N940B	51.00	38.75
●1N941	3.30	2.50
●1N941A	3.45	2.60
●1N941B	4.00	3.00
●1N942	3.75	2.80
●1N942A	4.40	3.30
●1N942B	5.00	3.75
●1N943	8.00	5.90
●1N943A	8.75	6.50
●1N943B	9.90	7.25
●1N944	10.00	7.50
●1N944A	11.25	8.50
●1N944B	15.10	11.35
●1N945	23.50	17.80
↓●1N945A	32.50	24.50
●1N945B	36.50	27.50
●1N946	53.00	40.00
●1N946A	63.50	47.50
●1N946B	70.00	52.50

TYPE	UNIT PRICE 1-99	100-999
1N949	.65	.50
●1N957 thru 1N984	2.05	1.50
●1N957A thru 1N984A	2.25	1.65
●1N957B thru 1N984B	2.50	1.95
1N993(S266G)	4.80	3.40
1N994(S570G)	1.75	1.25
1N995(S555G)	.60	.45
*1N995M	1.20	.95
1N996(S403G)	1.15	.87
1N1028	.90	.60
1N1029	1.10	.80
1N1030	1.15	.85
1N1031	1.20	.90
1N1032	1.25	.94
1N1033	1.35	.95
1N1046	1.25	.94
1N1093	.90	.68
1N1095	.76	.51
1N1096	.96	.60
1N1100	.53	.35
1N1101	.63	.42
1N1102	.66	.44
1N1103	.81	.54
1N1104	2.40	1.65
1N1105	2.75	1.95
↓1N1115	1.05	.70
↓1N1116	1.12	.75
↓1N1117	1.42	.95
↓1N1118	1.75	1.17
1N1119	1.90	1.27
↓1N1120	2.40	1.60
1N1124	2.00	1.45
↓1N1124A	2.10	1.40
↓1N1125	2.50	1.65
↓1N1125A	2.55	1.70
↓1N1126	3.30	2.20
↓1N1126A	3.60	2.40
↓1N1127	4.00	2.70
↓1N1127A	4.40	2.90
↓1N1128	4.50	3.00
↓1N1128A	5.00	3.50
1N1130	10.50	7.40
1N1133	7.30	5.50
1N1134	7.30	5.50
1N1135	8.60	6.45
1N1136	8.60	6.45
1N1137	10.60	7.90
1N1138	10.60	7.90
1N1139	14.20	10.75
1N1140	14.20	10.75
1N1141	17.10	12.75
1N1142	17.10	12.75
1N1143	20.10	15.65
1N1143A	20.10	15.65

TYPE	UNIT PRICE 1-99	100-999
1N1144	24.70	18.50
1N1145	24.70	18.50
1N1146	27.60	20.60
1N1147	41.00	30.50
1N1148	45.80	34.10
1N1149	51.00	38.00
1N1169	.60	.40
1N1169A	.65	.43
↓1N1183	1.95	1.30
1N1183A	2.55	1.70
↓1N1184	2.40	1.60
1N1184A	3.20	2.15
↓1N1185	2.90	1.95
1N1185A	3.95	2.65
↓1N1186	3.45	2.30
1N1186A	4.60	2.85
↓1N1187	5.25	3.50
1N1187A	6.00	4.00
1N1188	6.20	3.90
1N1188A	7.00	4.20
1N1189	6.50	4.30
1N1189A	7.50	5.00
1N1190	6.90	4.60
1N1190A	8.00	5.60
1N1191	1.80	1.20
1N1191A	2.45	1.65
1N1192	2.30	1.50
1N1192A	3.10	2.05
1N1193	2.85	1.90
1N1193A	3.85	2.65
↓1N1194	3.30	2.00
1N1194A	4.00	2.80
↓1N1195	4.05	2.70
1N1195A	5.00	3.50
↓1N1196	4.95	3.30
1N1196A	5.50	3.90
1N1197	5.70	3.85
1N1197A	7.00	4.60
1N1198	5.90	3.95
1N1198A	7.50	5.00
1N1199, A	1.24	.82
1N1199B	2.25	1.45
1N1200, A	1.40	.93
1N1200B	2.40	1.55
1N1201, A	1.80	1.20
1N1201B	3.40	2.05
1N1202, A	2.70	1.80
1N1202B	4.20	3.05
↓1N1203, A	4.10	2.70
1N1203B	6.30	4.10
1N1204, A	4.90	3.15
1N1204B	7.00	4.80
1N1205, A	5.50	3.60
1N1205B	6.50	4.50
1N1206, A	6.75	4.35
1N1206B	9.00	6.00
1N1217	.50	.33
1N1217A	.85	.59
1N1218	.56	.37
1N1218A	.85	.59

*Denotes MIL Type
‡Breakdown is for quantities of 1-24 and 25-99
†Breakdown is for quantities of 1-99 and 100-499

↓ Denotes Price Reduction
● Denotes New Type
↑ Denotes Price Increase

TRANS 4

Transitron SEMICONDUCTORS

TYPE	UNIT PRICE 1-99	100-999
1N1219	.57	.38
1N1219A	.95	.64
1N1220	.60	.40
1N1220A	1.04	.69
1N1221	.77	.51
1N1221A	1.20	.82
1N1222	.98	.65
1N1222A	1.40	1.00
1N1223	1.13	.75
1N1223A	1.90	1.30
1N1224	1.35	.90
1N1224A	2.10	1.40
1N1225	2.21	1.47
1N1226	2.43	1.62
1N1227	1.25	.78
1N1227A	1.25	.78
1N1228	1.36	.83
1N1228A	1.40	.87
1N1229	1.46	.97
1N1229A	1.55	.97
1N1230	1.59	1.05
1N1230A	1.75	1.09
1N1231	1.94	1.29
1N1231A	2.20	1.36
1N1232	2.20	1.45
1N1232A	2.50	1.65
1N1233	2.65	1.75
1N1233A	2.75	2.05
1N1234	3.15	2.05
1N1234A	3.20	2.40
1N1235	4.15	2.75
1N1236	5.10	3.30
1N1251	.45	.29
1N1252	.50	.32
1N1253	.53	.34
1N1254	.59	.39
1N1255	.68	.43
1N1256	.80	.50
1N1257	.95	.60
1N1258	1.40	.90
1N1259	1.75	1.10
1N1260	2.75	1.80
1N1261	3.50	2.30
↓1N1341	1.20	.95
1N1341A	1.79	1.18
1N1341B	2.25	1.45
↓1N1342	1.20	.98
1N1342A	1.80	1.20
1N1342B	1.80	1.20
↓1N1343	1.25	1.00
1N1343A	2.60	1.70
1N1343B	2.70	1.80
1N1344	2.40	1.60
1N1344A	3.05	2.00
1N1344B	4.00	2.95
1N1345	3.50	2.30
1N1345A	3.70	2.45
1N1345B	4.80	3.60
1N1346	4.40	2.90
1N1346A	4.50	3.00

TYPE	UNIT PRICE 1-99	100-999
1N1346B	6.40	4.80
1N1347	5.20	3.40
1N1347A	5.15	3.45
1N1347B	8.75	6.35
1N1348	6.00	3.95
1N1348A	6.20	4.15
1N1348B	9.00	7.00
1N1351 thru 1N1375	6.15	4.60
1N1351A thru 1N1375A	7.30	5.85
1N1351R thru 1N1375R	6.15	4.60
1N1351RA thru 1N1375RA	7.30	5.85
1N1406	1.40	1.00
1N1407	3.00	2.00
1N1408	5.00	3.50
1N1409	7.00	4.90
1N1410	8.00	5.60
1N1434	3.30	2.20
1N1435	3.60	2.40
1N1436	5.00	3.35
1N1437	6.25	4.05
1N1438	6.90	4.60
1N1443	4.43	2.95
1N1444	5.40	3.25
1N1486	.75	.50
↓1N1487	.50	.28
1N1488	.53	.34
1N1489	.59	.39
1N1490	.68	.42
1N1491	.75	.50
1N1492	.95	.59
1N1537	1.50	1.15
1N1538	1.70	1.50
1N1539	2.00	1.55
1N1540	2.25	1.70
1N1541	2.90	2.00
1N1542	3.80	2.65
1N1543	4.90	3.45
1N1544	6.30	4.20
1N1551	1.60	1.10
1N1552	2.00	1.35
1N1553	2.50	1.70
1N1554	2.90	2.05
1N1555	3.40	2.30
1N1556	.45	.30
1N1557	.50	.33
1N1558	.55	.36
1N1559	.60	.40
1N1560	.70	.48
↓1N1581(TM7)	1.10	.72
↓1N1582(TM17)	1.20	.80
↓1N1583(TM27)	2.25	1.50

TYPE	UNIT PRICE 1-99	100-999
1N1584(TM37)	3.25	2.20
1N1585(TM47)	4.00	2.80
1N1586(TM57)	4.50	3.10
1N1587(TM67)	5.00	3.50
↓1N1612	1.07	.72
↓1N1613	1.20	.80
1N1614	1.90	1.25
↓1N1615	3.90	2.60
↓1N1616	5.00	3.50
1N1644	.85	.59
1N1645	.85	.59
1N1646	.95	.64
1N1647	1.04	.69
1N1648	1.16	.77
1N1649	1.28	.85
1N1650	1.28	.85
1N1651	1.30	1.00
1N1652	1.38	1.03
1N1653	1.45	1.06
↓1N1692	.44	.28
1N1693	.47	.31
1N1694	.55	.36
1N1695	.65	.42
1N1696	.71	.47
1N1697	.92	.61
1N1701	.70	.50
1N1702	.85	.58
1N1703	1.00	.67
1N1704	1.20	.80
1N1705	1.55	1.00
1N1706	2.50	1.70
1N1707	.75	.55
1N1708	.90	.60
1N1709	1.05	.70
1N1710	1.40	.90
1N1711	2.15	1.40
1N1712	3.20	2.10
1N1730	5.85	3.90
1N1731	6.70	4.60
1N1732	8.05	5.80
1N1733	12.75	8.50
1N1734	15.00	10.00
1N1763	.50	.30
1N1764	.60	.36
1N1765 thru 1N1768	2.40	1.60
1N1765A thru 1N1768A	3.00	2.00
↓1N1769 thru 1N1781	2.80	1.95
1N1769A thru 1N1781A	3.25	2.40
1N1782 thru 1N1789	3.10	2.35

*Denotes MIL Type
‡Breakdown is for quantities of 1-24 and 25-99
†Breakdown is for quantities of 1-99 and 100-499

↓ Denotes Price Reduction
● Denotes New Type
↑ Denotes Price Increase

TRANS 5

481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351

Tranjitron SEMICONDUCTORS

TYPE	UNIT PRICE 1-99	100-999
1N1782A thru 1N1789A	4.00	3.00
1N1790 thru 1N1795	3.30	2.45
1N1790A thru 1N1795A	4.60	3.40
↓1N1804 thru 1N1808	4.90	3.60
↓1N1804A thru 1N1808A	5.10	3.80
↓1N1804R thru 1N1808R	4.90	3.60
↓1N1804RA thru 1N1808RA	5.10	3.80
↓1N1816 thru 1N1836	6.10	4.50
↓1N1816A thru 1N1836A	7.70	5.75
↓1N1816R thru 1N1836R	6.10	4.50
↓1N1816RA thru 1N1836RA	7.70	5.75
1N2021(TR151)	3.10	2.15
1N2022(TR251)	4.70	3.15
1N2023(TR301)	4.85	3.25
1N2024(TR351)	5.00	3.40
1N2025(TR401)	5.15	3.50
1N2026(TM4)	1.20	.90
1N2027(TM24)	2.25	1.40
1N2028(TM34)	2.95	2.15
1N2029(TM44)	3.50	2.75
1N2030(TM54)	4.25	3.10
1N2031(TM64)	5.00	3.50
1N2032 thru 1N2040	2.65	2.00
1N2032-1 thru 1N2040-1 (5% tol.)	3.40	2.60
1N2032-2 thru 1N2040-2 (5% tol.)	3.40	2.60
1N2032-3 thru 1N2040-3 (5% tol.)	3.40	2.60
1N2032-4 thru 1N2040-4 (5% tol.)	3.40	2.60
1N2041	5.00	3.75
1N2041-1 (5% tol.)	8.00	6.00
1N2041-2 (5% tol.)	8.00	6.00
1N2042(SV905)	5.00	3.75
1N2042-1 thru 1N2049-1 (5% tol.)	7.25	5.10
1N2042-2 thru 1N2049-2 (5% tol.)	7.25	5.10
1N2042-3 thru 1N2049-3 (5% tol.)	7.25	5.10
1N2042-4 thru 1N2049-4 (5% tol.)	7.25	5.10
1N2043(SV906)	5.00	3.75
1N2044(SV908)	5.00	3.75
1N2045(SV910)	5.00	3.75
1N2046(SV912)	5.00	3.75
1N2047(SV915)	5.00	3.75
1N2048(SV918)	5.00	3.75
1N2049(SV924)	5.00	3.75
1N2069	.50	.30
↓1N2069A	.60	.35
1N2070	.68	.38
↓1N2070A	.80	.45
1N2071	.87	.48
↓1N2071A	.98	.50
1N2072	.45	.30
1N2073	.50	.32
1N2074	.52	.33
1N2075	.53	.34
1N2076	.56	.36
1N2077	.59	.39
1N2078	.68	.43
1N2079	.75	.50
1N2080	.45	.29
1N2081	.50	.32
1N2082	.53	.34
1N2083	.59	.39
1N2084	.68	.45
1N2085	.75	.50
1N2086	.90	.58
1N2103	.45	.29
1N2104	.50	.32
1N2105	.53	.34
1N2106	.59	.39
1N2107	.68	.43
1N2108	.75	.50
1N2115	.60	.40
1N2117	1.10	.75
↓1N2128	2.40	1.90
↓1N2128A	2.50	1.95
↓1N2129	3.05	2.15
↓1N2129A	3.20	2.25
↓1N2130	3.80	2.90
↓1N2130A	4.00	3.10
↓1N2131	4.50	3.35
↓1N2131A	4.75	3.50
↓1N2132	5.20	3.55
1N2132A	5.40	3.60
1N2133	5.45	3.65
1N2133A	5.60	3.75
1N2134	5.65	3.80
1N2134A	5.80	3.85
1N2135	5.85	3.90
1N2135A	6.00	4.00
*1N2135A	7.00	4.70
1N2135RA	6.50	4.35
↓1N2154	2.39	1.59
↓1N2155	3.00	2.00
↓1N2156	4.38	2.92
1N2157	5.10	3.50
1N2158	5.60	3.95
1N2159	5.90	4.10
1N2160	6.30	4.20
1N2216	1.50	1.00
1N2217	2.15	1.30
1N2218	2.15	1.30
1N2219	3.05	1.90
1N2220	3.15	2.00
1N2221	4.00	2.60
1N2222	3.55	2.15
1N2222A	3.85	2.40
1N2223	4.45	2.75
1N2223A	4.75	3.00
1N2224	3.85	2.30
1N2224A	4.25	2.60
1N2225	4.75	2.90
1N2225A	5.15	3.20
1N2226	5.65	3.40
1N2226A	6.15	3.70
1N2227	6.55	3.95
1N2227A	7.00	4.25
1N2228	1.60	1.15
1N2229	2.50	1.75
1N2230	1.55	.98
1N2231	2.45	1.55
1N2232	1.95	1.22
1N2233	2.85	1.81
1N2234	2.45	1.50

*Denotes MIL Type
‡Breakdown is for quantities of 1-24 and 25-99
†Breakdown is for quantities of 1-99 and 100-499

↓Denotes Price Reduction
●Denotes New Type
↑Denotes Price Increase

TRANS 6

Transitron SEMICONDUCTORS

TYPE	UNIT PRICE 1-99	100-999
1N2235	3.35	2.10
1N2236	3.00	1.85
1N2237	3.90	2.45
1N2238	3.75	2.30
1N2239	4.65	2.90
1N2266	1.25	.70
1N2267	2.15	1.30
1N2268	2.15	1.30
1N2269	3.05	1.90
1N2270	3.15	1.90
1N2271	4.05	2.50
1N2272	1.90	1.25
1N2273	2.15	1.40
1N2274	3.20	2.15
1N2275	4.00	2.75
1N2276	5.00	3.50
1N2277	6.00	4.00
1N2278	7.00	4.40
1N2279	10.00	7.50
1N2372(TM106)	7.00	5.60
1N2373	1.25	.80
1N2374	2.00	1.40
1N2382	13.95	9.30
1N2383	18.90	12.60
1N2384	25.05	16.70
↓1N2385	30.00	20.00
1N2446, R	2.50	1.65
1N2447, R	3.05	2.00
1N2448, R	3.75	2.55
1N2449, R	4.40	2.95
1N2450, R	4.80	3.25
1N2451, R	5.00	3.40
1N2452, R	5.20	3.60
1N2453, R	5.40	3.75
1N2454, R	5.60	3.85
1N2455, R	5.90	3.95
1N2456, R	7.50	5.00
1N2457, R	10.00	6.65
↓1N2482	.50	.30
↓1N2483	.55	.38
↓1N2484	.60	.48
↓1N2485	.55	.45
↓1N2486	.60	.51
↓1N2487	.65	.53
↓1N2488	.67	.56
1N2489	.75	.60
1N2491(TM8)	1.25	.95
1N2492(TM18)	1.40	1.00
1N2493(TM28)	2.40	1.60
1N2494(TM38)	3.50	2.30
1N2495(TM48)	4.40	2.90
1N2496(TM58)	5.20	3.40
1N2497(TM68)	6.00	4.00
1N2498	5.80	4.30
1N2498A	7.70	6.25
1N2499	5.80	4.30
1N2499A	7.70	6.25
1N2500	5.80	4.30
1N2500A	7.70	6.25
1N2501(SL608)	1.60	1.00

TYPE	UNIT PRICE 1-99	100-999
1N2502(SL610)	3.00	2.00
1N2503(SL612)	6.00	4.10
1N2504(SL615)	8.00	5.70
1N2505(SL708)	1.80	1.15
1N2506(SL710)	3.50	2.35
1N2507(SL712)	7.00	4.90
1N2508(SL715)	9.00	6.00
●1N2609	.50	.33
●1N2610	.53	.35
●1N2611	.60	.40
●1N2612	.70	.43
●1N2613	.80	.50
●1N2614	.95	.60
●1N2615	1.10	.70
●1N2616	4.00	2.90
●1N2617	6.00	4.00
1N2793	2.75	2.00
1N2794	3.05	2.05
1N2795	3.15	2.10
1N2796	3.80	2.60
1N2797	4.00	2.90
1N2798	4.30	3.10
1N2799	4.70	3.35
1N2800	4.85	3.50
1N2847	1.65	1.10
1N2848	1.74	1.16
1N2849	2.21	1.47
1N2850	2.75	1.83
1N2851	2.75	1.83
1N2852	4.29	2.86
1N2858	.40	.24
1N2859	.41	.25
1N2860	.43	.26
1N2861	.56	.33
1N2862	.66	.43
1N2863	.73	.47
1N2864	1.00	.70
↓1N2970 thru 1N2988	5.10	3.85
↓1N2970A thru 1N2988A	5.20	3.90
↓1N2970B thru 1N2988B	6.90	5.25
↓1N2970R thru 1N2988R	5.10	3.85
↓1N2970RA thru 1N2988RA	5.20	3.90
↓1N2970RB thru 1N2988RB	6.90	5.25
↓1N2989 thru 1N3015	5.10	3.85

TYPE	UNIT PRICE 1-99	100-999
↓1N2989A thru 1N3015A	5.20	3.90
↓1N2989B thru 1N3015B	6.90	5.25
↓1N2989R thru 1N3015R	5.10	3.85
↓1N2989RA thru 1N3015RA	5.20	3.90
↓1N2989RB thru 1N3015RB	6.90	5.25
↓1N3016 thru 1N3051	2.50	1.95
↓1N3016A thru 1N3051A	2.90	2.30
↓1N3016B thru 1N3044B	3.30	2.60
*1N3016B thru 1N3032B	3.75	3.00
1N3045B thru 1N3051B	4.60	3.45
1N3053	76.50	57.30
1N3062	3.00	2.25
1N3063	2.85	2.15
↓1N3064	2.00	1.20
↓*1N3064	2.00	1.20
1N3065	3.50	2.75
1N3066	2.85	2.15
↓1N3067	1.20	.80
↓1N3068	1.10	.75
↓1N3069	1.20	.80
↓1N3070	5.25	3.50
↓1N3071	6.50	4.35
1N3072	.50	.35
1N3073	.52	.36
1N3074	.55	.37
1N3075	.58	.38
1N3076	.61	.39
1N3077	.65	.40
1N3078	.67	.41
1N3079	.70	.43
1N3080	.90	.60
1N3081	1.10	.70
1N3082(TK21)	1.00	.75
1N3083(TK41)	3.00	2.20
1N3084(TK61)	4.25	2.90
1N3110	1.10	.85
1N3146	1.75	1.25
↓1N3154	3.50	2.40
*1N3154	4.20	3.50
↓1N3154A	4.20	3.15

*Denotes MIL Type
‡Breakdown is for quantities of 1-24 and 25-99
†Breakdown is for quantities of 1-99 and 100-499

↓ Denotes Price Reduction
● Denotes New Type
↑ Denotes Price Increase

TRANS 7

1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625

Transitron SEMICONDUCTORS

TYPE	UNIT PRICE 1-99	100-999
↓1N3155	4.10	2.90
↓*1N3155	5.30	4.40
↓1N3155A	5.70	4.30
↓1N3156	8.75	6.50
↑*1N3156	12.50	9.85
↓1N3156A	10.25	7.75
1N3157	21.75	18.00
*1N3157	27.15	22.50
1N3157A	24.00	20.00
1N3189	3.00	2.10
1N3190	4.50	3.00
1N3191	7.00	4.90
●1N3193	.38	.25
●1N3194	.41	.28
●1N3195	.66	.44
●1N3196	.91	.61
↑1N3210, R	2.90	2.00
↑1N3211, R	3.20	2.15
↑1N3212, R	3.60	2.50
↑1N3213, R	4.50	3.35
↑1N3214, R	5.75	3.85
●1N3253	.41	.28
●1N3254	.45	.30
●1N3255	.69	.46
●1N3256	.94	.63
1N3257	2.65	1.90
1N3258	2.55	1.80
1N3287	.60	.42
*1N3287W	.90	.68
1N3466	.67	.48
1N3467	1.60	1.25
1N3468	1.20	.92
1N3469	2.00	1.50
1N3470	1.85	1.40
1N3496	3.75	2.50
1N3497	5.75	4.50
1N3498	9.00	7.00
1N3499	19.00	15.50
1N3500	3.00	2.05
1N3501	42.50	35.00
1N3502	48.00	40.00
1N3503	60.00	48.00
1N3503A	65.00	52.00
1N3504	72.00	57.50
1N3504A	80.00	64.00
↓1N3550	.69	.53
1N3566	12.50	9.00
↓1N3600	4.90	3.30
*1N3600	5.00	3.50
↓1N3604	2.00	.96
↓1N3605	2.19	1.03
1N3606	2.90	1.90
●1N3639	.60	.40
●1N3640	.75	.50
●1N3641	1.08	.72
●1N3642	1.49	.99
1N3666	.70	.52
*1N3666M	.75	.58
*1N3666M-1	.80	.64
*1N3666M-2	.88	.71

TYPE	UNIT PRICE 1-99	100-999
1N3668	3.10	2.52
1N3731	2.20	1.30
1N3874	11.25	8.50
1N3875	16.50	10.75
1N3876	18.00	13.50
1N3877	20.00	15.50
1N3878	22.50	17.60
1N3879	11.25	7.50
1N3880	14.50	9.55
1N3881	18.00	12.00
1N3882	21.00	13.85
1N3883	25.50	17.00
1N3884	15.50	11.25
1N3885	20.50	13.25
1N3886	23.00	15.75
1N3887	25.00	17.75
1N3888	27.00	19.00
1N3889	15.50	10.25
1N3890	18.50	12.20
1N3891	22.00	14.50
1N3892	25.00	16.50
1N3893	27.00	18.00
1N3899	20.00	13.20
1N3900	27.00	17.80
1N3901	35.00	23.05
1N3902	39.00	25.75
1N3903	49.75	37.00
1N3909	49.50	37.00
1N3910	64.50	48.25
1N3911	79.50	59.50
1N3912	89.50	67.00
1N3913	99.50	74.50
1N4009	.50	.33
1N4089	1.00	.70
●1N4099 thru 1N4135	4.95	3.70
1N4308(SG5000)	2.75	2.10
1N4309(SG5100)	2.25	1.60
1N4310(SG5200)	2.50	1.85
1N4311(SG5300)	3.00	2.30
↓1N4312(SG5400)	3.25	1.95
2N117	8.15	5.45
2N118	8.15	5.45
2N118A	8.15	5.45
2N119	11.05	7.35
2N120	12.60	8.40
2N243	13.75	9.15
2N244	20.45	13.60
●2N263	17.85	11.90
●2N264	11.50	7.65
2N332	4.65	3.10
2N333	4.65	3.10
2N334	4.65	3.10
2N335	4.95	3.30
2N336	6.00	4.00
2N337	4.85	3.20
*2N337	5.15	3.40
2N338	5.50	3.65

TYPE	UNIT PRICE 1-99	100-999
*2N338	5.80	3.85
2N339	10.15	6.75
2N339A	11.25	7.50
2N340	10.80	7.20
2N340A	12.00	8.00
2N341	17.50	11.65
2N341A	19.50	13.00
*2N341M	17.50	11.65
2N342	11.85	7.90
*2N342	14.55	9.65
2N342A	11.90	7.95
2N342B	16.75	11.20
2N343	18.40	12.25
*2N343	19.40	13.25
2N343A	21.75	14.45
†2N389	21.00	14.00
†*2N389	21.50	14.15
†2N389A	21.50	14.15
↓†2N424	16.50	11.00
↓†*2N424	17.00	11.35
†2N424A	21.50	14.15
2N470(ST10)	3.40	2.25
2N471(ST30)	5.50	3.70
2N471A	5.80	3.90
2N472(ST40)	7.30	4.85
2N472A	7.60	5.05
2N473(ST11)	3.40	2.45
2N474(ST31)	6.30	4.20
2N474A	6.55	4.40
2N475(ST41)	7.80	5.20
2N475A	8.10	5.40
2N476(ST13)	8.65	5.90
2N477(ST33)	9.60	6.40
2N478(ST12)	3.60	2.75
2N479(ST32)	6.95	4.65
2N479A	7.15	4.85
2N480(ST42)	9.30	6.40
2N480A	9.60	6.60
↓2N497	3.75	2.50
↓*2N497	4.15	2.75
2N497A	4.05	2.70
↓2N498	4.50	3.00
↓*2N498	4.90	3.25
↓2N498A	4.90	3.25
2N541(ST14)	6.10	4.00
2N542(ST34)	6.20	4.10
2N542A	9.85	6.55
2N543(ST44)	7.95	5.30
2N543A	12.65	8.45
2N545	19.40	13.25
*2N545	26.50	17.65
2N546	11.75	7.85
2N547	13.50	9.30
●2N547/A	15.00	10.05
2N548	9.30	6.10
2N549	7.35	4.90
2N550	4.40	2.95
2N551	7.35	4.90
2N552	3.65	2.45
↓2N656	4.10	2.75

*Denotes MIL Type
‡Breakdown is for quantities of 1-24 and 25-99
†Breakdown is for quantities of 1-99 and 100-499

↓Denotes Price Reduction
●Denotes New Type
↑Denotes Price Increase

TRANS 8

Transitron SEMICONDUCTORS

TYPE	UNIT PRICE 1-99	100-999
↓*2N656	4.50	3.00
2N656A	4.85	3.25
↓2N657	8.25	5.50
↓*2N657	8.65	5.75
2N657A	8.80	5.90
●2N657/A	9.75	6.25
↓2N681	8.50	5.65
↓2N682	9.35	6.20
↓2N683	10.15	6.75
↓2N684	12.65	8.40
↓2N685	14.20	9.45
↓2N686	17.95	11.95
↓2N687	20.95	13.95
↓2N688	25.45	16.95
↓2N689	31.85	21.20
2N696	1.57	1.05
2N697	2.06	1.38
↓2N698	2.64	1.76
↓2N699	2.64	1.76
↓2N706	1.24	.83
●2N706/46	1.80	1.20
●2N706/51	4.50	3.00
●2N706/TNT	3.90	2.60
●2N706/TPT	4.50	3.00
●2N706/KVT	4.50	3.00
↓2N706A	1.49	.99
●2N706A/46	2.50	1.65
●2N706A/51	5.70	3.80
●2N706A/TNT	4.95	3.30
●2N706A/TPT	5.70	3.80
●2N706B	4.05	2.70
●2N706B/46	5.00	3.35
●2N706B/51	10.05	6.70
↓2N708	1.32	.88
●2N708/46	1.87	1.25
●2N708/51	4.80	3.20
●2N708/TNT	4.20	2.80
●2N708/TPT	4.80	3.20
●2N708/KVT	4.80	3.20
●2N709	2.48	1.65
●2N709/46	2.95	1.95
●2N709/51	7.50	5.00
●2N709/52	2.95	1.95
●2N709/TNT	6.75	4.50
●2N709/TPT	7.50	5.00
●2N709/KVT	7.50	5.00
●2N709A	4.87	3.25
●2N709A/46	5.85	3.90
●2N709A/51	10.00	6.70
●2N709A/52	5.50	3.70
↓2N717	1.58	1.05
↓2N718	2.05	1.33
↓2N718A	2.89	1.93
↓2N719	2.49	1.66
↓2N720	3.75	2.50
↓2N720A	3.30	2.20
2N721	4.50	3.00
2N722	6.00	4.00
2N722A	14.70	9.80

TYPE	UNIT PRICE 1-99	100-999
2N728	15.00	10.00
2N729	18.00	12.00
↓2N730	1.58	1.05
↓2N731	2.06	1.38
2N734	8.95	5.95
2N735	8.95	5.95
↓2N736	8.95	5.95
2N738	12.50	8.30
2N739	12.50	8.30
2N740	12.50	8.30
●2N743	6.20	4.15
●2N744	2.90	1.95
↓2N753	1.97	1.31
2N754	8.50	5.60
2N755	11.25	7.40
●2N756	2.00	1.35
↓2N756A	2.15	1.45
2N757	2.10	1.40
↓2N757A	2.30	1.55
2N758	2.30	1.55
↓2N758A	2.50	1.55
2N759	2.50	1.65
↓2N759A	2.80	1.85
2N760	2.70	1.80
↓2N760A	3.00	2.00
2N764	4.50	3.15
2N765	4.90	3.45
2N766	5.20	3.85
2N767	7.00	5.20
2N839	3.35	2.20
2N840	3.60	2.45
2N841	4.40	2.95
●2N841/46	4.80	3.20
●2N841/51	6.30	4.40
●2N841/TNT	5.25	3.70
●2N841/TPT	6.30	4.40
●2N841/KVT	6.30	4.40
2N842	3.95	2.65
2N843	4.65	3.10
2N844	9.60	6.40
2N845	12.20	8.10
↓2N870	12.00	9.00
↓2N871	15.00	11.00
↓2N876	5.55	4.05
↓2N877	6.75	5.05
↓2N878	7.90	5.90
↓2N879	9.85	7.40
↓2N880	14.75	10.00
↓2N881	16.95	12.75
2N884	7.20	5.05
2N884/A	8.65	5.65
↓2N885	8.65	6.30
2N885/A	10.80	7.55
↓2N886	9.75	7.30
2N886/A	14.10	9.90
↓2N887	11.85	8.90
2N887/A	20.80	14.55
↓2N888	16.95	12.75
2N888/A	28.80	20.15
↓2N889	20.00	15.00

TYPE	UNIT PRICE 1-99	100-999
2N889/A	35.20	24.65
2N892	9.00	6.05
↓2N894	12.70	8.45
↓2N896	17.45	11.70
↓2N898	21.45	14.20
↓2N900	41.95	27.90
↓2N909	11.50	7.75
2N910	8.25	5.40
2N911	5.50	3.60
↓2N914	2.48	1.65
↓2N929	4.20	2.80
●2N929A	4.50	3.00
↓2N930	4.65	3.10
●2N930/46	12.00	8.00
●2N930/51	15.00	10.00
●2N930/TNT	13.50	9.00
●2N930/TPT	15.00	10.00
●2N930/KVT	15.00	10.00
●2N930A	5.40	3.60
●2N930A/46	15.00	10.00
●2N930A/51	18.00	12.00
2N947	2.95	2.00
2N948(TSW31S)	8.45	5.90
2N949(TSW61S)	11.00	7.70
2N950(TSW101S)	16.20	11.35
2N951(TSW201S)	27.00	18.90
↓2N956	2.50	1.67
2N957	5.20	3.60
2N978	3.15	2.10
↓2N995	5.85	3.90
2N996	22.40	14.80
2N1047	18.80	13.20
2N1047A	18.80	13.20
2N1047B	20.70	14.50
2N1048	25.70	17.15
2N1048A	25.70	17.15
2N1048B	28.25	18.85
2N1049	23.40	15.60
2N1049A	23.40	15.60
2N1049B	25.70	17.15
2N1050	32.75	21.85
2N1050A	32.75	21.85
2N1050B	36.00	24.05
2N1052	18.35	12.25
2N1053	13.95	9.30
2N1054	11.70	7.80
2N1055	14.55	9.70
2N1084	28.80	19.20
2N1116(ST4044)	22.00	15.00
2N1117(ST4045)	12.00	8.00
↑2N1131	5.10	3.40
●2N1131A	10.50	7.00
*2N1131	6.00	4.00
2N1132	6.00	4.00
*2N1132	8.25	5.50
●2N1132/46	7.50	5.00
●2N1132/51	8.10	5.40
●2N1132/TNT	7.00	5.25
●2N1132/TPT	8.10	5.40
●2N1132/KVT	8.10	5.40

*Denotes MIL Type
‡Breakdown is for quantities of 1-24 and 25-99
†Breakdown is for quantities of 1-99 and 100-499

↓Denotes Price Reduction
●Denotes New Type
↑Denotes Price Increase

TRANS 9

481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351

Tranzitron SEMICONDUCTORS

TYPE	UNIT PRICE 1-99	100-999
↓2N1132A	12.00	8.00
●2N1132A/46	13.50	9.00
●2N1132A/51	15.00	10.00
↓2N1132B	16.70	11.15
●2N1132B/46	18.00	12.00
●2N1132B/51	21.00	14.00
2N1149	8.65	5.75
2N1150	8.65	5.75
2N1151	8.65	5.75
2N1152	11.35	7.55
2N1153	13.35	8.90
2N1154	12.65	8.40
2N1155	13.15	8.80
2N1156	17.65	11.75
2N1206(ST4080)	11.25	7.50
2N1207(ST4081)	19.50	13.00
†2N1208(ST410)	19.50	13.00
†2N1209(ST411)	18.50	12.25
†2N1210	24.00	16.00
†2N1211	27.00	18.00
†2N1212(ST414)	22.00	14.25
2N1247(ST1026)	13.25	8.75
2N1248(ST1050)	13.25	8.75
2N1249	4.50	3.00
†2N1250(ST400)	43.50	29.00
2N1252	6.75	4.40
●2N1253	11.75	7.75
●2N1276	3.85	2.55
2N1277	4.25	2.84
2N1278	4.75	3.15
2N1279	5.60	3.70
2N1417(ST9)	1.45	.95
2N1418(ST29)	1.70	1.13
2N1420	2.50	1.65
2N1479	2.64	1.76
2N1480	2.97	1.98
↓2N1481	3.30	2.20
2N1482	4.13	2.75
↓2N1564	9.30	6.20
↓2N1565	9.30	6.20
↓2N1566	9.30	6.20
2N1572	12.45	8.25
↓2N1573	12.60	8.40
↓2N1574	13.50	9.00
↓2N1586	4.65	3.10
↓2N1587	4.50	3.00
↓2N1588	6.15	4.10
↓2N1589	4.90	3.25
↓2N1590	5.25	3.50
↓2N1591	6.30	4.20
.2N1592	7.75	5.15
2N1593	9.05	6.05
2N1594	10.30	6.85
↓2N1595	3.00	2.00
↓2N1596	4.90	3.25
↓2N1597	9.40	6.25
↓2N1598	14.40	9.60
2N1599	19.30	12.85
2N1600	5.70	3.80
↓2N1601	6.00	4.40

TYPE	UNIT PRICE 1-99	100-999
↓2N1602	10.50	7.00
↓2N1603	15.00	10.00
2N1604	20.00	13.60
↓2N1613	2.15	1.43
●2N1613/46	7.50	5.00
●2N1613/51	9.00	6.00
●2N1613/TNT	8.40	5.60
●2N1613/TPT	9.00	6.00
●2N1613/KVT	9.00	6.00
†2N1616	26.00	17.50
†●2N1616A	45.00	30.00
†2N1617	30.00	20.00
†●2N1617A	51.00	34.00
†2N1618	35.00	23.50
†●2N1618A	59.25	39.50
†2N1620	40.00	26.00
2N1647	17.00	12.70
2N1648	21.00	14.30
2N1649	20.00	13.70
2N1650	25.00	17.00
2N1686	4.90	3.40
2N1687	5.20	3.75
2N1688	5.55	4.05
2N1689	7.15	5.40
2N1700	2.23	1.49
↓2N1711	2.81	1.87
●2N1711/46	9.00	6.00
●2N1711/51	10.50	7.00
●2N1711/TNT	9.60	6.40
●2N1711/TPT	10.50	7.00
●2N1711/KVT	10.50	7.00
↓†2N1722	52.50	35.00
↓†2N1722A	60.00	40.00
↓†2N1723	54.00	36.00
↓†2N1724	55.50	37.00
↓†2N1724A	63.00	42.00
↓†2N1725	57.00	38.00
↓2N1770	5.45	3.65
↓2N1770A	6.10	4.05
↓2N1771	5.95	3.95
↓2N1771A	6.95	4.00
2N1772	7.20	4.80
2N1772A	8.55	5.70
↓2N1773	9.70	6.45
↓2N1773A	11.05	7.35
2N1774	10.40	7.60
2N1774A	12.90	8.50
↓2N1775	14.20	9.45
↓2N1775A	15.70	10.45
↓2N1776	16.45	10.95
↓2N1776A	18.35	12.20
2N1777	19.90	13.25
2N1777A	22.50	15.00
↓2N1842	6.75	4.50
↓2N1843	7.50	5.00
↓2N1844	8.25	5.50
↓2N1845	10.10	6.75
↓2N1846	12.00	8.00
↓2N1847	14.25	9.50
↓2N1848	16.85	11.25

TYPE	UNIT PRICE 1-99	100-999
↓2N1849	21.30	14.20
↓2N1850	24.35	16.25
↓2N1869	5.10	3.40
↓2N1870	11.10	7.40
2N1870A	15.50	10.35
2N1871	16.15	10.80
2N1871A	17.00	11.35
2N1872	19.55	13.05
2N1872A	20.50	13.70
2N1873	21.00	14.00
2N1874	22.50	15.00
2N1874A	25.85	17.25
2N1875	12.80	8.55
2N1875A	14.10	9.40
↓2N1876	12.95	8.90
↓2N1876A	14.80	9.80
↓2N1877	26.90	19.20
↓2N1877A	27.20	20.15
↓2N1878	29.90	22.15
↓2N1878A	30.80	22.85
2N1879	36.20	24.15
2N1879A	37.00	24.65
↓2N1880	38.80	27.45
↓2N1880A	39.30	27.75
↓2N1881	3.75	2.50
↓2N1882	4.15	2.75
↓2N1883	6.60	4.40
↓2N1884	9.50	6.35
↓2N1885	12.40	8.25
2N1886	11.50	7.65
●2N1889	12.00	8.00
↓2N1890	15.00	11.00
↓2N1893	3.30	2.20
●2N1893/46	9.00	6.00
●2N1893/51	10.50	7.00
●2N1893/TNT	9.60	6.40
●2N1893/TPT	10.50	7.00
●2N1893/KVT	10.50	7.00
2N1972	7.85	5.20
↓2N1973	8.00	6.00
↓2N1974	6.70	5.00
↓2N1975	5.30	4.00
2N1983	6.15	4.70
2N1984	4.15	3.15
2N1985	3.15	2.45
2N1986	3.75	2.50
2N1987	4.00	3.05
2N1988	6.50	5.00
2N1989	4.25	3.25
2N1990	3.60	2.40
2N1991	3.15	2.10
↓2N2009(TCR251)	3.75	2.50
↓2N2010(TCR501)	4.15	2.75
↓2N2011(TCR1001)	6.60	4.40
↓2N2012(TCR2001)	12.50	8.25
↓2N2013(TCR3001)	24.00	16.00
↓2N2014(TCR4001)	34.15	22.75
2N2017	8.35	5.55
2N2018	30.00	22.50
2N2019	37.50	28.00

*Denotes MIL Type
‡Breakdown is for quantities of 1-24 and 25-99
†Breakdown is for quantities of 1-99 and 100-499

↓Denotes Price Reduction
●Denotes New Type
↑Denotes Price Increase

TRANS 10

Transitron SEMICONDUCTORS

TYPE	UNIT PRICE 1-99	100-999
2N2020	36.00	26.50
2N2021	55.00	36.00
†2N2032(ST401)	18.00	12.00
2N2038	1.74	1.16
2N2039	2.98	1.98
2N2040	2.04	1.36
2N2041	3.24	2.16
●2N2102	3.30	2.20
2N2106	2.75	2.40
2N2107	3.15	2.75
2N2108	3.25	2.85
↓2N2150	22.50	15.00
↓2N2151	24.75	16.50
↓2N2217	4.95	3.30
↓2N2218	4.95	3.30
●2N2218/TNT	10.00	6.70
●2N2218/TPT	10.50	7.00
↓2N2219	5.85	3.90
●2N2219/TNT	11.75	7.85
●2N2219/TPT	12.00	8.00
↓2N2220	4.95	3.30
↓2N2221	4.95	3.30
↓2N2222	5.85	3.90
●2N2270	1.82	1.21
●2N2297	17.00	11.00
2N2303	6.60	4.40
●2N2303/46	8.25	5.50
●2N2303/51	9.00	6.00
●2N2303/TNT	8.70	5.90
●2N2303/TPT	9.00	6.00
●2N2303/KVT	9.00	6.00
↓2N2322	3.05	2.00
●2N2322A	3.55	2.35
↓2N2323	3.35	2.20
●2N2323A	4.00	2.60
↓2N2324	5.50	3.55
●2N2324A	6.55	4.35
2N2325	7.95	5.25
●2N2325A	9.55	6.35
↓2N2326	10.20	6.85
●2N2326A	12.45	8.20
↓2N2327	12.95	8.65
●2N2327A	15.70	10.45
↓2N2328	16.05	10.65
●2N2328A	19.30	12.85
↓2N2329	21.35	14.15
●2N2368	4.45	2.90
●2N2369	4.80	3.10
●2N2369/46	6.60	4.40
●2N2369/51	12.00	8.00
●2N2369/TNT	10.50	7.00
●2N2369/TPT	12.00	8.00
●2N2369/KVT	12.00	8.00
●2N2369A	4.80	3.10
2N2427	10.50	7.00
●2N2475	5.94	3.96
↓2N2483	4.50	3.00
↓2N2484	6.45	4.30
●2N2501	4.70	3.15
↓2N2509	9.95	6.00
↓2N2510	15.40	10.30
↓2N2511	19.90	13.85
●2N2594	4.13	2.75
●2N2594/TNT	8.00	5.35
●2N2594/TPT	8.50	5.70
↓2N2679	12.65	8.85
2N2679/A	14.00	9.80
2N2680	16.95	11.90
2N2680/A	18.60	13.00
2N2681	25.25	17.85
2N2681/A	27.85	19.50
2N2682	40.50	28.85
2N2682/A	44.55	31.20
2N2683	8.45	5.90
2N2683/A	9.30	6.50
2N2684	11.25	7.90
2N2684/A	12.40	8.70
2N2685	16.90	11.85
2N2685/A	18.55	13.00
2N2686	27.00	18.90
2N2686/A	29.95	20.50
2N2687	4.50	3.15
2N2688	7.05	4.95
2N2689	11.25	7.90
2N2690	18.00	12.60
●2N2784	11.25	7.50
●2N2784/46	18.00	12.00
●2N2784/51	23.25	15.50
●2N2784/52	17.25	9.25
●2N2784/TNT	21.00	14.00
●2N2784/TPT	23.25	15.50
●2N2784/KVT	23.50	16.25
2N2866	23.50	16.25
2N2867	26.50	18.25
2N2875	43.50	29.00
2N2885	8.50	5.90
↓2N2904	7.50	5.00
↓2N2904A	10.50	7.00
●2N2904/TNT	15.00	11.10
●2N2904/TPT	15.50	11.50
↓2N2905	9.00	6.00
↓2N2905A	12.00	8.00
●2N2905/TNT	18.00	12.00
●2N2905/TPT	18.75	12.50
↓2N2906	7.20	4.80
↓2N2906A	10.05	6.70
↓2N2907	8.70	5.70
↓2N2907A	11.55	7.70
●2N3001	15.00	10.00
2N3002	19.80	13.20
2N3003	29.32	19.55
2N3004	42.60	28.40
2N3005	10.50	7.00
2N3006	13.20	8.80
2N3007	17.75	11.85
2N3008	28.35	18.90
●2N3010	1.90	1.27
●2N3053	1.24	.83
●2N3077	23.50	15.60
●2N3078	16.50	11.00
●2N3633	22.50	15.00
●2N3633/46	27.00	18.00
●2N3633/51	40.00	26.75
●2N3633/52	24.75	16.50
●2N3633/TNT	38.00	25.50
●2N3633/TPT	40.00	26.75
●2N3633/KVT	40.00	26.75
●2N3660	10.80	7.20
●2N3661	14.00	10.50
●2N3665	6.00	4.00
●2N3666	6.75	4.35
3N39(SV3290)	14.50	11.60
3N40(SV3291)	17.15	13.30
3N41(SV3292)	19.60	15.10
3N42(SV3300)	17.50	13.40
3N43(SV3301)	21.10	16.20
3N44(SV3302)	27.90	21.50
3N44A	36.00	27.65
↓ER1	.40	.26
↓ER11	.45	.27
↓ER21	.49	.28
↓ER31	.54	.33
↓ER41	.60	.36
↓ER51	.63	.40
↓ER61	.66	.44
↓ER81	.80	.53
●ER308	.95	.65
●ER310	1.06	.75
●ER312	1.27	1.05
ER900	1.75	1.20
EVR1	.45	.36
EVR1A	.55	.44
EVR1B	.90	.70
EVR4 thru EVR110	1.35	.90
EVR4A thru EVR110A	1.60	1.00
EVR4B thru EVR110B	1.75	1.20
●GBS216	13.95	9.50
●GBS416	21.45	14.50
GMD-1	.72	.50
GMD-5	.90	.65
GPD-1	.72	.50
GPD-5	.90	.65
●KVT696	8.00	5.50
●KVT697	9.50	6.30
●KVT706	5.00	3.50
●KVT841	7.00	4.90
●KVT1131	9.75	6.50
●KVT1132	14.00	9.75
●KVT1543	12.50	8.70
●KVT1613	11.00	7.75
●§ND100 47.50	43.50	41.50

*Denotes MIL Type
‡Breakdown is for quantities of 1-24 and 25-99
†Breakdown is for quantities of 1-99 and 100-499

↓ Denotes Price Reduction
● Denotes New Type
↑ Denotes Price Increase

§Breakdown 1-9
10-24
25-99

TRANS 11

1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625

Transitron HIGH LEVEL LOGIC INTEGRATED CIRCUITS PRICE LIST

			1-24	25-99	100-999
TNG3011	Single 8 Input Nand/Nor Gate	−55 to +125°C	25.00	21.40	17.50
TNG3011F	Single 8 Input Nand/Nor Gate	−55 to +125°C	29.40	25.20	20.60
TNG3012	Single 8 Input Nand/Nor Gate	0 to +75°C	20.00	17.20	14.40
TNG3012F	Single 8 Input Nand/Nor Gate	0 to +75°C	23.50	20.20	16.90
TNG3013	Single 8 Input Nand/Nor Gate	−55 to +125°C	15.60	13.40	10.90
TNG3013F	Single 8 Input Nand/Nor Gate	−55 to +125°C	18.35	15.80	12.85
TNG3014	Single 8 Input Nand/Nor Gate	0 to +75°C	13.70	11.80	9.60
TNG3014F	Single 8 Input Nand/Nor Gate	0 to +75°C	16.15	13.90	11.30
TNG3015	Single 6 Input Nand/Nor Gate	−55 to +125°C	22.00	18.90	15.40
TNG3015F	Single 6 Input Nand/Nor Gate	−55 to +125°C	25.85	22.25	18.10
TNG3016	Single 6 Input Nand/Nor Gate	0 to +75°C	17.60	15.10	12.30
TNG3016F	Single 6 Input Nand/Nor Gate	0 to +75°C	20.70	17.80	14.50
TNG3017	Single 6 Input Nand/Nor Gate	−55 to +125°C	12.85	11.00	9.00
TNG3017F	Single 6 Input Nand/Nor Gate	−55 to +125°C	15.10	12.95	10.60
TNG3018	Single 6 Input Nand/Nor Gate	0 to +75°C	11.30	9.70	7.90
TNG3018F	Single 6 Input Nand/Nor Gate	0 to +75°C	13.30	11.40	9.30
TNG3111	Dual 4 Input Nand/Nor Gate	−55 to +125°C	28.45	24.50	19.95
TNG3111F	Dual 4 Input Nand/Nor Gate	−55 to +125°C	33.50	28.80	23.45
TNG3112	Dual 4 Input Nand/Nor Gate	0 to +75°C	22.80	19.65	15.95
TNG3112F	Dual 4 Input Nand/Nor Gate	0 to +75°C	26.80	23.10	18.75
TNG3113	Dual 4 Input Nand/Nor Gate	−55 to +125°C	17.00	14.60	11.90
TNG3113F	Dual 4 Input Nand/Nor Gate	−55 to +125°C	20.00	17.20	14.00
TNG3114	Dual 4 Input Nand/Nor Gate	0 to +75°C	15.00	12.85	10.50
TNG3114F	Dual 4 Input Nand/Nor Gate	0 to +75°C	17.60	15.15	12.30
TNG3115	Dual 3 Input Nand/Nor Gate	−55 to +125°C	25.05	21.55	17.25
TNG3115F	Dual 3 Input Nand/Nor Gate	−55 to +125°C	29.45	25.35	20.30
TNG3116	Dual 3 Input Nand/Nor Gate	0 to +75°C	20.05	17.25	14.05
TNG3116F	Dual 3 Input Nand/Nor Gate	0 to +75°C	23.60	20.30	16.55
TNG3117	Dual 3 Input Nand/Nor Gate	−55 to +125°C	14.00	12.05	9.80
TNG3117F	Dual 3 Input Nand/Nor Gate	−55 to +125°C	16.50	14.20	11.55
TNG3118	Dual 3 Input Nand/Nor Gate	0 to +75°C	12.30	10.60	8.65
TNG3118F	Dual 3 Input Nand/Nor Gate	0 to +75°C	14.50	12.45	10.15
TNG3211	Dual 4 Input Nand-Or Gate	−55 to +125°C	20.40	17.50	14.30
TNG3211F	Dual 4 Input Nand-Or Gate	−55 to +125°C	24.00	20.60	16.80
TNG3212	Dual 4 Input Nand-Or Gate	0 to +75°C	16.30	14.00	11.45
TNG3212F	Dual 4 Input Nand-Or Gate	0 to +75°C	19.20	16.45	13.45
TNG3213	Dual 4 Input Nand-Or Gate	−55 to +125°C	12.25	10.45	8.60
TNG3213F	Dual 4 Input Nand-Or Gate	−55 to +125°C	14.40	12.30	10.10
TNG3214	Dual 4 Input Nand-Or Gate	0 to +75°C	10.80	9.20	7.55
TNG3214F	Dual 4 Input Nand-Or Gate	0 to +75°C	12.70	10.85	8.90

* These circuits are supplied in short lead, short cap, 8 pin TO-5 package only.

MIXED QUANTITY PRICING — Mixed quantity pricing shall apply on all integrated circuit gates on the same type package regardless of quantity, function, fan out or temperature range. Thus, on any one order, the price for individual types will be the price as shown in the quantity column in which the total order quantity would fall.

TRANS 12

Transitron HIGH LEVEL LOGIC INTEGRATED CIRCUITS PRICE LIST

			1-24	25-99	100-999
TNG3215	Dual 3 Input Nand-Or Gate	−55 to +125°C	18.00	15.45	12.60
TNG3215F	Dual 3 Input Nand-Or Gate	−55 to +125°C	21.20	18.20	14.80
TNG3216	Dual 3 Input Nand-Or Gate	0 to +75°C	14.45	12.40	10.10
TNG3216F	Dual 3 Input Nand-Or Gate	0 to +75°C	17.00	14.60	11.90
TNG3217	Dual 3 Input Nand-Or Gate	−55 to +125°C	10.80	9.20	7.55
TNG3217F	Dual 3 Input Nand-Or Gate	−55 to +125°C	12.70	10.80	8.90
TNG3218	Dual 3 Input Nand-Or Gate	0 to +75°C	10.00	8.10	7.25
TNG3218F	Dual 3 Input Nand-Or Gate	0 to +75°C	11.80	9.45	8.50
TFF3011	Dual 3 Input Set-Reset, 2 Phase Flip Flop	−55 to +125°C	35.60	30.60	25.00
TFF3011F	Dual 3 Input Set-Reset, 2 Phase Flip Flop	−55 to +125°C	42.00	36.10	29.40
TFF3012	Dual 3 Input Set-Reset, 2 Phase Flip Flop	0 to +75°C	28.50	24.40	19.90
TFF3012F	Dual 3 Input Set-Reset, 2 Phase Flip Flop	0 to +75°C	33.60	28.85	23.50
TFF3013	Dual 3 Input Set-Reset, 2 Phase Flip Flop	−55 to +125°C	21.40	18.35	15.00
TFF3013F	Dual 3 Input Set-Reset, 2 Phase Flip Flop	−55 to +125°C	25.20	21.60	17.65
TFF3014	Dual 3 Input Set-Reset, 2 Phase Flip Flop	0 to +75°C	18.85	16.25	13.20
TFF3014F	Dual 3 Input Set-Reset, 2 Phase Flip Flop	0 to +75°C	22.20	19.10	15.55
TFF3015	Dual 2 Input Set-Reset, 2 Phase Flip Flop	−55 to +125°C	31.40	27.00	21.95
TFF3015F	Dual 2 Input Set-Reset, 2 Phase Flip Flop	−55 to +125°C	37.00	31.75	25.90
TFF3016	Dual 2 Input Set-Reset, 2 Phase Flip Flop	0 to +75°C	25.10	21.60	17.50
TFF3016F	Dual 2 Input Set-Reset, 2 Phase Flip Flop	0 to +75°C	29.60	25.50	20.65
TFF3017	Dual 2 Input Set-Reset, 2 Phase Flip Flop	−55 to +125°C	18.80	16.20	13.20
TFF3017F	Dual 2 Input Set-Reset, 2 Phase Flip Flop	−55 to +125°C	22.20	19.10	15.55
TFF3018	Dual 2 Input Set-Reset, 2 Phase Flip Flop	0 to +75°C	16.55	14.20	11.55
TFF3018F	Dual 2 Input Set-Reset, 2 Phase Flip Flop	0 to +75°C	19.50	16.75	13.60

* COMMERCIAL GRADE CIRCUITS

TNG3031	Single 4 Input Nand/Nor Gate	+10 to +60°C	8.65	7.45	6.05
TNG3131	Dual 2 Input Nand/Nor Gate	+10 to +60°C	9.50	8.20	6.65
TNG3231	Dual 2 Input Nand/Or Gate	+10 to +60°C	8.65	7.45	6.05

* These circuits are supplied in short lead, short cap, 8 pin TO-5 package only.

MIXED QUANTITY PRICING — Mixed quantity pricing shall apply on all integrated circuit gates on the same type package regardless of quantity, function, fan out or temperature range. Thus, on any one order, the price for individual types will be the price as shown in the quantity column in which the total order quantity would fall.

TRANS 13

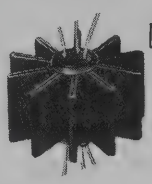
481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351

DELTA DIVISION

Wakefield Engineering Semiconductor Coolers

SERIES 200 FEATHERWEIGHT COOLERS

RISE (°C) FOR 1 WATT			
Type	Nat. Conv.	250 Ft/Min	Fits JEDEC Case Styles
201 203 222	66 56 56	27 19 19	TO 18, 24, 28 (222 accepts 2 cases)
204 205 207 209 224	70 61 49 34 49	28 24 17 10 17	TO 5, 9, 11, 12, 16 29, 33, 39, 42, 43 (224 accepts 2 cases)
211 213 215	56 44 31	20 13 8	TO 8


4

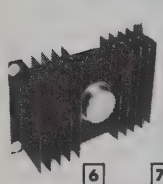

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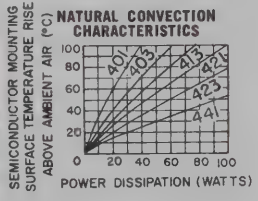
Stock No.	Mfr's. Type	Fig.	Dia.	Lgth.	Fits Case Dia.	EACH 1-49	50-499	500-999	1,000-4,999
	NF201	1	.64	.19	.161/.195	.27	.21	.16	.11
	NF202	1	.49	.20	.161/.195	.25	.20	.15	.10
	NF203	2	.64	.38	.161/.195	.29	.22	.17	.12
	NF204	1	.55	.20	.275/.335	.25	.20	.15	.10
	NF205	1	.72	.19	.275/.335	.27	.21	.16	.11
	NF207	2	.72	.38	.275/.335	.29	.22	.17	.12
	NF209	3	1.26	.44	.275/.335	.34	.29	.23	.18
	NF211	1	.82	.19	.444/.524	.27	.21	.16	.11
	NF213	2	.82	.38	.444/.524	.29	.22	.17	.12
	NF215	3	1.38	.44	.444/.524	.34	.29	.23	.18
	NF222	4	.64	.38	.161/.195	.38	.30	.24	.19
	NF224	4	.72	.44	.275/.335	.38	.30	.24	.19
	160 Installation Tool for Models 201, 3, 4, 5, 7, 9								1.00
	161 Installation Tool for Models 211, 213, 215								1.00

SERIES 400 NATURAL CONVECTION COOLERS


6


7

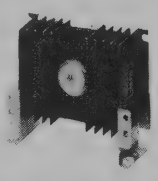
Semiconductor mtg. area for 401 thru 423 is 1.31 wide & for 441 is 1.5 wide.



Stock No.	Mfr's Type	Fig.	Inches H	W	D	EACH 1-49	50-99	100-249	250-499
	NC401A	6	1.50	4.81	1.25	1.41	1.15	.97	.84
	NC401B					1.41	1.15	.97	.84
	NC401E					1.62	1.32	1.11	.96
	NC401K					1.17	.96	.80	.69
	NC403A	6	3.00	4.81	1.25	1.62	1.32	1.12	.97
	NC403B					1.62	1.32	1.12	.97
	NC403C					1.62	1.32	1.12	.97
	NC403K					1.38	1.13	.95	.82
	NC413A	6	3.00	4.81	1.87	2.19	1.78	1.50	1.30
	NC413B					2.19	1.78	1.50	1.30
	NC413K					1.95	1.59	1.33	1.15
	NC421A	6	3.00	4.81	2.63	2.28	1.86	1.57	1.35
	NC421B					2.28	1.86	1.57	1.35
	NC421C					2.28	1.86	1.57	1.35
	NC421K					2.04	1.67	1.40	1.20
	NC423A	6	5.50	4.81	2.63	3.33	2.71	2.29	1.97
	NC423B					3.33	2.71	2.29	1.97
	NC423K					3.09	2.52	2.12	1.82
	NC441J	7	5.50	4.75	4.50	5.83	4.76	3.97	3.43
	NC441W					5.83	4.76	3.97	3.43
	NC441K					5.38	4.40	3.66	3.16

VERTICAL MTG. BRACKETS

Meet vibration of Mil 202B. For NC401 & 403 use #111, for NC421 & 423 use #113. Two bkts. reqd. per sink. To insulate use teflon insulator #103. Shpg. wt 10 oz.



Stock No.	Type	1-99	100-499
	111	.15	.12
	113	.18	.15

THERMAL COMPOUND (TYPE 120)

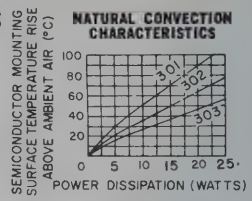


For use between semiconductor and heat sink. Also used for thermoelectric modules.

Stock No.	Mfr's No.	Quantity	Net
	122	2 oz.	1.95
	128	8 oz.	5.10
	1280	5 lb.	30.00

SERIES 300 RECTIFIER COOLERS

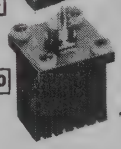

5

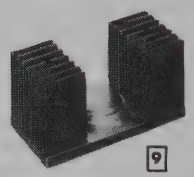


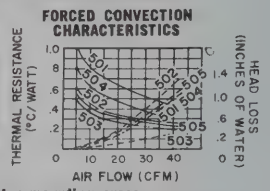
Stock No.	Mfr's Type	Fig.	Inches H	W	D	EACH 1-40	50-99	100-249	250-499
	NC301L	5	.75	2.00	2.00	1.55	1.30	1.05	.90
	NC301M					1.55	1.30	1.05	.90
	NC301N					1.55	1.30	1.05	.90
	NC301R					1.55	1.30	1.05	.90
	NC301RR					1.85	1.55	1.25	1.10
	NC301K					1.25	1.05	.85	.70
	NC302M	5	1.50	2.00	2.00	1.65	1.40	1.15	1.00
	NC302N					1.65	1.40	1.15	1.00
	NC302R					1.65	1.40	1.15	1.00
	NC302K					1.35	1.15	.95	.80
	NC302NN					1.95	1.65	1.35	1.20
	NC302RR					1.95	1.65	1.35	1.20
	NC303N	5	3.00	2.00	2.00	1.90	1.60	1.30	1.15
	NC303R					1.90	1.60	1.30	1.15
	NC303K					1.60	1.35	1.10	.95
	NC303NN					2.20	1.85	1.50	1.35
	NC303RR					2.20	1.85	1.50	1.35

SERIES 500 FORCED CONVECTION COOLERS


8


10


9

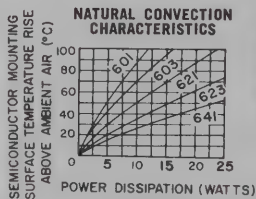


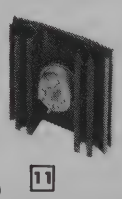
Semiconductor mounting areas

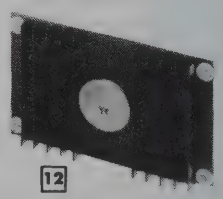
501	502	503	504	505
1.25 x 1.75	1.50 x 1.75	1.5 x 3.0	1.75 x 1.75	2.0 x 1.75

Stock No.	Type	Fig.	Inches H	W	D	EACH 1-49	50-99	100-249
	FC501A	8	1.75	1.75	2.25	5.10	4.55	4.25
	FC501B					4.95	4.40	4.10
	FC501K					4.60	4.10	3.85
	FC502A	9	1.75	3.50	1.75	7.30	6.55	6.15
	FC502B					7.15	6.40	6.00
	FC502K					6.80	6.10	5.75
	FC503A	9	1.75	3.50	3.50	12.20	10.95	10.25
	FC503B					12.05	10.80	10.10
	FC503K					11.70	10.50	9.85
	FC504K	10	1.75	1.75	1.75	4.20	3.80	3.50
	FC505K		1.75	1.75	2.00	6.10	5.35	5.00

SERIES 600 CIRCUIT BOARD COOLERS




11


12

Semiconductor mtg area for 601 & 603 is .81 wide and for 621 thru 641 is 1.31 wide.

Stock No.	Mfr's Type	Fig.	Inches H	W	D	EACH 1-40	50-99	100-249	250-499
	NC601K	11	1.25	2.02	.56	1.10	.90	.70	.55
	NC603T		2.00	2.02	.56	1.50	1.20	.95	.80
	NC603K		2.00	2.02	.56	1.20	.95	.75	.60
	NC621A	12	1.50	4.81	.46	1.65	1.35	1.10	.95
	NC621B		1.50	4.81	.46	1.65	1.35	1.10	.95
	NC621K		1.50	4.81	.46	1.35	1.10	.90	.75
	NC623A	12	3.00	4.81	.46	1.80	1.50	1.20	1.05
	NC623B		3.00	4.81	.46	1.80	1.50	1.20	1.05
	NC623K		3.00	4.81	.46	1.50	1.25	1.00	.85
	NS641A	11	3.00	4.12	1.00	1.95	1.60	1.30	1.10
	NC641B		3.00	4.12	1.00	1.95	1.60	1.30	1.10
	NC641K		3.00	4.12	1.00	1.65	1.35	1.10	.90

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A Complete Line — From Milliwatt To High Power

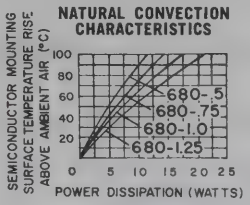
DELTA DIVISION

SERIES 680 CIRCUIT BOARD COOLERS



Model 680 Coolers will accommodate TO-3, TO-36, 2N1016 or other smaller case sizes.

13



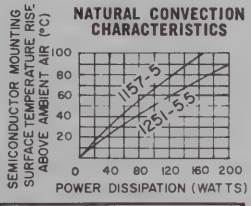
Stock No.	Mfr's Type	Fig.	INCHES H	W	D	EACH 1-24	25-49	50-99	100-499
	NC680-.5A NC680-.5B NC680-.5K	13	.50	1.81	1.81	.91	.85	.80	.75
	NC680-.75A NC680-.75B NC680-.75K	13	.75	1.81	1.81	.91	.85	.80	.75
	NC680-1.0A NC680-1.0B NC680-1.0K	13	1.00	1.81	1.81	.91	.85	.80	.75
	NC680-1.25A NC680-1.25B NC680-1.25K		1.25	1.81	1.81	.91	.85	.80	.75

GN SERIES FOR 70/200 AMP RECTIFIERS



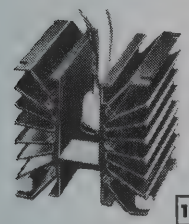
Width of semiconductor mtg. area.
GN1157-1.07 min.
GN1251-1.31 min.

14



Stock No.	Mfr's Type	Fig.	INCHES H	W	D	EACH 1-24	25-49	50-99	100-199
	GN1157-5H	14	4.12	4.12	5.00	5.55	4.75	4.20	3.75
	GN1157-5J					5.55	4.75	4.20	3.75
	GN1157-5K					5.20	4.45	3.95	3.55
	GN1251-5.5W		5.00	5.00	5.00	7.00	6.00	5.30	4.75
	GN1251-5.5K					6.65	5.70	5.00	4.55

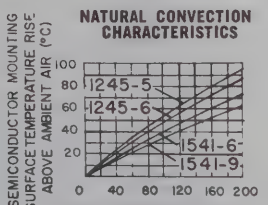
WN SERIES FOR 70/350 AMP RECTIFIERS



Width of semiconductor mtg. area.

WN1244-1.10 min.
WN1245-1.28 min.
WN1541-1.76 min.

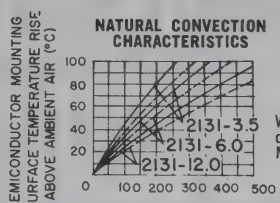
15



Stock No.	Mfr's Type	Fig.	INCHES H	W	D	EACH 1-24	25-49	50-99	100-199
	WN1244-5H	15	4.00	4.00	5.00	4.85	4.15	3.70	3.30
	WN1244-5J					4.85	4.15	3.70	3.30
	WN1244-5K					4.50	3.85	3.40	3.10
	WN1245-6W	15	5.00	5.00	6.00	6.15	5.25	4.65	4.15
	WN1245-6K					5.80	4.95	4.40	3.95
	WN1541-6Z	15	6.25	6.25	9.00	9.55	8.20	7.25	6.50
	WN1541-6Y					9.55	8.20	7.25	6.50
	WN1541-6K					9.00	7.75	6.85	6.15
	WN1541-9Z					13.40	11.50	10.20	9.20
	WN1541-9Y					13.40	11.50	10.20	9.20
	WN1541-9K					13.10	11.25	9.90	8.90

MN SERIES FOR 240/650 AMP RECTIFIERS

17

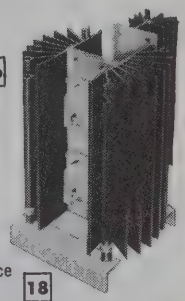


Width of semiconductor mtg. area of MN2131 is 3.45 min.

DOTTED LINES INDICATE MODELS WITH INSERT 2159

MN2159 inserts give added dissipation for surface mtg. rectifiers as shown.

16



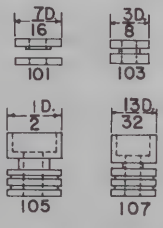
18

Stock No.	Mfr's Type	Fig.	INCHES H	W	D	EACH 1-9	10-24	25-49	50-99
	MN2131-3.5K	16	3.5	9.25	6.75	7.70	6.60	5.85	5.25
	MN2131-6K		6.0			11.95	10.30	9.10	8.20
	MN2131-12K		12.0			21.80	18.70	16.50	14.85
	MN2159-3.5K	17	3.5	3.37	3.43	1.95	1.70	1.50	1.35
	MN2159-6K		6.0			3.15	2.70	2.40	2.15
	MN2159-12K		12.0			5.50	4.75	4.20	3.75
	109	18	1.5	7.5	1.5	Plastic Angle Bkt. .... .95 ea			

EXTRUSION IN 3 FT. LENGTHS

Stock No.	Mfr's Type	For Cooler Type	INCHES H	W	NET EACH PER 3 FT. LGTH. 1-4	5-9	10-24
	300	NC301, 302, 303	2.00	2.00	6.00	5.00	4.00
	400	NC401, 403	1.25	4.81	7.75	6.50	5.75
	410	NC413	1.87	4.81	10.50	9.25	8.00
	420	NC421, 423	2.63	4.81	12.75	11.00	9.50
	440	NC441	4.50	4.75	20.50	17.50	15.50
	600	NC601, 603	.56	2.24	3.25	2.75	2.50
	620	NC621, 623	.46	4.81	5.75	5.00	4.25
	640	NC641	1.00	4.12	7.50	6.50	5.75
	1157	GN1157	4.12	4.12	25.50	22.00	19.25
	1251	GN1251	5.00	5.00	32.25	27.75	24.50
	1244	WN1244	4.00	4.00	25.50	22.00	19.25
	1245	WN1245	5.00	5.00	32.50	28.00	24.50
	1541	WN1541	6.25	6.25	51.00	43.75	38.75
	2131	MN2131	6.75	9.25	63.00	54.00	47.50
	2159	MN2159 Insert	3.44	3.38	12.75	11.00	9.50

TEFLON INSULATORS



Stock No.	Type	For Heatsink No.	No. Req'd	Bkdn Kv	Each
	101	501 502, 503, 504, 505	3 4	1	.07
	103	401 403, 413, 421, 423 621, 623, 641	3 4 4	1.5	.05
	105	441, 1244, 1245, 1541	4	5	.20
	107	Same as for 103	4	3.5	.20

SERIES 300 RECTIFIER STACK HARDWARE KIT

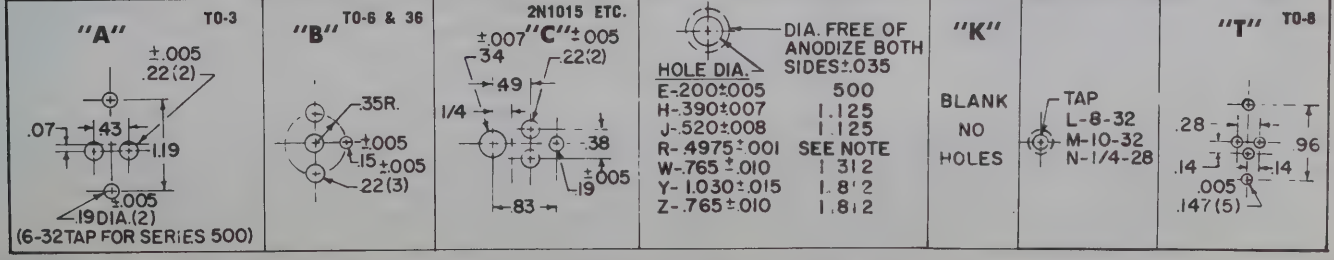


This kit of hardware makes it possible to quickly assemble rugged rectifier stack assemblies from press fit rectifiers and NC301, 302 and 303 R and RR Rectifier Sinks. Contains a total of 94 pcs. made up of 9 different items including bus bars, rectifier lugs, 4 types insulating supports, 2 types mounting feet and a pair of rectifier driving blocks. All hardware items available in bulk and may be ordered from parts list included in kit.

Net Each $19.95

STANDARD SEMICONDUCTOR MOUNTING ACCOMMODATIONS

MANUFACTURERS TYPE SUFFIX (A, B, C, ETC.) DENOTES MOUNTING. DOUBLE SUFFIX DENOTES 2 MOUNTINGS.



NOTE: I.D. OF R(.4975 DIA.) HOLE FREE OF ANODIZE

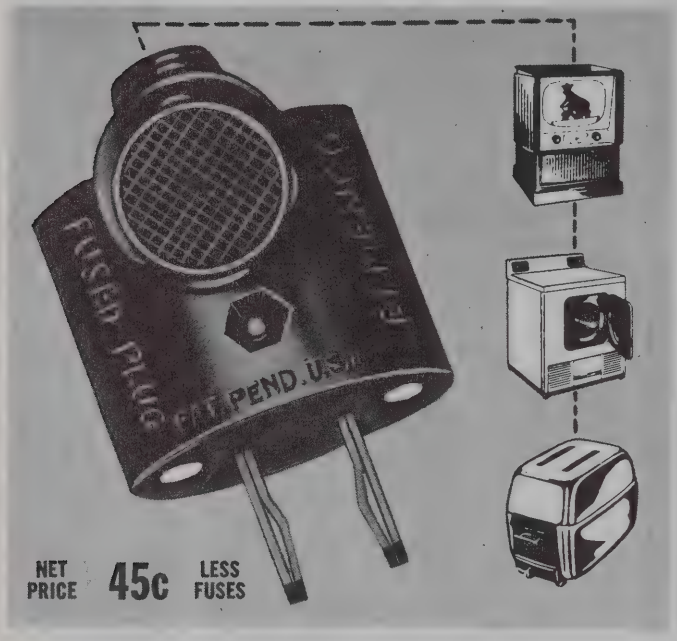
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ELMENCO CAPACITORS — FUSED PLUG

PROTECTS ALL ELECTRICAL APPLIANCES

Offers complete protection against current surges & short circuits

REDUCES FIRE HAZARDS



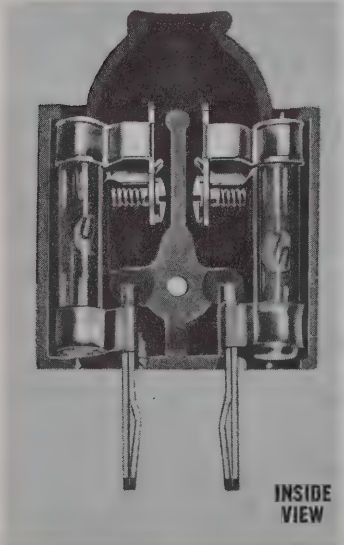
The Elmenco Fused Plug is like any standard plug, is light in weight, but easier to handle because of finger grips. However, it employs 2 small fuses which provide complete protection against damage to the appliance and to the main line. The blown fuse is easy to remove and simple to replace. Fits any standard wall outlet.

NEW MARKETS! GREATER VALUE!

Approved by Underwriters Laboratories and used by many of the largest manufacturers of radio and electronic equipment, battery chargers, washing machines, curling irons, lighting equipment, automatic relay equipment, motors of every description, and practically every other type of product that consumes electricity. Every wired home, office and store is a prospect.

IMPACT RESISTANT COVER
plus SPRING ACTION for positive contact

New spring action design of the male blades assures 100% positive contact regardless of worn condition of wall outlet.



Fuses are replaced instantly without need of opening plug. Can be used with standard 3AG and 3AB glass tubular fuses up to 20 amps.

REPLACE FUSE INSTANTLY!



RECOMMENDED BY THE BOARD OF FIRE UNDERWRITERS



Conveniently packed 10 to a Box in colorful self-merchandising displays. Easy to handle for resale.

USED BY LEADING MANUFACTURERS

- Auto-Lite
- Bell Telephone Labs.
- Buick Motors
- Cambridge Instrument
- Canaday Cooler
- Dictaphone
- Dila-Therm
- Eagle Electric
- Eastman Kodak
- Electro-Physical Labs.
- General Electric
- Gerlat Lighting
- I. B. M.
- Philco
- R. C. A.
- Sylvania
- Thomas Edison
- Webster-Chicago
- Western Electric
- Westinghouse

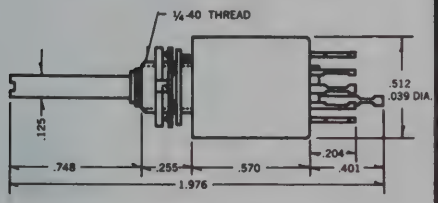
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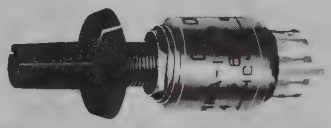
ALCOSWITCH MANUFACTURED TO MEET HIGH STANDARDS OF QUALITY AND MINIATURIZATION REQUIREMENTS

ADJUSTABLE-STOP ROTARY

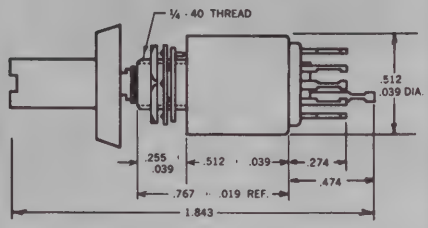


MRA-1-10S, LESS KNOB, ⅛" DIA. SHAFT





MRA-1-10, WITH KNOB, 9/32" DIA. SHAFT



First, new ultra-miniature rotary switches with the invaluable feature of an adjustable-stop. Ideal for installations where size and space limitations are a factor including applications in aircraft, computers, and all types of electronic equipment. The only one of its kind, the adjustable-stop miniature rotary switch has these additional features • non-shorting • 36° spacing • up to 4 poles on single deck

SPECIFICATIONS

Current Rating:
500 ma @ 125 VAC.
Initial Contact Resistance:
Below 20 milliohm at 2-4 VDC and at rated current.
Insulating Resistance:
Over 100 megohms between terminals and case ground (when measured with a megger of 500 VDC at room temp.)
Voltage Breakdown:
1000 VAC between terminals and case ground for a duration of one minute.
Life Cycle:
Over 10,000 switching operations at the rate of 15 to 20 full rotations per minute at the rated current.

Contacts and Terminals:
Solid silver.
Bushing Size:
¼ - 40.
Shaft:
See Below

Humidity: Models MRA-S Only (⅛" shaft)
Tested at a temperature of 40°C and relative humidity of 90-95% for 10 hours. Resistance between terminals and case ground will be more than 10 megohms.

Stop Guide Strain: Models MRA-S Only
The stop guide which limits rotation shall not be subjected to a force of not more than 2 Kg-cm.

INDUSTRIAL NET PRICE SCHEDULES

LESS KNOB — ⅛" DIA. SHAFT

MODEL	USABLE	One-24	25-99	100-499	500-999
MRA-1-10S	2-10 pos.	3.85	2.57	2.31	1.925
MRA-2-5S	2- 5 pos.	3.85	2.57	2.31	1.925
MRA-3-3S	2- 3 pos.	3.85	2.57	2.31	1.925
*MSRA-4-2S	2 pos.	3.85	2.57	2.31	1.925

*Fixed

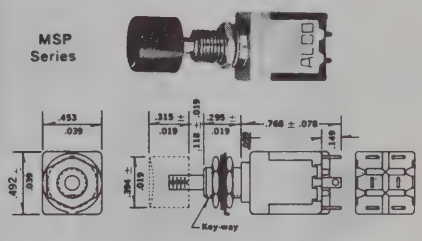
WITH KNOB — 9/32" DIA. SHAFT

MODEL	USABLE	One-24	25-99	100-499	500-999
MRA-1-10	2-10 pos.	3.85	2.57	2.31	1.925
MRA-2-5	2- 5 pos.	3.85	2.57	2.31	1.925
MRA-3-3	2- 3 pos.	3.85	2.57	2.31	1.925
*MSRA-4-2	2 pos.	3.85	2.57	2.31	1.925

*Fixed

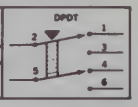
PUSH BUTTON

MSP Series



High current capacity in this new compact momentary push button switch designed for reliable control in aviation, military and industrial "miniature" requirements. Contact pressure is greatest at point of make and break. An audible click is produced by the snap-action mechanism. Available SPDT and DPDT, usable as either a Normally Open or Normally Closed switch.

NORMAL CONTACT	PUSH FOR MOMENTARY CONTACT
ON	ON
(1) — (2)	(2) — (3)
(4) — (5)	(5) — (6)



SPECIFICATIONS

Current Rating:
5 amperes, 115 volts
Initial Contact Resistance:
Below 10 milliohms at 2-4 VDC 1 amp
Insulating Resistance:
Over 100 megohms between terminals and case ground (when measured with a megger of 500VDC.)
Voltage Breakdown:
1000VAC between terminals and case ground for a duration of one minute.
Force Required to Activate:
Below 1.5 kilogram.
Life Cycle:
Well over 20,000 on-off switching actions at rated current.
Contacts and Terminals:
Solid Silver
Case Material:
Black phenolic resin
Bushing Size:
¼"-40

INDUSTRIAL NET PRICE SCHEDULE

MODEL DESCRIPTION	ONE-24	25-99	100-499	500-999
MSP-105F SPDT	1.95	1.33	1.17	.975
MSP-205R DPDT	2.85	1.90	1.71	1.42
C-12 PLASTIC BUTTON*	.05	.036	.032	.03
C-14 CHROME BUTTON*	.06	.04	.036	.033

*One red or black button supplied — state color. Chrome buttons available optionally.

WORLD'S FIRST **MINIATURE** PUSH TO MAKE PUSH TO BREAK

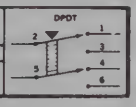
PUSH BUTTON SWITCH FOR REVERSING APPLICATIONS

Controls 2 circuits — PUSH to make contacts and PUSH again to reverse action. Fast make and break snap-action to handle a high current of 5 amps @ 115 VAC. Solid silver contacts and terminals. Compact ½" size.



MSP-205N
AVAILABLE WITH RED, BLACK OR CHROME BUTTONS

PUSH FOR CONTACT	PUSH FOR CONTACT
ON	ON
(1) — (2)	(2) — (3)
(4) — (5)	(5) — (6)



SPECIFICATIONS (See MSP-205R Above)

INDUSTRIAL NET PRICE SCHEDULE

MODEL DESCRIPTION	ONE-24	25-99	100-499	500-999
MSP-205N DPDT	2.85	1.90	1.71	1.42
C-12 PLASTIC BUTTON*	.05	.036	.032	.03
C-14 CHROME BUTTON*	.06	.04	.036	.033

One red or black button supplied — state color. Chrome buttons available optionally.

AUXILIARY PUSH BUTTONS

The MSP-205 series push button ALCO-SWITCHES are normally supplied with black buttons and are also available in red or chrome when requested. Additional push buttons can also be obtained. When ordering state choice of color, special markings, i.e. letters, numerals, symbols which are available for quantity users above 5000 pieces.

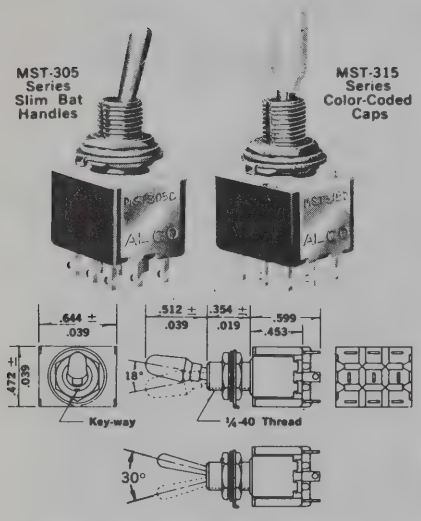
ALCOSWITCH LAWRENCE MASS.

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ALCOSWITCH

MANUFACTURED TO MEET MINIATURIZATION REQUIREMENTS

3PDT



Features one-piece body construction for ultra-miniature space requirements. Has unusually high current rating, and is capable of handling multiple circuits simultaneously. Has high voltage barriers between terminals and contacts firmly anchored to base. Rated 3 amperes @ 115 VAC.

SPECIFICATIONS

Initial Contact Resistance:
Below 20 milliohms at 2-4 VDC, 1 amp.
Insulating Resistance:
Over 1000 megohms between terminals and case ground @ 500 VDC.
Voltage Breakdown:
1000 VAC between terminals and case ground for a duration of one minute.
Life Cycle:
Well over 25,000 on-off switching actions at rated current.
Contacts and Terminals:
*Solid silver.
Case Material:
Black phenolic resin.
Bushing Size:
Standard ¼-40 • Nut, ⅜ acruss flats

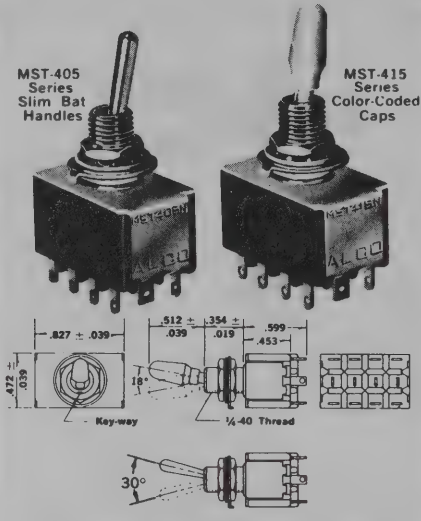
Center terminal brass with silver plate

INDUSTRIAL NET PRICE SCHEDULE

MODEL DESCRIPTION	ONE 24	25-99	100-499	500-999
MST-315D On-None-On	3.85	2.57	2.31	1.925
MST-305D On-None-On	3.85	2.57	2.31	1.925
MST-305P On-Off-On	4.15	2.78	2.49	2.075
MST-305T On-Off-(On)	4.15	2.78	2.49	2.075

(On) Indicates Momentary Positions

4PDT



The world's first 4-Pole toggle switch with a one-piece miniaturized body construction. Includes high voltage barriers, solid silver terminals and contacts. Can be easily mounted in compact aircraft and electronic equipment. Current rating: 3 amperes @ 115 VAC.

SPECIFICATIONS

Initial Contact Resistance:
Below 20 milliohms at 2-4 VDC, 1 amp.
Insulating Resistance:
Over 1000 megohms between terminals and case ground @ 500 VDC.
Voltage Breakdown:
1000 VAC between terminals and case ground for a duration of one minute.
Life Cycle:
Well over 25,000 on-off switching actions at rated current.
Contacts and Terminals:
*Solid silver.
Case Material:
Black phenolic resin.
Bushing Size:
Standard ¼-40 • Nut, ⅜ across flats

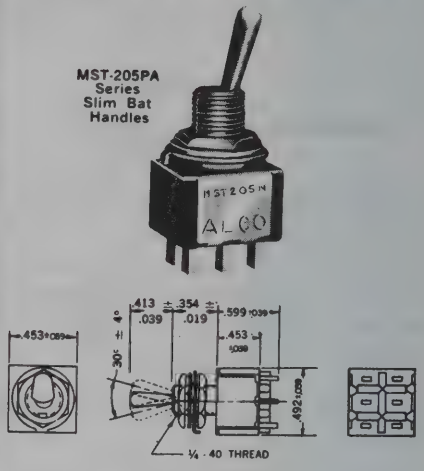
*Center terminal brass with silver plate.

INDUSTRIAL NET PRICE SCHEDULE

MODEL DESCRIPTION	One 24	25-99	100-499	500-999
MST 405N On-None-On	4.85	3.29	2.96	2.55
MST 415N On-None-On	4.85	3.29	2.96	2.55

ALCOSWITCH

ON-ON-ON



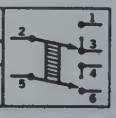
DP3P ON-ON-ON

New ON-ON-ON toggle switch made for applications where the Center-ON position is desired. The DPDT circuit is designed to have "ON" positions at opposite sides of the lever throw with the Center-ON operational when either circuit is used. 3 amperes @ 115 VAC. Ultra-miniature size is only ½".

SPECIFICATIONS

Initial Contact Resistance:
Below 20 milliohms at 2-4 VDC. amp.
Insulating Resistance:
Over 1000 megohms between terminals and case ground @ 500 VDC.
Voltage Breakdown:
1000 VAC between terminals and case ground for a duration of one minute.
Life Cycle:
Well over 15,000 on-off switching actions at rated current.

WITH HANDLE TO THE KEY WAY	CENTER	WITH HANDLE OPPOSITE SIDE OF KEY WAY
ON	ON	ON
1-2 4-5	2-3 4-5	2-3 5-6



INDUSTRIAL NET PRICE SCHEDULE

MODEL DESCRIPTION	One 24	25-99	100-499	500-999
MST205-PA On-On-On	2.85	1.90	1.71	1.42
MST205-TA On-On-(On)	3.15	2.12	1.89	1.58

(On) Indicates Momentary Positions

ALCOSWITCH

ANODIZED ALUMINUM KNOBS FOR ⅛" DIA. SHAFTS



DIMENSIONS

MODEL	A	B	C	D	E	F
K-500 ⅛	.500	.625	.435	.354	.433	.160

Machined aluminum knobs with anodized finish, modern styling and hairline indicator. Useable with switches and potentiometers having a ⅛" dia. shaft.



K-500A



K-500B

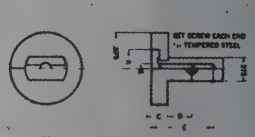
INDUSTRIAL NET PRICE SCHEDULE

MODEL	DESCRIPTION	One 99	100-249	250-499	500 999
K-500A-⅛	Natural Aluminum	.45	.39	.37	.35
K-500B-⅛	Black Anodized	.45	.39	.37	.35

A new series of skirted knobs designed for MRA series Alcoswitches. Machined aluminum anodized with hairline indicator and 2 set screws. ⅛" shafts only.

INDUSTRIAL NET PRICE SCHEDULE

MODEL	DESCRIPTION	One 99	100-249	250-499	500-999
KC-500A	Natural Aluminum	.55	.49	.47	.45
KC-500B	Black Anodized	.55	.49	.47	.45



DIMENSIONS

MODEL	A	B	C	D	E	F
KC-500	.473	.125	.198	.295	.748	.867

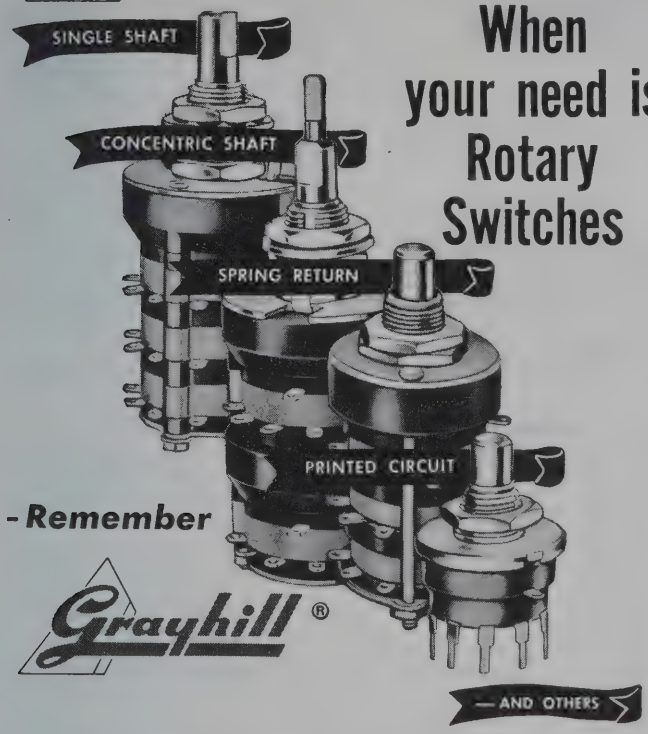
ALCOSWITCH

LAWRENCE MASS.

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Grayhill INC.

When your need is Rotary Switches



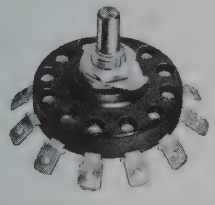
- Remember

Grayhill®

Every switch receives a minimum of 75 Quality Control Inspections and tests
You get over 100,000 operations

General Specifications

- Contact Resistance .010 ohms typical
- 100,000 cycle life
- Make or Break 1 Amp. 115 VAC Resistive
- 1 to 6 Poles Per Deck
- 1 to 12 Decks
- 2 to 12 Positions Per Deck
- Explosion Proof



SERIES 19 POWER TAP SWITCH

- A 15 Amp. switch in a 10 Amp. size
- UL Listed
- Over 50,000 cycles of operation
- 2 to 11 Positions
- Choice of "Faston" or Solder Terminals

When It's Push Button Switches

— Remember

Grayhill®

General Specifications

- Snap-Action — Silent Action
- SPST - DPST - SPDT - DPDT
- Momentary Contact — Push-Pull-Lighted
- Rating from ¼ Amp. to 10 Amp. 115 VAC Resistive
- Normally Open — Normally Closed
- Life expectancy 50,000 to 1,000,000 operations



Be sure you have the Current Engineering Catalog

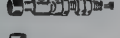
''PIONEERS IN MINIATURIZATION''



SERIES 29 BINDING POSTS
For ⅜'' and ½'' Mounting Holes.
Screw Type or Spring Loaded.
Single and Double Binding Plugs.



TEST CLIPS (STANDARD, MINIATURE & ULTRA-MINIATURE)
Eliminates Manual Opening of Jaws.



''PUSH-POSTS''
Plunger Type Binding Posts with Positive Contact.



STUD-LESS AND INSULATED TEST CLIPS, TEST CLIP ADAPTERS, TEST JACKS AND STAND-OFF INSULATORS



TRANSISTOR AND PENCIL TUBE SOCKETS
Pencil Tube Socket for .020 Pins.
Socket for Jetec 30 Transistors.

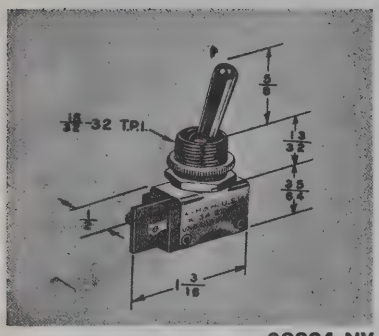


COIL FORMS AND MATING INSULATING WASHER SET
Coil Forms with Pat. Anchoring Posts.
Insulating Washers for Phone Jacks
Molded of Phenolic.

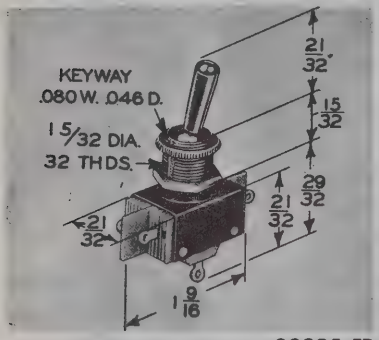
MOLDTRONICS CUSTOM MOLDING
Pat. Automatic Molding Presses.
Low Mold Cost Offers Unusual Savings.
Very Close Tolerances Can Be Held.

CUSTOM SWITCHES

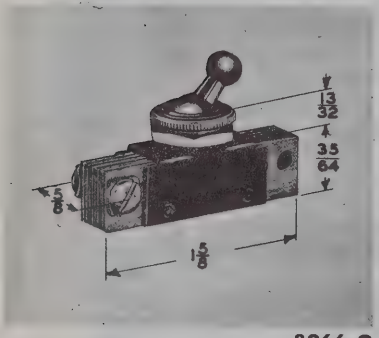
TOGGLE SWITCHES



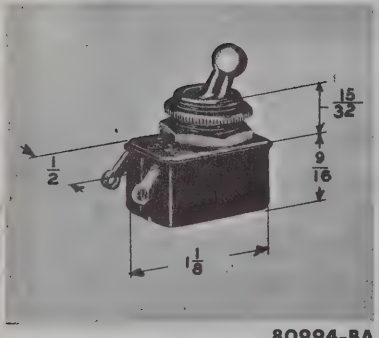
20994-NV



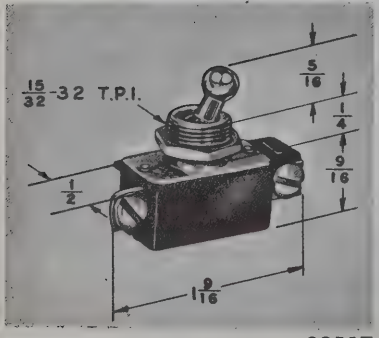
20905-FR



8966-Q



80994-BA



80517

TOGGLE SWITCHES—SMALL CANOPY TYPE

Laminated Phenolic Sections—Slotted Sleeve (15/32" dia 32 thrds per inch)—One Hex Nut and One Knurled Nut Assembled—Nickel Finish—No Indicating Dials (order separately)

Single Pole Single Throw Switches. Rating—3A 250V AC-DC

Single Pole Double Throw, 2 Circuit, Double Pole Single Throw and Double Pole Double Throw Switches. Ratings—1A 250V, 3A 125V AC-DC

POSITIVE ACTION

Circuit	Sleeve Length	Solder Lugs		6" Wire Leads		Screw Terminals	
		Ball Lever	Bat Lever	Ball Lever	Bat Lever	Ball Lever	Bat Lever
SPST	13/32"	20994-BF	20994-NV	20599-M	20599-NF	8964-A	8964-KC
SPST	15/32"	20994-CS	20994-LH	20599-BJ	20599-MD	8964-T	
SPST	3/4"	21518-B	21518-BJ	21487-B	21487-BH	21705-A	21705-B
SPST	1"	21615-BD	21615-BE		21633-BA	21640	
SPDT	13/32"	21350-B	21350-CF	21354-B		8966-Q	
SPDT	15/32"	21350-BF	21350-EH			8966-U	8966-UA
SPDT	3/4"	80023-B	80023-BE				
SPDT	1"	21661-B	21661-BE				
2 Cir	13/32"	21191-B	21191-X	21190-B		8967	8967-KA
2 Cir	15/32"	21191-BK	21191-BV			8967-T	
2 Cir	3/4"	21620-B	21620-E			8967-P	
2 Cir	1"	21656-B	21656-BA				
DPST	13/32"	20902-AM	20902-AJ	20901-AB			8965-AC
DPST	15/32"	20902-N	20902-CX	20901-KA		8965-J	8965-JB
DPST	3/4"	20902-AZ	20902-JH			8965-N	
DPST	1"	20902-Q	20902-HU				8965-K
DPDT	13/32"	20905-Z	20905-AN			*20904-A	
DPDT	15/32"	20905-BX	20905-FR	*20906-W			*20904-E
DPDT	3/4"	20905-BT	20905-MU				
DPDT	1"	20905-C	20905-KA				

*Wire leads in end contacts only, or binding screws in end contacts only with solder lugs on bottom.

MOMENTARY ACTION

Circuit	Sleeve Length	Solder Lugs		6" Wire Leads		Screw Terminals	
		Ball Lever	Bat Lever	Ball Lever	Bat Lever	Ball Lever	Bat Lever
Normally OPEN							
SPST	13/32"		80054-BE			80109-Q	
SPST	15/32"		80054-S		80109-JA	80109-P	80109-PA
DPST	13/32"	20907-M	20907-MA				
DPST	15/32"	20907	20907-H				
Normally CLOSED							
SPST	13/32"					80109-K	
SPST	15/32"		80054-SA				
SPDT	13/32"		21827-S				
SPDT	15/32"		21827-GA				
DPST	13/32"		20907-GA				
DPDT	13/32"	21858-C	21858-CB	*21858-K			
DPDT	15/32"	21858-B	21858-X				

*Wire leads in end contacts only, solder lugs on bottom.

TOGGLE SWITCHES—MIDGET SIZE

Molded Phenolic Base—Slotted Sleeve (15/32" dia 32 thrds per inch)—One Hex Nut and One Knurled Nut Assembled—Nickel Finish—No Dial

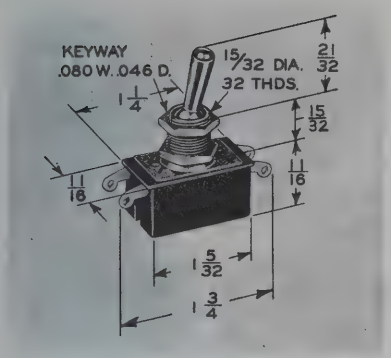
POSITIVE ACTION

Circuit	Sleeve Length	Solder Lugs		6" Wire Leads		Screw Terminals	
		Ball Lever	Bat Lever	Ball Lever	Bat Lever	Ball Lever	Bat Lever
Rating—3A 250V							
SPST	15/32"	80994-BA	80994-BD			80964-D	80964-C
Ratings—1A 250V, 3A 125V							
SPDT	1/4"	80515		80516		80517	
2 Cir	1/4"	80518		80519		80520	
Ratings—3A 250V, 6A 125V							
SPST	15/32"	86994-AQ	86994-N	86599-CA	86599-QE		86964-E

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ARR. 1

TOGGLE SWITCHES



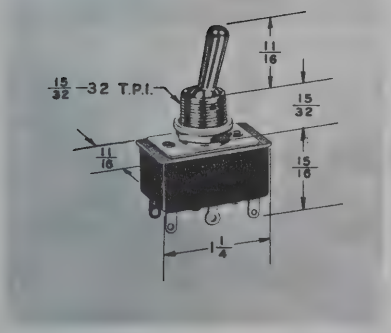
81024-KB

TOGGLE SWITCHES—INTERMEDIATE SIZE

Molded Phenolic Base—Slotted Sleeve (13/32" dia 32 thrds per inch)—One Hex Nut and One Knurled Nut Assembled—Nickel Finish—No Dial (order separately)

Single Pole Single Throw, 2 Circuit, Double Pole Single Throw and Double Pole Double Throw Switches. Ratings—3A 250V, 6A 125V AC-DC.

Single Pole Double Throw Switches. Ratings—1A 250V, 6A 125V AC-DC.

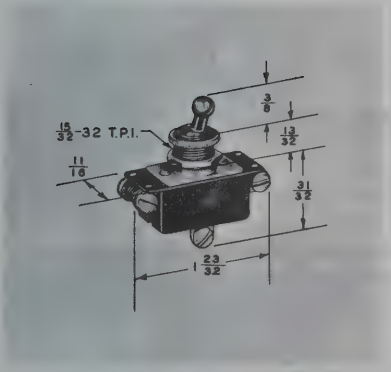


81027-CE

POSITIVE ACTION—2 POSITION—SIDE CONNECTED

Circuit	Sleeve Length	Solder Lugs		6" Wire Leads		Screw Contacts	
		Ball Lever	Bat Lever	Ball Lever	Bat Lever	Ball Lever	Bat Lever
SPST	13/32"	81015-U	81015-F	81016-S	81016-R		81017-N
SPST	15/32"	81015-M	81015-K	81016-F	81016-Y		81017-JA
SPST	3/4"						81017-L
SPST	1"	81015-N	81015-AY		81016-XA	81017-FA	
SPDT	13/32"	81021-P	81021-F			81023-J	
SPDT	15/32"	81021-G	81021-AT	*81022-J		81023-HA	81023-M
SPDT	3/4"	81021-RA					
SPDT	1"	81021-H	81021-HA	*81022-H			
2 Cir	13/32"	81018-M					81020-H
2 Cir	15/32"	81018-F	81018-H		81019-AE		81020-GA
2 Cir	1"		81018-HA			81020-E	
DPST	13/32"	81024-G	81024-F	81025-AB		81026-U	81026-K
DPST	15/32"	81024-K	81024-KB	81025-U	81025-UA	81026-B	81026-C
DPST	3/4"		81024-E				81026-JA
DPST	1"	81024-BF	81024-CG			81026-H	81026-M
DPDT	13/32"	81027-G	81027-F		*81028-C	81029-S	81029-K
DPDT	15/32"	81027-M	81027-CB		*81028-N		81029-Q
DPDT	3/4"	81027-BT	81027-DX				81029-AD
DPDT	1"	81027-N	81027-DK				81029-HA

*Wire leads in end contacts only, solder lugs on bottom.



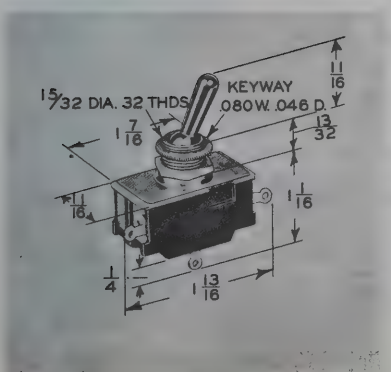
81029-S

POSITIVE ACTION—2 POSITION—BACK CONNECTED

Circuit	Sleeve Length	Solder Lugs		Circuit	Sleeve Length	Solder Lugs	
		Ball Lever	Bat Lever			Ball Lever	Bat Lever
SPST	13/32"	81015-BH	81015-BP	DPST	13/32"	81024-BA	81024-BP
SPST	15/32"	81015-AF	81015-AW	DPST	15/32"	81024-GH	81024-GB
SPST	1"	81015-AV	81015-AX	DPST	3/4"		81024-EA
SPDT	13/32"	81021-AH	81021-BP	DPDT	13/32"	81027-BM	81027-CH
SPDT	15/32"	81021-AF	81021-AV	DPDT	15/32"	81027-AZ	81027-CE
SPDT	1"	81021-AX	81021-AW	DPDT	3/4"		81027-EA
2 Cir	13/32"		81018-BP	DPDT	1"	81027-FW	81027-CN
2 Cir	15/32"	81018-JA	81018-J				

MOMENTARY ACTION—2 POSITION—BACK CONNECTED

Circuit	Sleeve Length	Solder Lugs & Bat Lever
SPST	15/32"	Normally OPEN 81045-FB
DPST	15/32"	Normally OPEN 81054-H
SPDT	15/32"	81051-G
DPDT	15/32"	81057-N



82022-CD

TOGGLE SWITCHES—INTERMEDIATE SIZE—3 POSITION—CENTER OFF

Molded Phenolic Base—Slotted Sleeve (15/32" dia 32 thrds per inch)—One Hex Nut and One Knurled Nut Assembled—Nickel Finish—No Dial—Connections ON-OFF-ON

Ratings—3A 250V, 6A 125V AC-DC

POSITIVE ACTION ONLY

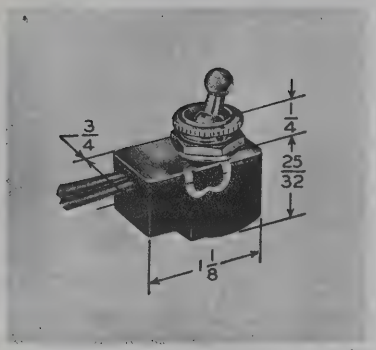
Circuit	Sleeve Length	Solder Lugs		Screw Terminals	
		Ball Lever	Bat Lever	Ball Lever	Bat Lever
SPDT	11/32"	82022	82022-D	82012	82012-D
SPDT	13/32"	82022-C	82022-CD	82012-C	82012-CD
SPDT	15/32"	82022-H	82022-HD	82012-H	82012-HD
2 Cir	11/32"	82021	82021-D	82011	82011-D
2 Cir	13/32"	82021-C	82021-CD	82011-C	82011-CD
2 Cir	15/32"	82021-H	82021-HD	82011-H	82011-HD
DPDT	11/32"	82024	82024-D	82014	82014-D
DPDT	13/32"	82024-C	82024-CD	82014-C	82014-CD
DPDT	15/32"	82024-H	82024-HD	82014-H	82014-HD

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TOGGLE SWITCHES

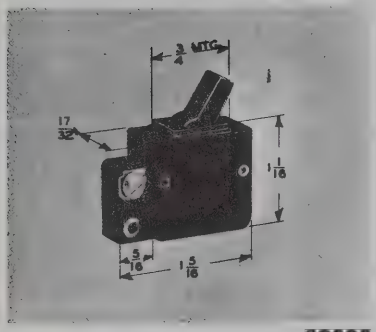


80560 80591

TOGGLE SWITCH—MEDIUM SIZE—S.P.—QUICK MAKE AND BREAK

Molded phenolic base—*wire leads only*—slotted sleeve (15/32" dia., 32 threads per inch)—one hex nut, one knurled nut—nickel finish—no dial

Rating	Circuit	Sleeve Length	Ball Lever	Bat Lever
3A 250V 6A 125V AC-DC	SPST	1/4"	80560	80560-D
		15/32"	80560-H	80560-HD
4A 250V 8A 125V AC-DC	SPST	1/4"	80591	80591-D
		15/32"	80591-H	80591-HD



80323

TOGGLE SWITCHES—MEDIUM SIZE SINGLE POLE—QUICK MAKE AND BREAK

Molded Phenolic Base—Screw Terminals Only—Flush Mounting (Square Lever) OR Single Hole (Ball Lever)—No Dial—Nickel Finish

POSITIVE ACTION

Ratings	Circuit	Type Mounting	Catalog Number
5A 250V:10A 125V T ¾ HP 240V AC ½ HP 250V DC	SPST	Flush Square Lever	80323
	SPST	*Single Hole Ball Lever	80323-B

*One Hex Nut Assembled and One Knurled Nut in Bulk.



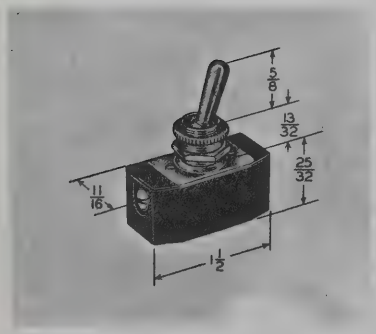
80323-B

TOGGLE SWITCH—MEDIUM SIZE—QUICK MAKE AND BREAK—SINGLE POLE ONLY

Molded Base—Slotted Sleeve (15/32" dia., 32 threads per inch)—One Hex Nut—One Knurled Nut—(No Dial)

SLEEVE LENGTH 13/32"

4A 250V, 8A 125 V		5A 250V, 10A 125V
Bat Lever	Terminals	Bat Lever
82969	Screw	82540
82970	Wire Lead	82542
82971	Quick Connect	82763



82540

TOGGLE SWITCHES—STANDARD DUTY—QUICK MAKE AND BREAK

Molded Phenolic Base—Slotted Sleeve (15/32" dia., 32 threads per inch)—One Hex Nut and One Knurled Nut Assembled—No Dial—Nickel Finish

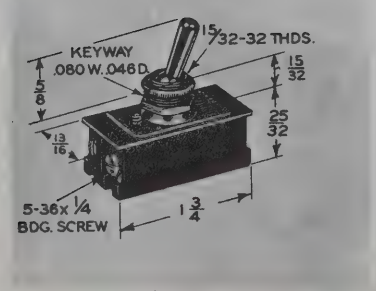
Single Pole Single Throw and Single Pole Double Throw Switches. Ratings—6A 250V, 12A 125V AC-DC

2 Circuit Switches. Ratings—3A 250V, 6A 125V AC-DC

Double Pole Single Throw Switches. Ratings—8A 250V, 16A 125V, 1 HP 125, 250V AC-DC

POSITIVE ACTION

Circuit	Sleeve Length	SCREW TERMINALS Ball Lever	SCREW TERMINALS Bat Lever	Circuit	Sleeve Length	SCREW TERMINALS Ball Lever	SCREW TERMINALS Bat Lever
SPST	5/16"	80607		2 Cir	5/16"	80605	80605-EA
SPST	15/32"	80607-B	80607-BJ	2 Cir	15/32"	80605-B	
SPDT	5/16"	80618	80618-D	DPST	5/16"	80600	80600-D
SPDT	15/32"	80618-A	80618-K	DPST	15/32"	80600-B	80600-BJ

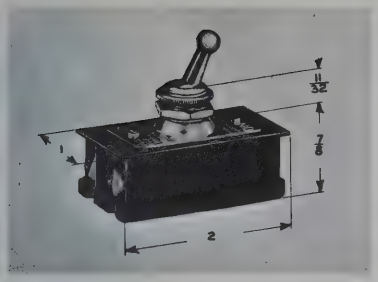


80600-BJ

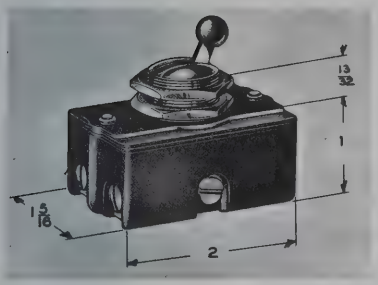
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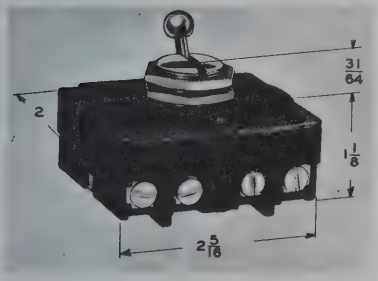
TOGGLE SWITCHES



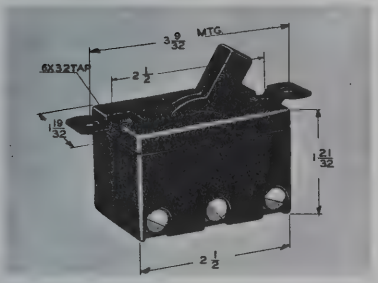
80602



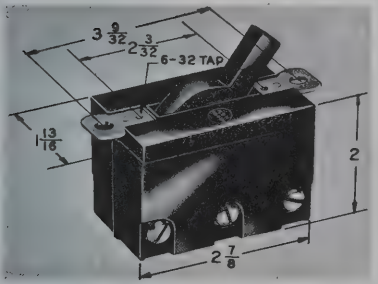
80638-D



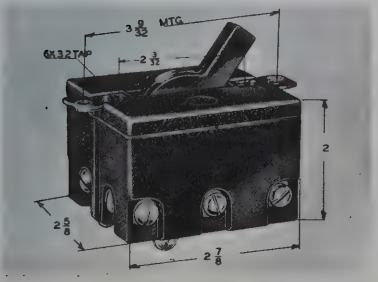
80985



80634



80988



80899

TOGGLE SWITCHES—HEAVY DUTY

Molded Phenolic Base—Slotted Sleeve (1⅝2" dia 32 thrds per inch)—One Hex Nut and One Knurled Nut Assembled—No Dial—Nickel Finish
Single Pole Single Throw and Single Pole Double Throw Switches. Ratings—10A 250V, 15A 125V AC-DC
2 Circuit Switches. Ratings—6A 250V, 12A 125V AC-DC
Double Pole Single Throw Switches. Ratings—10A 250V, 15A 125V AC-DC, 1½ HP 125, 250V AC-DC

POSITIVE ACTION

Circuit	Sleeve Length	Screw Terminals		Circuit	Sleeve Length	Screw Terminals	
		Ball Lever	Bat Lever			Ball Lever	Bat Lever
SPST	1½2"	80601	80601-J	**2 Cir**	1½2"	81903	
SPST	1⅝2"	80601-B	80601-BD	**2 Cir**	1⅝2"	81903-C	
SPDT	1½2"	80609	80609-G	**DPST**	1½2"	80602	80602-M
SPDT	1⅝2"	80609-C	80609-CA	**DPST**	1⅝2"	80602-C	80602-CA

TOGGLE SWITCHES—EXTRA HEAVY DUTY—3 POSITION—POSITIVE CENTER OFF

Molded Phenolic Base—Screw Terminals Only—Slotted Sleeve (¾" dia 32 thrds per inch)—Supplied with Two Hex Nuts—Nickel Finish

80638 TYPE 1, 2, 3 AND 4 POLES

Circuit		2 Position ST—OFF-ON DT—ON-ON	3 Position ON-OFF-ON Positive OFF in Center	3 Position ON-OFF-ON OFF in Center NOT Positive
SPST	5A 250V	**80749		
SPDT	10A 125V	*81905	*80766	*81589
DPST	¾ HP 250V AC-DC	*80745		
DPDT		80976	80638-D	80870
	5A 250V			
3PST	10A 125V	80887		
3PDT	½ HP 115/230V AC	*80952	80983	81524
	3 Phase			
	5A 250V			
4PST	10A 125V	80889		
4PDT	½ HP 115/230V AC	*80950	80985	81563
	2 Phase			

*5A 250V AC-DC, 10A 125V AC-DC
**2A 250V AC-DC, 5A 125V, ½ HP 115V AC

TOGGLE SWITCHES—EXTRA HEAVY DUTY

80634 TYPE 1 AND 2 POLES, SQUARE LEVER

Circuit		2 Position ST—OFF-ON DT—ON-ON	3 Position ON-OFF-ON Positive OFF in Center	3 Position ON-OFF-ON OFF in Center NOT Positive
SPST	10A 250V	80824		
SPDT	20A 125V	80909	80799	
DPST	AC-DC	80825		
	10A 250V AC-DC	80975	80634	80813
	20A 125V AC-DC			
DPDT	5A 600V AC-DC			
	1½ HP 250V DC			
	2 HP 230V AC			

80797 TYPE 1, 2, 3 AND 4 POLES, SQUARE LEVER

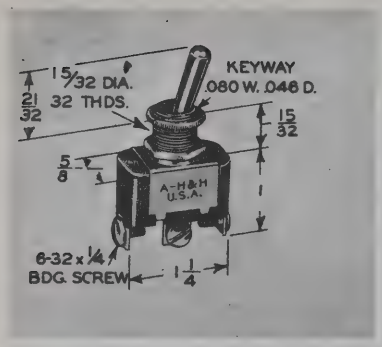
Circuit		2 Position ST—OFF-ON DT—ON-ON	3 Position ON-OFF-ON Positive OFF in Center	3 Position ON-OFF-ON OFF in Center NOT Positive
SPDT		81395	81392	81527
DPST		81394		
DPDT	20A 250V	81869	80988	81526
3PST	30A 125V	81393		
3PDT	AC-DC	80891	80898	81525
4PST		81328		
4PDT		80999	80899	81528

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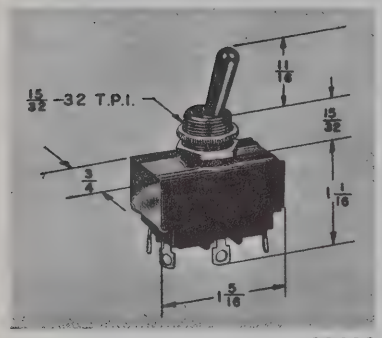
TOGGLE SWITCHES



82602

TOGGLE SWITCHES—SLOW MAKE AND BREAK UTILITY SIZE

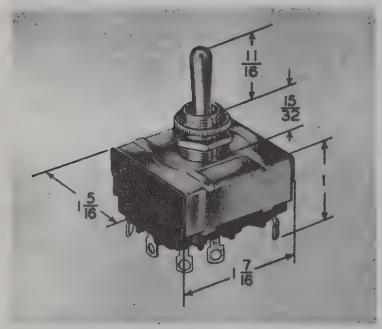
Molded Phenolic Base—Bat Lever—2 and 3 Position—Slotted Sleeve (15/32" dia. 32 threads per inch)—One Hex Nut and One Knurled Nut and Terminal Screws Supplied in Bulk—No Dial—Nickel Finish (Aluminum Sleeve, Lever and Nuts on 6A Type)
The same switch with identical physical characteristics is available in two separate electrical ratings.



82609

POSITIVE ACTION
ALL SLEEVES 15/32" LONG

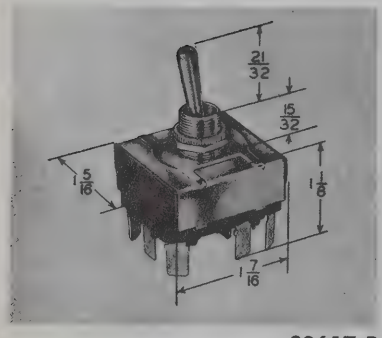
	†10A 250V AC 15A 125V AC ¾ HP 120-240V AC		††3A 250V AC 6A 125V AC ⅛ HP 120-240V AC	
	SPST 2 Position (ON-OFF)		**DPST 2 Position (ON-OFF)**	
	†	††	†	††
Screw Terminals	82600	83000	82606	83024
Solder Lug	82601	83001	82607	83025
Quick Connect	82601-P	83002	82607-P	83026
	SPDT 3 Position (ON-OFF-ON)		**DPDT 3 Position (ON-OFF-ON)**	
	†	††	†	††
Screw Terminals	82602	83003	82608	83027
Solder Lug	82603	83004	82609	83028
Quick Connect	82603-P	83005	82609-P	83029
	SPDT 2 Position (ON-ON)		**DPDT 2 Position (ON-ON)**	
	†	††	†	††
Screw Terminals	82604	83006	82610	83030
Solder Lug	82605	83007	82611	83031
Quick Connect	82605-P	83008	82611-P	83032



82615

MOMENTARY ACTION

	2 Position ON-OFF (Normally OPEN)			
	† SPST	††	† DPST	††
Screw Terminals	82720	83009	82730	83036
Solder Lug	82721	83010	82731	83037
Quick Connect	82721-P	83011	82731-P	83038
	3 Position ON-OFF-ON (Center OPEN Momentary CLOSED Each End)			
	† SPDT	††	† DPDT	††
Screw Terminals	82726	83021	82736	83045
Solder Lug	82727	83022	82737	83046
Quick Connect	82727-P	83023	82737-P	83047
	2 Position ON-ON (Normally CLOSED Momentary CLOSED Opposite End)			
	† SPDT	††	† DPDT	††
Screw Terminals	82728	83015	82738	83039
Solder Lug	82729	83016	82739	83040
Quick Connect	82729-P	83017	82739-P	83041



82617-P

TOGGLE SWITCH—SLOW MAKE AND BREAK—3 AND 4 POLE

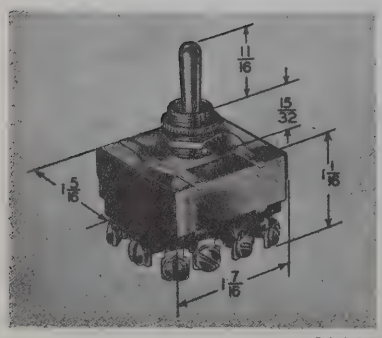
Molded phenolic base—Bat Lever—2 and 3 positions—slotted sleeve (15/32" dia. 32 threads per inch)—One hex nut and one knurled nut and terminal screws supplied in bulk—no dial—nickel finish.

POSITIVE ACTION
ALL SLEEVES 15/32" LONG

3 POLE SWITCH
10 A 250V AC
15 A 125 V AC
1 HP 1-2-3 PHASE 125V AC

4 POLE SWITCH
10 A 250V AC
½ HP 115—230V AC

2 position (ON—NONE—OFF)			3 position (ON—OFF—ON)			2 position (ON—NONE—ON)		
	3PST	4PST		3PDT	4PDT		3PDT	4PDT
Screw	82612	82631	Screw	82614	82633	Screw	82616	82635
Solder	82613	82632	Solder	82615	82634	Solder	82617	82636
Quick Connect	82613-P	82632-P	Quick Connect	82615-P	82634-P	Quick Connect	82617-P	82636-P



82633

MOMENTARY ACTION

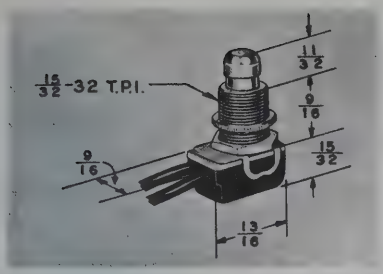
2 position (Normally OFF—NONE—Momentary ON)			2 position (Normally ON—NONE—Momentary OFF)		
	3PST	4PST		3PST	4PST
Screw	82618	82637	Screw	82620	82639
Solder	82619	82638	Solder	82621	82640
Quick Connect	82619-P	82638-P	Quick Connect	82621-P	82640-P
3 position (ON—OFF—Momentary ON)			**3 position (Momentary ON—OFF—Momentary ON)**		
	3PDT	4PDT		3PDT	4PDT
Screw	82622	82641	Screw	82624	82643
Solder	82623	82642	Solder	82625	82644
Quick Connect	82623-P	82642-P	Quick Connect	82625-P	82644-P

2 position (ON—NONE—Momentary ON)		
	3PDT	4PDT
Screw	82626	82645
Solder	82627	82646
Quick Connect	82627-P	82646-P

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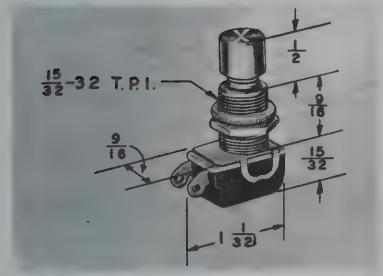
ARR 5

MOMENTARY PUSH SWITCHES



80512

MOMENTARY PUSH SWITCHES—SLOW MAKE AND BREAK MIDGET SIZE



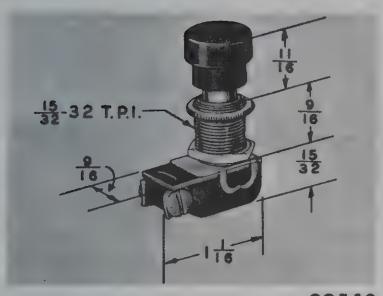
80511-CE

Molded Phenolic Base—Slotted Sleeve (1⅝2" dia., 32 threads per inch, 9/16" long)—One Hex Nut and One Knurled Nut Assembled—Sleeve, Nuts and Standard Metal Button are Aluminum—Concave Button Brass Nickel Finish

Single Pole Single Throw and 2-Circuit

Ratings—3A 120V AC., 1/10 HP 120V AC

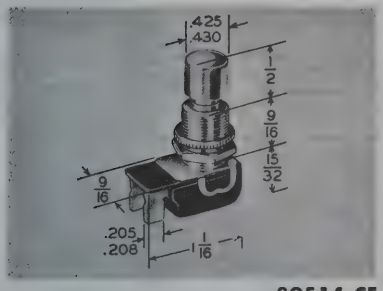
	Standard Metal Button	Concave Metal Button	Phenolic Snap-on Button	
			Black	Red
		SPST Normally CLOSED		
Solder Lug	80511	80511-C	80541	80541-R
Wire Leads	80512	80512-C	80542	80542-R
Screw Terminals	80513	80513-C	80543	80543-R
Quick Connect	80514	80514-C	80544	80544-R
		SPST Normally OPEN		
Solder Lug	80511-E	80511-CE	80541-E	80541-ER
Wire Lead	80512-E	80512-CE	80542-E	80542-ER
Screw Terminals	80513-E	80513-CE	80543-E	80543-ER
Quick Connect	80514-E	80514-CE	80544-E	80544-ER
		2-Circuit		
Solder Lug	82931	82931-C	82935	82935-R
Wire Lead	82932	82932-C	82936	82936-R
Screw Terminals	82933	82933-C	82937	82937-R
Quick Connect	82934	82934-C	82938	82938-R



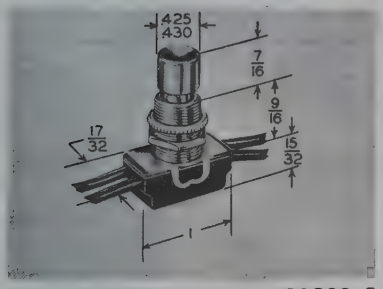
80543

Similar to above except rated 3A 250V AC, ¼ HP 240V AC and Current Carrying Parts Coin Silver

		SPST Normally CLOSED		
Solder Lug	82791	82791-C	82795	82795-R
Wire Leads	82792	82792-C	82796	82796-R
Screw Terminals	82793	82793-C	82797	82797-R
Quick Connect	82794	82794-C	82798	82798-R
		SPST Normally OPEN		
Solder Lug	82791-E	82791-CE	82795-E	82795-ER
Wire Leads	82792-E	82792-CE	82796-E	82796-ER
Screw Terminals	82793-E	82793-CE	82797-E	82797-ER
Quick Connect	82794-E	82794-CE	82798-E	82798-ER



80514-CE



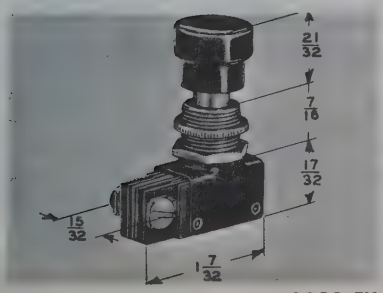
82932-C

MOMENTARY PUSH SWITCHES—SLOW MAKE AND BREAK CANOPY SIZE

Laminated Phenolic Sections—Slotted Sleeve (1⅝2" dia., 32 threads per inch)—One Hex Nut and One Knurled Nut Assembled—Nickel Finish

Single Pole Single Throw and 2 Circuit Switches. Rating—1A 125V AC

Circuit	Sleeve Length	SOLDER LUGS		6" WIRE LEADS		SCREW TERMINALS	
		Plain Top on Button	Snap-on Button	Plain Top on Button	Snap-on Button	Plain Top on Button	Snap-on Button
			Normally OPEN				
SPST	7/16"	3391-BR	* 3391-EG	3391-HW			* 3391-FU
SPST	9/16"	3391-E	* 3391-GL	3391-EV	* 3391-TE	3391-ET	* 3391-TH
			Normally CLOSED				
SPST	7/16"		* 3391-CJ				* 3391-JN
SPST	9/16"	3391	* 3391-GJ	3391-A	* 3391-JT	3391-CS	
2 Cir	7/16"	3392-E	* 3392-A				* 3392-AP
2 Cir	9/16"	3392	* 3392-AE			3392-M	* 3392-MA



3391-FU

*When ordering, specify color desired—Black or Red Snap-on Buttons are standard.

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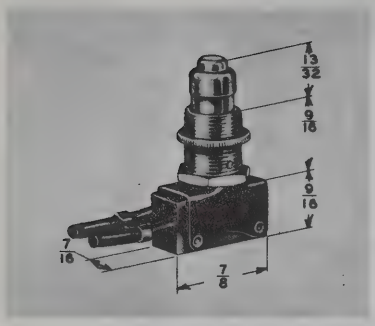
ARR 6

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MOMENTARY PUSH SWITCHES

ARROW AH HART

MOMENTARY PUSH SWITCHES—QUICK MAKE AND BREAK CANOPY TYPE



3591

Laminated Phenolic Sections—Slotted Sleeve (1⅜₂" dia 32 thrds per inch)—One Hex Nut and One Knurled Nut Assembled—Nickel Finish

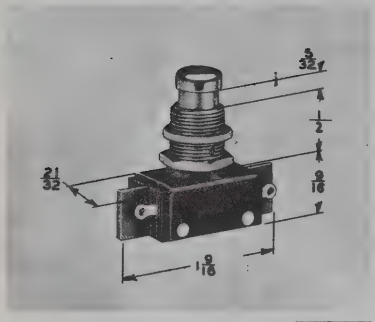
Single Pole Single Throw Switches. Rating—3A 250V AC-DC

Single Pole Double Throw, 2 Circuit, Double Pole Single Throw and Double Pole Double Throw Switches. Ratings—1A 250V, 3A 125V AC-DC

		SOLDER LUGS			6" WIRE LEADS			SCREW TERMINALS		
Circuit	Sleeve Length	Plain Top on Button	Overthrow Top on Button	* Snap-on Button	Plain Top on Button	Overthrow Top on Button	* Snap-on Button	Plain Top on Button	Overthrow Top on Button	* Snap-on Button
					Normally OPEN					
SPST	½"	3592-D			3591-N			3593-C		
SPST	9/16"		3592	*3592-K		3591	*3591-BN		3593	*3593-F
DPST	½"	3594-D			3594-DN			3594-DP		
DPST	9/16"	3594-DT	3594-M	*3594-Q		3594	*3594-N		3594-DS	*3594-QD
					Normally CLOSED					
SPST	½"	3592-E			3591-AG			3593-D		
SPST	9/16"		3592-C	*3592-CP		3591-H	*3591-CQ		3593-A	*3593-G
SPDT	½"	3595			3595-J			3595-E		
SPDT	9/16"		3595-D	*3595-C						
2 Cir	½"	3596						3596-H		
2 Cir	9/16"		3596-D	*3596-BC		3596-A				*3596-AD
DPST	½"	3594-DA			3594-G			3594-DQ		
DPST	9/16"		3594-P	*3594-PA		3594-Z			3594-DW	
DPDT	½"	3599-E								
DPDT	9/16"	3599-ED	3599	*3599-GF						**3599-N

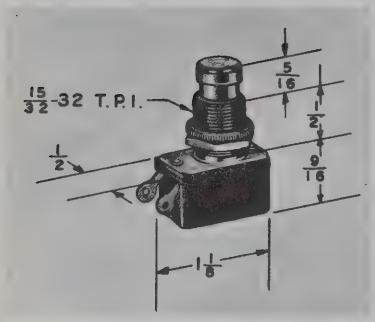
*When ordering specify color desired—Black or Red Snap-on Buttons are standard.

**Wire Leads, or Binding Screws, in end terminals only—Solder Lugs on bottom.



3594-D

MOMENTARY PUSH SWITCHES—MIDGET SIZE



81826-E

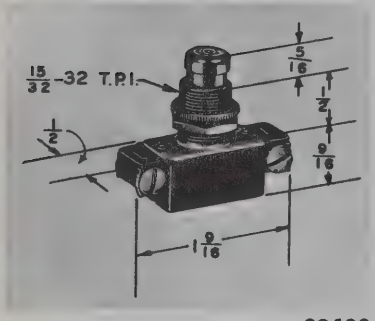
Molded Phenolic Base—Slotted Sleeve (1⅜₂" dia 32 thrds per inch)—One Hex Nut and One Knurled Nut Assembled—Nickel Finish

Single Pole Single Throw Switches—Ratings—3A 250V 6A 125V

Single Pole Double Throw and 2 Circuit Switches—Ratings—1A 250V 6A 125V

Circuit	Sleeve Length	Solder Lugs	6" Wire Leads	Screw Terminals
SPST	½"	81826-E (Normally OFF)	81826-F (Normally OFF)	81826-G (Normally OFF)
SPDT	½"	82428	82429	82430
2 Cir	½"	82431	82432	82433

MOMENTARY PUSH SWITCHES—INTERMEDIATE SIZE



82433

Molded Phenolic Base—Slotted Sleeve (1⅜₂" dia 32 thrds per inch)—One Hex Nut and One Knurled Nut Assembled—Nickel Finish

Single Pole Single Throw, 2 Circuit, Double Pole Single Throw and Double Pole Double Throw Switches—3A 250V and 6A 125V AC-DC

Single Pole Double Throw Switches—Ratings—1A 250V, 6A 125V AC-DC

SIDE CONNECTED CONTACTS

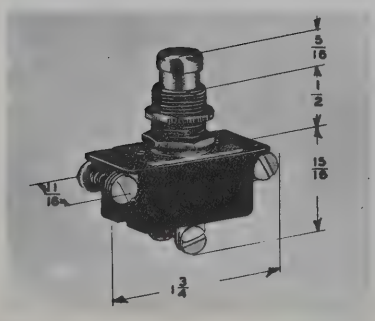
		SOLDER LUGS			6" WIRE LEADS			SCREW TERMINALS		
Circuit	Sleeve Length	Plain Top On Button	Overthrow Button	**Snap-on Button	Plain Top On Button	Overthrow Button	**Snap-on Button	Plain Top On Button	Overthrow Button	**Snap-on Button
					Normally OPEN					
SPST	½"	81075			81076			81077		
SPST	9/16"	81075-BK	81075-B			81076-B			81077-B	
DPST	½"	81084		81084-J	81085		81085-D	81086		81086-SNB
DPST	9/16"								81086-B	
					Normally CLOSED					
SPST	½"	81075-A		81075-S	81076-A			81077-A		81077-SNB
SPDT	½"	81081		81081-D	*81082			81083		
SPDT	9/16"		81081-B							
2 Cir	½"	81078		81078-C	81079			81080		81080-D
2 Cir	9/16"		81078-B							
DPST	½"	81084-A			81085-A		81085-E	81086-A		
DPDT	½"	81087		81087-CA	*81088		*81088-CA	81089		
DPDT	9/16"		81087-B			*81088-B			81089-B	

*Wire Leads in end contacts only—Solder Lugs on bottom. **Specify color when ordering—Black or Red Snap-on Buttons are standard.

BACK CONNECTED CONTACTS

SOLDER LUGS (Normally OPEN)					SOLDER LUGS (Normally CLOSED)				
Circuit	Sleeve Length	Plain Top On Button	Overthrow Button	**Snap-on Button	Circuit	Sleeve Length	Plain Top On Button	Overthrow Button	**Snap-on Button
SPST	½"	81075-Q		81075-BP	SPST	½"	81075-QA		81075-BQ
SPST	9/16"		81075-BE		SPDT	½"	81081-G		
DPST	½"	81084-G		81084-R	2 Cir	½"	81078-E		81078-CB
					DPDT	½"	81087-J		81087-CH
					DPDT	9/16"	81087-BG	81087-BD	

**Specify color when ordering—Black or Red Snap-on Buttons are standard.

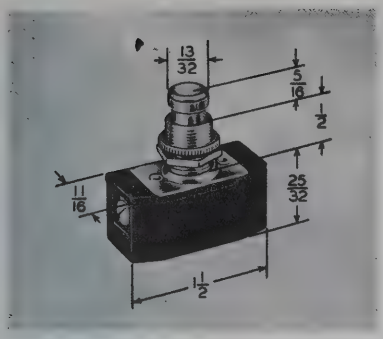


81089

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ARR 7

MOMENTARY PUSH SWITCHES



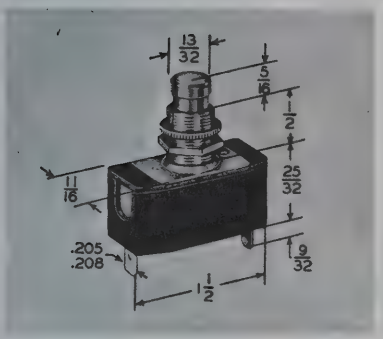
82546

MOMENTARY PUSH SWITCH—SINGLE POLE

Molded Phenolic Base—Slotted Sleeve (13/32" dia., 32 threads per inch)—One Hex Nut and One Knurled Nut—Nickel Finish
4A 250V, 8A 125V AC-DC

Type Button	Sleeve Length	Screw Term.	Wire Lead	Quick Connect
		Normally OPEN		
Plain Top	½"	82383	82385	82384
Overthrow	9/16"	82383-B	82385-B	82384-B
**Snap-On	½"	82383-C	82385-C	82384-C
		Normally CLOSED		
Plain Top	½"	82383-A	82385-A	82384-A
Overthrow	9/16"	82383-BA	82385-BA	82384-BA
**Snap-On	½"	82383-CA	82385-CA	82384-CA

**Specify color when ordering—Black or Red Snap-on Buttons are standard.

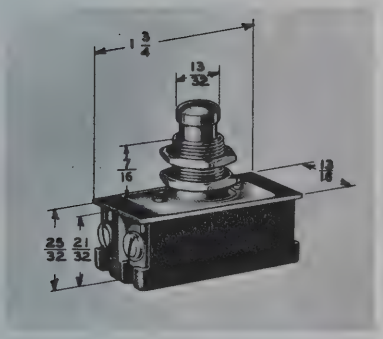


82384

5A 250V, 10 A 125V AC-DC

		Normally OPEN		
Plain Top	½"	82546	82548	82547
Overthrow	9/16"	82546-B	82548-B	82547-BA
**Snap-On	½"	82546-C	82548-C	82547-C
		Normally CLOSED		
Plain Top	½"	82546-A	82548-A	82547-A
Overthrow	9/16"	82546-BA	82548-BA	82547-B
**Snap-On	½"	82546-CA	82548-CA	82547-CA

**Specify color when ordering—Black or Red Snap-on Buttons are standard.



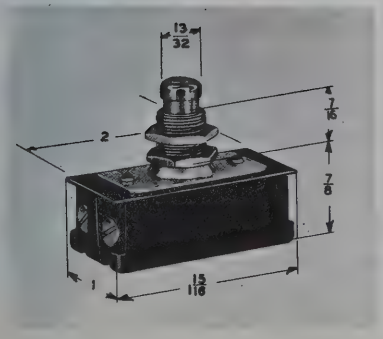
80630

MOMENTARY PUSH SWITCHES—STANDARD DUTY

Molded Phenolic Base—Slotted Sleeve (13/32" dia., 32 threads per inch)—Two Hex Nuts Assembled—Nickel Finish
Single Pole Single Throw and Single Pole Double Throw Switches—Ratings—6A 250V, 12A 125V AC-DC
2 Circuit Switches—Ratings 3A 250V, 6A 125V AC-DC
Double Pole Single Throw Switches—Ratings—6A 250V, 12A 125V, 1 HP 125, 250V AC-DC

SCREW TERMINALS (Normally OPEN)					SCREW TERMINALS (Normally CLOSED)				
Circuit	Sleeve Length	Plain Top On Button	Overthrow Button	**Snap-on Button	Circuit	Sleeve Length	Plain Top On Button	Overthrow Button	**Snap-on Button
SPST	7/16"	80631		80631-F	SPST	7/16"	80631-A		80631-AF
SPST	½"		80631-B		SPDT	7/16"	80979		80979-F
DPST	7/16"	80630			SPDT	½"		80979-B	
DPST	½"		80630-C		2 Cir	7/16"	82184		
					DPST	7/16"	80630-A		
					DPST	½"		80630-AB	

**Specify color when ordering—Black or Red Snap-on Buttons are standard.



80938

MOMENTARY PUSH SWITCHES—HEAVY DUTY

Molded Phenolic Base—Slotted (13/32" dia., 32 threads per inch)—Two Hex Nuts Assembled—Nickel Finish
Single Pole Single Throw and Single Pole Double Throw Switches—Ratings—10A 250V, 15A 125 V AC-DC
2 Circuit Switches—Ratings—6A 250V, 12A 125V AC-DC
Double Pole Single Throw Switches—Ratings—10A 250V, 15A 125V AC-DC, 1 HP 240V AC, 1½ HP 125, 250V AC-DC

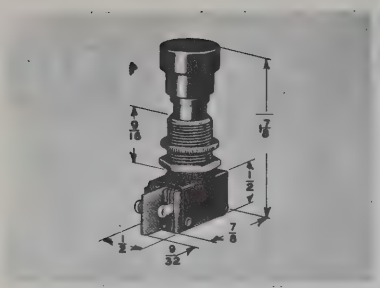
SCREW TERMINALS (Normally OPEN)					SCREW TERMINALS (Normally CLOSED)				
Circuit	Sleeve Length	Plain Top On Button	Overthrow Button	**Snap-on Button	Circuit	Sleeve Length	Plain Top On Button	Overthrow Button	**Snap-on Button
SPST	7/16"	82194			SPST	7/16"	82194-A		
DPST	7/16"	80938		80938-H	SPDT	7/16"	82197		
DPST	½"		80938-B		2 Cir	7/16"	82196		
					DPST	½"		80938-C	

**Specify color when ordering—Black or Red Snap-on Buttons are standard.

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DOUBLE ACTION PUSH SWITCHES



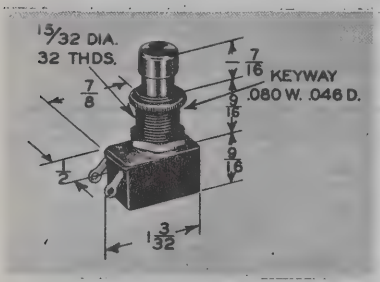
80710-C

DOUBLE ACTION PUSH SWITCHES—CANOPY TYPE

Laminated Phenolic Sections—Slotted Sleeve (15/32" dia 32 thrds per inch)—One Hex Nut and One Knurled Nut Assembled—Nickel Finish
Single Pole Single Throw Switches. Rating—3A 250V AC-DC
Single Pole Double Throw, 2 Circuit, Double Pole Single Throw, and Double Pole Double Throw Switches. Ratings—1A 250V, 3A 125V AC-DC

Circuit	Sleeve Length	SOLDER LUGS Plain Top on Button	SOLDER LUGS **Snap-on Button	6" WIRE LEADS Plain Top on Button	6" WIRE LEADS **Snap-on Button	SCREW TERMINALS Plain Top on Button	SCREW TERMINALS **Snap-on Button
SPST	5/16"	80710	80710-C	80721	80721-C	80726	80726-C
SPDT	5/16"	80711	80711-C	80722	80722-C	80727	80727-C
2 Cir	5/16"	80712	80712-C	80723	80723-C	80728	80728-C
DPST	5/16"	80713	80713-C	80724	80724-C	80729	80729-C
DPDT	5/16"	80714	80714-C	*80725	*80725-C	*80730	*80730-C

*Wire leads or terminal screws in end contacts only—solder lugs on bottom.
**When ordering specify color—Black or Red snap-on buttons are standard.



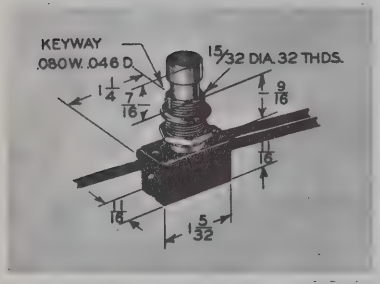
82403

DOUBLE ACTION PUSH SWITCHES—MIDGET SIZE

Molded Phenolic Base—Slotted Sleeve (15/32" dia 32 thrds per inch x 5/16" lg)—One Hex Nut and One Knurled Nut Assembled—Nickel Finish
Single Pole Single Throw Switches. Ratings—3A 250V, 6A 125V.
2 Circuit and Single Pole Double Throw Switches. Ratings—1A 250V, 6A 125V

Circuit	Sleeve Length	SOLDER LUGS Plain Top on Button	SOLDER LUGS **Snap-on Button	6" WIRE LEADS Plain Top on Button	6" WIRE LEADS **Snap-on Button	SCREW TERMINALS Plain Top on Button	SCREW TERMINALS **Snap-on Button
SPST	5/16"	82403	82403-C	82404		82405	
2 Cir	5/16"	82425		82426		82427	
SPDT	5/16"	82422		82423		82424	

**When ordering specify color—Black or Red snap-on buttons are standard.



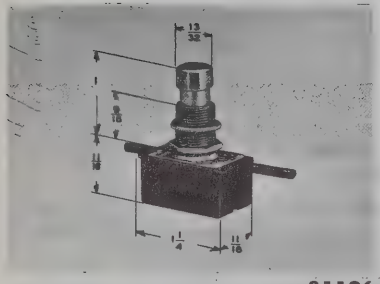
82423

DOUBLE ACTION PUSH SWITCHES—INTERMEDIATE SIZE

Molded Phenolic Base—Slotted Sleeve (15/32" dia 32 thrds per inch)—One Hex Nut and One Knurled Nut Assembled—Nickel Finish
Single Pole Single Throw, 2 Circuit, Double Pole Single Throw and Double Pole Double Throw Switches. Ratings—3A 250V, 6A 125V AC-DC
Single Pole Double Throw Switches. Ratings—1A, 250V, 6A 125V AC-DC

Circuit	Sleeve Length	SOLDER LUGS Plain Top on Button	SOLDER LUGS **Snap-on Button	6" WIRE LEADS Plain Top on Button	6" WIRE LEADS **Snap-on Button	SCREW TERMINALS Plain Top on Button	SCREW TERMINALS **Snap-on Button
SPST	5/16"	81105	81105-C	81106		81107	81107-C
SPDT	5/16"	81111		*81112	*81112-C	81113	81113-C
2 Cir	5/16"	81108		81109		81110	
DPST	5/16"	81114	81114-C	81115		81116	
DPDT	5/16"	81117	81117-D	*81118		81119	

*Wire lead in end contacts only—solder lugs on bottom.
**When ordering specify color—Black or Red snap-on buttons are standard.



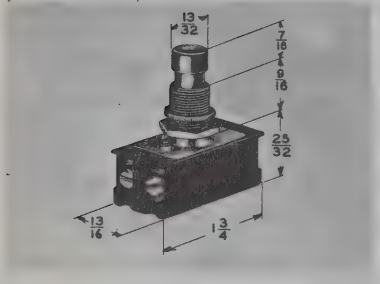
81106

DOUBLE ACTION PUSH SWITCHES—STANDARD DUTY

Molded Phenolic Base—Slotted Sleeve (15/32" dia 32 thrds per inch)—One Hex Nut and One Knurled Nut Assembled—Nickel Finish
Single Pole Single Throw and Single Pole Double Throw Switches. Ratings 6A 250V, 12A 125V AC-DC
2 Circuit Switches. Ratings—3A 250V, 6A 125V
Double Pole Single Throw Switches. Ratings—6A 250V, 12A 125V, 1 HP 125, 250V AC-DC

Circuit	Sleeve Length	SCREW TERMINALS Plain Top on Button	SCREW TERMINALS **Snap-on Button	6" WIRE LEADS Plain Top on Button	6" WIRE LEADS **Snap-on Button
SPST	5/16"	80919		82094	
SPDT	5/16"	81645			
2 Cir	5/16"	82186			
DPST	5/16"	80863	80863-F	82097	

**When ordering specify color—Black or Red snap-on buttons are standard.

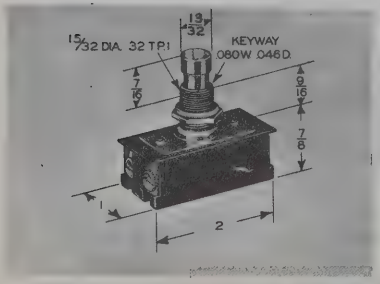


80863

DOUBLE ACTION PUSH SWITCHES—HEAVY DUTY

Molded Phenolic Base—Slotted Sleeve (15/32" dia 32 thrds per inch)—One Hex Nut and One Knurled Nut Assembled—Nickel Finish
Single Pole Single Throw and Single Pole Double Throw Switches. Ratings—10A 250V, 15A 125V AC-DC
2 Circuit Switches. Ratings—6A 250V, 12A 125V AC-DC
Double Pole Single Throw Switches. Ratings—10A 250V, 15A 125V AC-DC, 1½ HP 125, 250V AC-DC

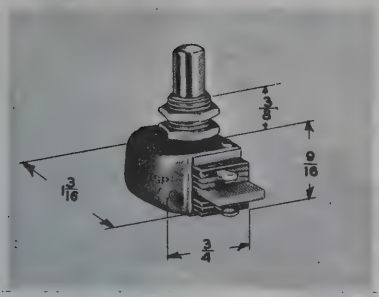
Circuit	Sleeve Length	SCREW TERMINALS Plain Top on Button
SPST	5/16"	81946
SPDT	5/16"	81947
2 Cir	5/16"	81950
DPST	5/16"	81951



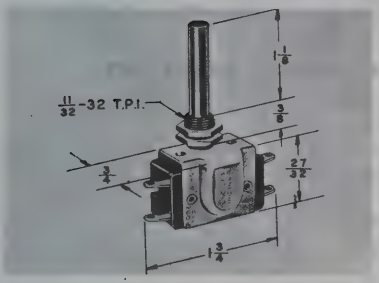
81951

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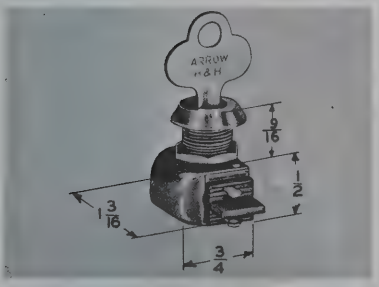
ROTO-POWER
ROTO-POWER LOCK
SLIDE LEVER
SWITCHES



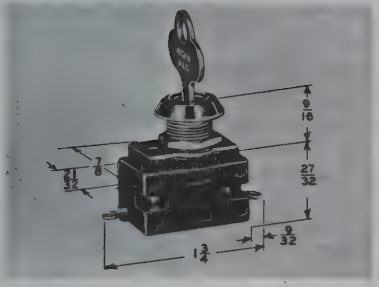
1561-B



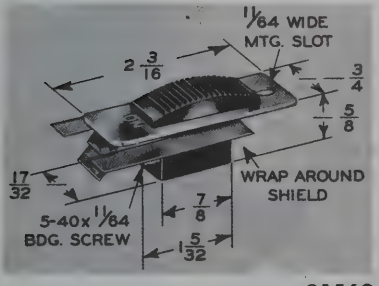
81727-J



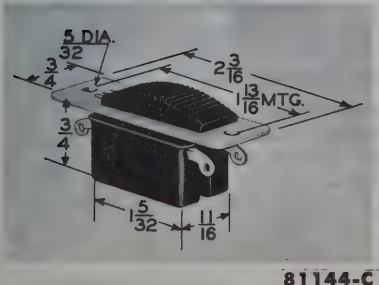
1561-L



81715-L



81569



81144-C

ROTO-POWER—CANOPY TYPE

Laminated Phenolic Sections—Sleeve 1 1/32" dia 32 thrds per inch (not slotted)—Two Hex Nuts Assembled—
Single Pole Single Throw Switches. Rating—3A 250V AC-DC
Single Pole Double Throw, 2 Circuit, Double Pole Single Throw and Double Pole Double Throw Switches. Ratings—1A 250V 3A 125 V. AC-DC

Circuit	Sleeve Length	SOLDER LUGS Spdle projection	SOLDER LUGS Catalog Number
SPST	3/8"	3/8"	1561-B
SPST	3/8"	1 1/8"	1561-BS
SPST	1"	1/2"	1561-GK
SPST	1"	1 1/2"	1561-GZ
SPDT	3/8"	3/8"	1565-B
SPDT	3/8"	1 1/8"	1565-BH
SPDT	1"	1/2"	1565-XC
SPDT	1"	1 1/2"	1565-BE
2 Cir	3/8"	3/8"	1563-B
2 Cir	3/8"	1 1/8"	1563-BM
2 Cir	1"	1/2"	1563-BL
2 Cir	1"	1 1/2"	1563-U
DPST	3/8"	3/8"	1572
DPST	3/8"	1 1/8"	1572-AR
DPST	1"	1/2"	1572-DN
DPST	1"	1 1/2"	1572-AV
DPDT	3/8"	3/8"	1575
DPDT	3/8"	1 1/8"	1575-AG
DPDT	1"	1/2"	1575-VA
DPDT	1"	1 1/2"	1575-V

ROTO-POWER—INTERMEDIATE SIZE

Molded Phenolic Base—Sleeve 1 1/32" dia 32 thrds per inch (not slotted)—Two Hex Nuts Assembled
Single Pole Single Throw, Double Pole Single Throw, Double Pole Double Throw, and 2 Circuit Switches. Ratings—3A 250V, 6A 125 V AC-DC
Single Pole Double Throw Switches. Ratings—1A 250V, 6A 125V AC-DC

Circuit	Sleeve Length	SOLDER LUGS Spdle Projection	SOLDER LUGS Catalog Number
SPST	3/8"	3/8"	81715
SPST	3/4"	1 1/4"	81715-J
SPST	1"	1/2"	81715-TD
SPST	1"	1 1/2"	81715-TN
SPDT	3/4"	3/8"	81721
SPDT	3/4"	1 1/8"	81721-J
SPDT	1"	1/2"	81721-TD
SPDT	1"	1 1/2"	81721-TN
2 Cir	3/4"	3/8"	81718
2 Cir	3/4"	1 1/8"	81718-J
2 Cir	1"	1/2"	81718-TD
2 Cir	1"	1 1/2"	81718-TN
DPST	3/4"	3/8"	81724
DPST	3/4"	1 1/4"	81724-J
DPST	1"	1/2"	81724-TD
DPST	1"	1 1/2"	81724-TN
DPDT	3/4"	3/8"	81727
DPDT	3/4"	1 1/8"	81727-J
DPDT	1"	1/2"	81727-TD
DPDT	1"	1 1/2"	81727-TN

ROTO-POWER—LOCK TYPE (CANOPY)

Laminated Phenolic Sections—Sleeve 1 5/32" dia 32 thrds per inch (not slotted)—One Hex Nut and One Dress Nut Assembled—Nickel Finish
Single Pole Single Throw Switches. Rating—3A 250V AC-DC
Single Pole Double Throw, 2 Circuit, Double Pole Single Throw and Double Pole Double Throw Switches. Ratings—1A 250V, 3A 125V AC-DC

ROTO-POWER—LOCK TYPE (INTERMEDIATE SIZE)

Molded Phenolic Base—1 5/32" dia 32 thrds per inch (not slotted)—One Hex Nut and One Dress Nut Assembled—Nickel Finish
Single Pole Single Throw, 2 Circuit, and Double Pole Double Throw Switches. Ratings—3A 250V, 6 A 125V AC-DC
Single Pole Double Throw Switches. Ratings— 1A 250V, 6A 125V AC-DC

Circuit	Sleeve Length	Solder Lugs	6" Wire Leads	Screw Terminals	Circuit	Sleeve Length	Solder Lugs	6" Wire Leads	Screw Terminals
KEY REMOVABLE IN OFF POSITION ONLY—OPERATE CLOCKWISE FOR ON—USES 1561-488 LOCK KEY									
SPST	1 5/32"	1561-L	1562-L		SPST	1 5/32"	81715-L	81716-L	81717-L
DPST	1 5/32"	1572-L			DPST	1 5/32"	81724-L	81725-L	81726-L
KEY REMOVABLE IN BOTH POSITIONS—USES 1561-487 LOCK KEY									
SPDT	1 5/32"	1565-L	1566-L	1565-LB	SPDT	1 5/32"	81721-L	*81722-L	81723-L
2 Cir	1 5/32"	1563-L			2 Cir	1 5/32"	81718-L	81719-L	81720-L
DPDT	1 5/32"	1575-L			DPDT	1 5/32"	81727-L	*81728-L	*81729-L

*Wire leads or bdg screws in end contacts only—solder lugs on bottom.

SLIDE LEVER MIDGET SIZE

Molded Phenolic Base and lever
Single Pole Single Throw Switches. Ratings—3A 250V AC-DC
81564—Solder Lugs
81565—Wire Leads
81566—Bdg. Screw Contacts
3A 250V, 6A 125V AC-DC
81567—Solder Lugs
81568—Wire Leads
81569—Bdg. Screw Contacts

SLIDE LEVER INTERMEDIATE SIZE

Molded Phenolic Base and Lever
Single Pole Single Throw, 2 Circuit, Double Pole Single Throw, and Double Pole Double Throw Switches. Ratings—3A 250V, 6A 125V AC-DC
Single Pole Double Throw Switches. Ratings—1A 250V, 6A 125V

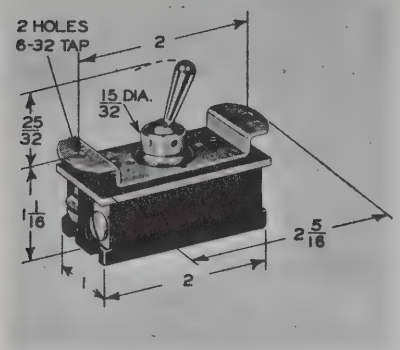
Circuit	Solder Lugs	6" Wire Leads	Screw Terminals
SPST	81135-C		81137-C
SPDT	81141-C		81143-C
2 Cir	81138-C		
DPST	81144-C	81145-C	81146-C
DPDT	81147-C	*81148-C	

*Wire leads in end contacts only—solder lugs on bottom

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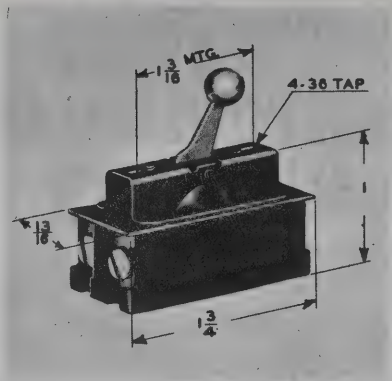
MISCELLANEOUS SWITCHES



FLUSH TOGGLE SWITCH
HEAVY DUTY

Two Screw Mounting—Bat Lever
Double Pole, Single Throw
10 amp—250 volt
15 amp—125 volt
1½ HP 125, 250V AC-DC
(double pole rating)
Nickel Finish

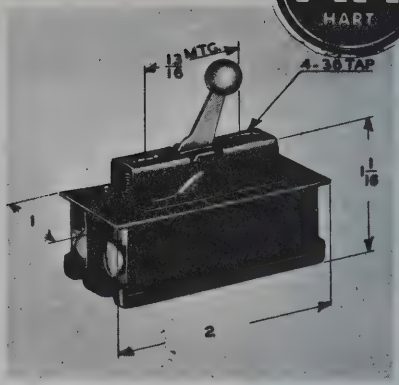
80602-FMC



TOGGLE SWITCH, STANDARD DUTY

Double Pole
Two Screw Mounting
6 amp—250 volt
12 amp—125 volt
1 HP 125, 250V AC-DC
Nickel Finish

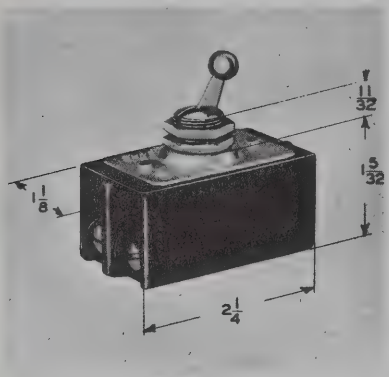
80600-F



TOGGLE SWITCH, HEAVY DUTY

Double Pole
Two Screw Mounting
10 amp—250 volt
15 amp—125 volt
1½ HP 125, 250V AC-DC
Nickel Finish

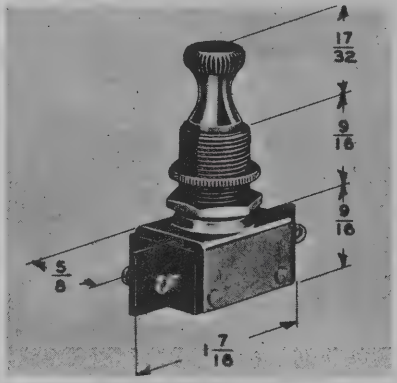
80602-F



TOGGLE SWITCH
EXTRA HEAVY DUTY

Double Pole, Single Throw
Sleeve dia. ½", 32 threads per inch
Ball Lever
20 amp—250 volt
1½ HP, 125-250 volt
Nickel Finish

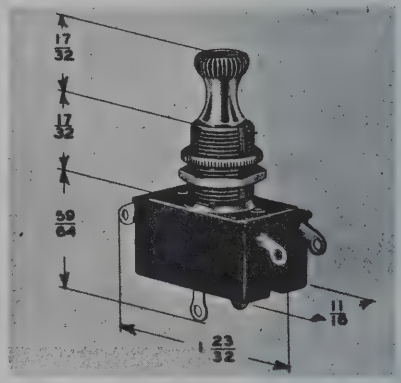
80421



PUSH-PULL SWITCH
MIDGET SIZE

Single Hole Mounting
Double Pole—Single Throw
Solder Lug Contacts
Laminated Phenolic Base
3 amp—125 volt
1 amp—250 volt
Nickel Finish

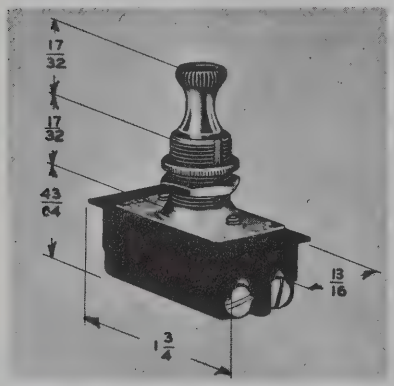
3581



PUSH-PULL SWITCH
STANDARD DUTY

Double Pole—Double Throw
Solder Lug Contacts
Molded Phenolic Base
3 amp—250 volt
6 amp—125 volt
Nickel Finish

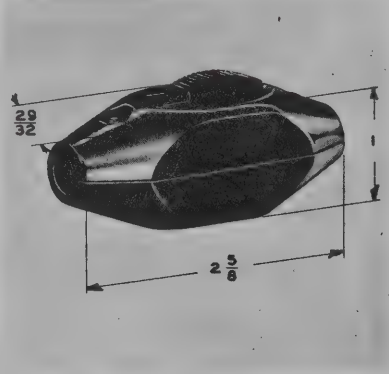
81376



PUSH-PULL SWITCH
STANDARD DUTY

3-Way
Binding Screw Contacts
Molded Phenolic Base
6 amp—250 volt
12 amp—125 volt
Nickel Finish

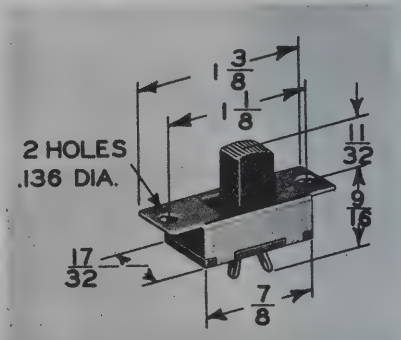
81923



FEED THRU SWITCH

Enclosed in Phenolic Base
Single Pole
Sliding Lever
5 amp—250 volt
10 amp—125 volt

81550



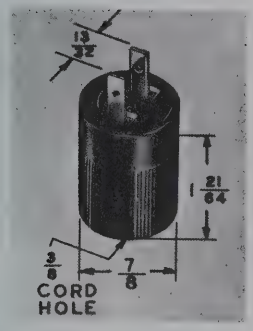
MIDGET SLIDING LEVER SWITCH

Single Pole—Single Throw
Black Phenolic Lever
3 amp—125 volt AC
Nickel Finish

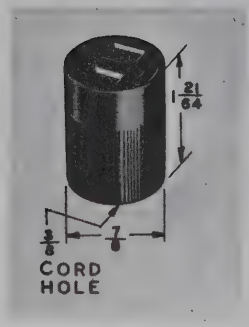
81574

MIDGET CONNECTORS & RECEPTACLES

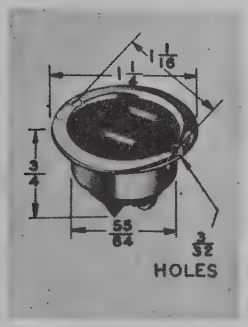
All Ratings: 10A—250V



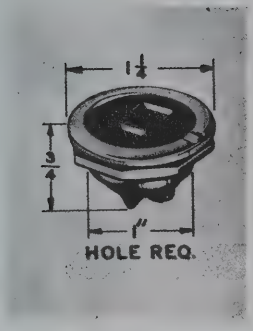
80324
Receptacle Cap



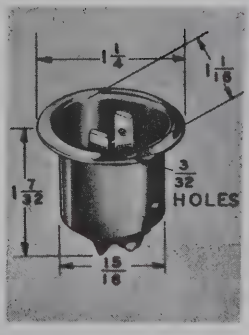
80325
Female Receptacle



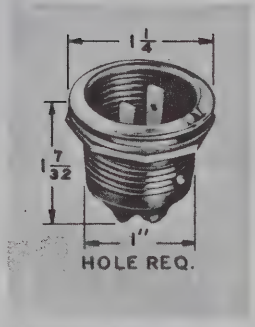
80326
Short Female Flush
Receptacle
2-Screw Mounting



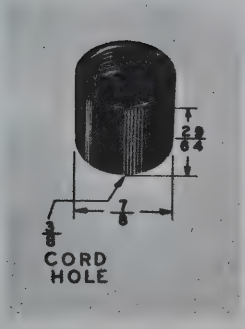
80327
Short Female Flush
Receptacle
Lock Nut Mounting



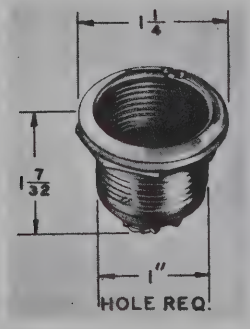
80328
Recessed Male
Receptacle
2-Screw Mounting



80329
Recessed Male
Receptacle
Lock Nut Mounting



80330
Threaded Bakelite
Terminal Cover for
All Units



80331
Recessed Female
Receptacle
Lock Nut Mounting

80324-80325
Combined

80332

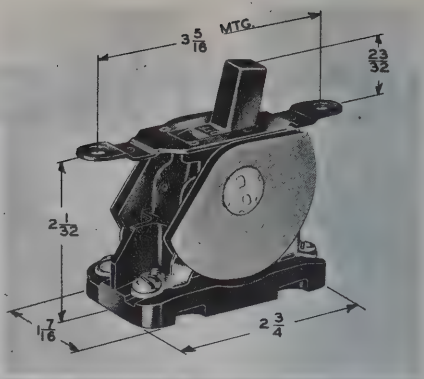
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ARROW AH HART

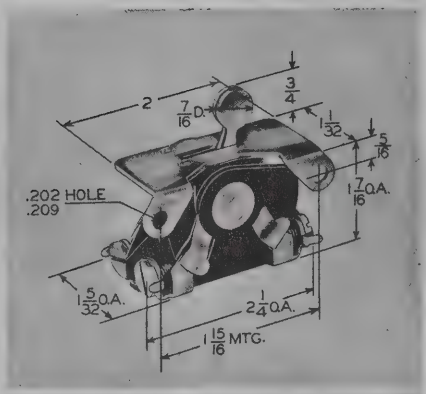
TUMBLER SWITCHES

HEAVY DUTY

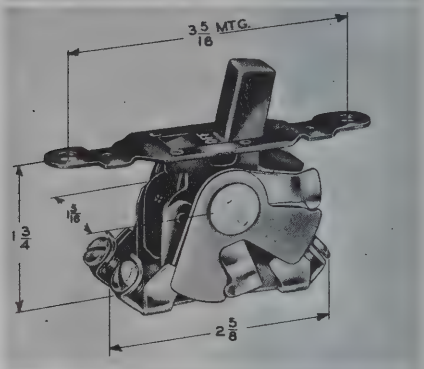
80093
Double pole-single throw.
Square lever.
Bakelite base.
20 Ampere-600 Volt.
30 Ampere-250 Volt.
2 HP-250-600 Volt.



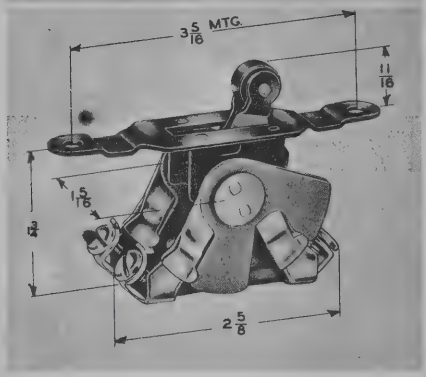
100011-ZM
DPST—Special lever
for Mechanical interlock
20 A 250 V
1 HP 125-250 V AC-DC



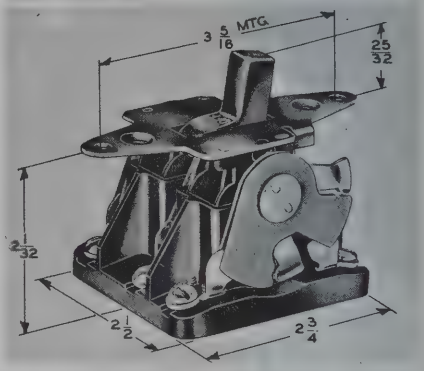
100,006
Double pole.
Square lever.
Laminated base.
30 Ampere-250 Volt.
2 HP-115-230 Volt-AC
1 HP-460 Volt-AC



100,006 KA
Double pole.
Roller type lever.
30 Ampere-250 Volt.
2 HP-115-230 Volt-AC
1 HP-460 Volt-AC

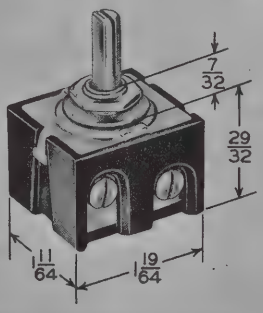


80404
Three pole.
Bakelite lever.
Molded Bakelite base.
30 Ampere-250 Volt.
20 Ampere-600 Volt.
2 HP-115-575 Volt-AC
3 Phase



ROTARY HEATER SWITCH

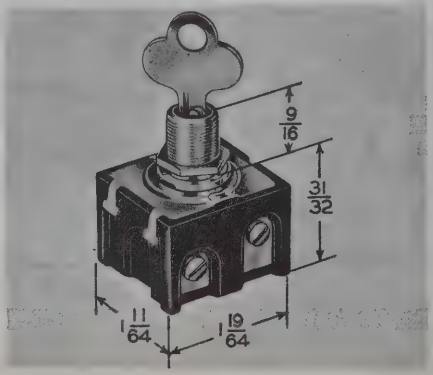
SMALL SIZE



70302-A*
DPST slow make & break
Midget size Heater sw.
20 A 120-240 V AC
1 HP 120 V AC
2 HP 240 V AC
5 A 120 V L.
available in other circuits
DP series parallel
SP 3 circuit 1-1 & 2-1 & 3-off
SP 2 circuit off-1-1 & 2
SP 2 circuit 1-off-2
*Rating applies to 70302-A *only*

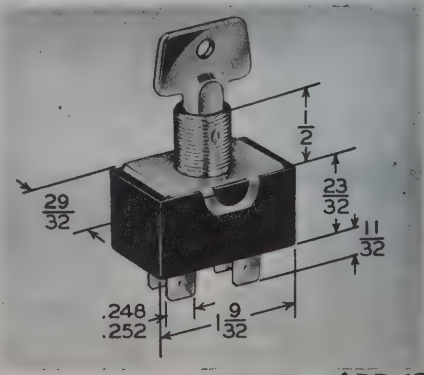
ROTARY LOCK SWITCH

SMALL SIZE AND MIDGET SIZE



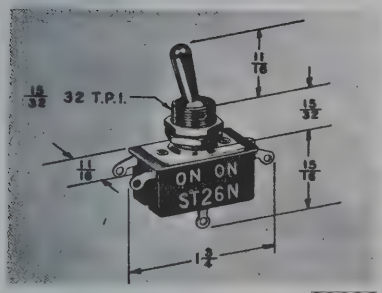
70307-LA
DPST slow make & break*
lock switch
20A 120-240 V AC
1½ HP 120 V AC *
2 HP 240 V AC
two position

82787-A
DPST midget size rotary
lock switch—4 pos.
ON-OFF-ON-OFF
20 A 120 — 240 V AC
1½ HP 120 V AC
2 HP 240 V AC

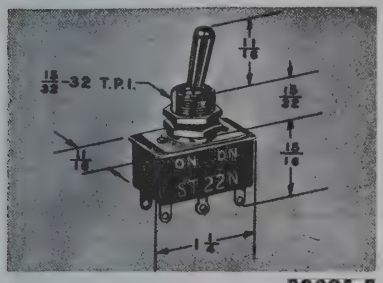


ARR 13

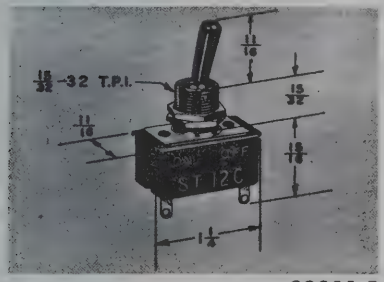
TOGGLE SWITCHES–MILITARY TYPE



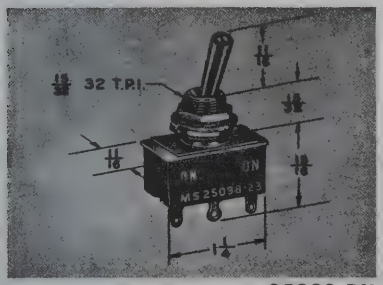
82305



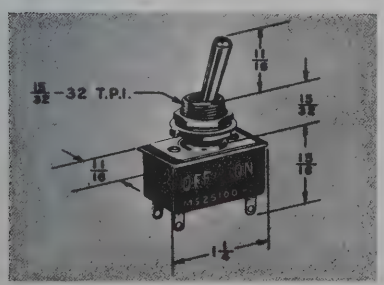
82305-B



82311-B



25098-DM



25100-AM

TOGGLE SWITCHES—MILITARY TYPE—MANUFACTURED OF MATERIALS AND IN ACCORDANCE WITH SPECIFICATION JAN-S-23, MIL-S-21195

SWITCHES SUPPLIED WITH LOCKWASHER AND LOCK RING AS STANDARD UNDER MIL-S-21195.

NOTE: Supplied with two hex nuts as standard. Lockwasher #8991-1378 and locking ring #20590-174 should be ordered separately, under JAN-S-23.

POSITIVE ACTION—15/32" LONG SLEEVE—15/32" DIA 32 THREADS PER INCH

SIDE CONNECTED			BACK CONNECTED		
JAN-S-23 Designation	A-H&H Cat. Number	Circuit	JAN-S-23 Designation	A-H&H Cat. Number	Circuit
ST-16-A	82301	SPST	ST-12-A	82301-B	SPST
ST-16-V	82302	2 Ckt	ST-12-V	82302-B	2 Ckt
ST-16-D	82303	SPDT	ST-12-D	82303-B	SPDT
ST-26-K	82304	DPST	ST-22-K	82304-B	DPST
ST-26-N	82305	DPDT	ST-22-N	82305-B	DPDT

POSITIVE ACTION—¼" LONG SLEEVE—15/32" DIA 32 THREADS PER INCH

ST-17-A	82301-S	SPST	ST-13-A	82301-BS	SPST
ST-17-V	82302-S	2 Ckt	ST-13-V	82302-BS	2 Ckt
ST-17-D	82303-S	SPDT	ST-13-D	82303-BS	SPDT
ST-27-K	82304-S	DPST	ST-23-K	82304-BS	DPST
ST-27-N	82305-S	DPDT	ST-23-N	82305-BS	DPDT

MOMENTARY ACTION—NORMALLY OPEN—15/32" LONG SLEEVE—15/32" DIA 32 THREADS PER INCH

ST-16-C	82311	SPST	ST-12-C	82311-B	SPST
ST-26-M	82314	DPST	ST-22-M	82314-B	DPST

MOMENTARY ACTION—NORMALLY CLOSED—15/32" LONG SLEEVE—15/32" DIA 32 THREADS PER INCH

ST-16-B	82311-C	SPST	ST-12-B	82311-BC	SPST
ST-16-F	82313	SPDT			
ST-26-L	82314-C	DPST	ST-22-L	82314-BC	DPST
ST-26-R	82315	DPDT			

Accessories for above Toggle Switches

STF01	82299-F	Fluorescent Tip
STR01	82299-R	Radioactive Tip
	20590-174	Locking Ring
	8991-1378	Lockwasher
	8947-151	Mounting Nut

TOGGLE SWITCHES—MILITARY TYPE—MANUFACTURED OF MATERIALS AND IN ACCORDANCE WITH SPECIFICATION MIL-S-3950—DRAWING MS25098 AND MS25100

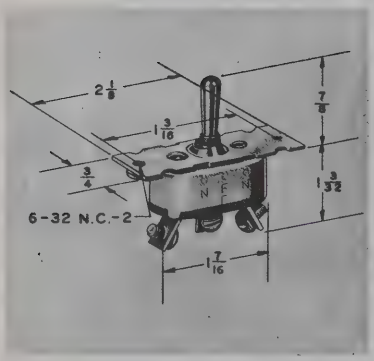
NOTE: Supplied with two hex nuts, one lockwasher, and one locking ring as standard.

A-H&H Cat. No.	MS Part No.	Former JAN No.	Circuit with Toggle Lever In		
			One Extreme Pos.	Center Pos.	Other Extreme Pos. Keyway Side
25098-AM	MS25098-22	ST-12-A	ON	NONE	OFF
25098-BM	MS25098-29	ST-12-B	ON	NONE	Momentarily OFF
25098-CM	MS25098-30	ST-12-C	OFF	NONE	Momentarily ON
25098-DM	MS25098-23	ST-12-D	ON	NONE	ON
		DRAWING MS25100			
25100-AM	MS25100-22	ST-22-K	ON	NONE	OFF
25100-BM	MS25100-29	ST-22-L	ON	NONE	Momentarily OFF
25100-CM	MS25100-30	ST-22-M	OFF	NONE	Momentarily ON
25100-DM	MS25100-23	ST-22-N	ON	NONE	ON

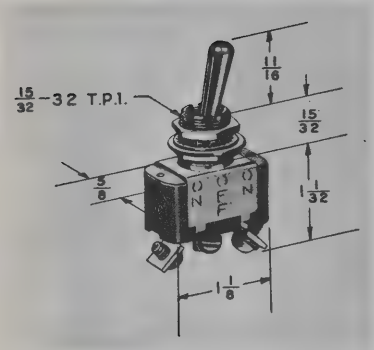
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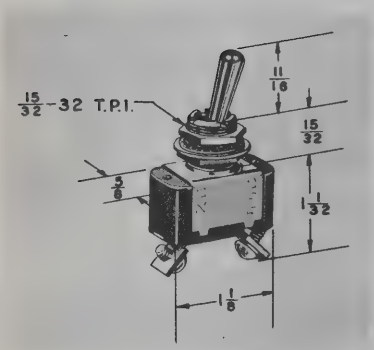
TOGGLE SWITCHES–MILITARY TYPE



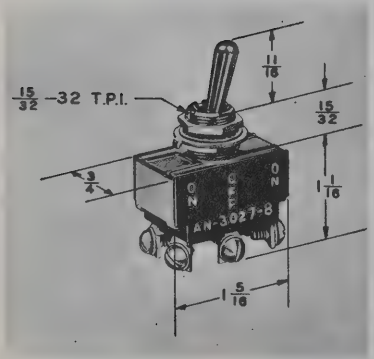
AN3022-1
81401



AN3021-1
82650



AN3021-2
82651



AN3027-8
82679

TOGGLE SWITCHES—MILITARY TYPE—MANUFACTURED OF MATERIALS AND IN ACCORDANCE WITH SPECIFICATION MIL-S-6745

DRAWING AN-3022—SINGLE POLE METAL CLAD

PART NUMBERS		CIRCUIT WITH TOGGLE LEVER IN			CURRENT CAPACITY (AMP.) 28 Volts DC				CURRENT CAPACITY (AMP.) 115 Volts 400 Cycles AC			
AN	A-H&H	One Extreme Position	Center Position	Other Extreme Position (Keyway Side)	Continuous	Lamp Load Circuit	Resistive Circuit	Inductive Circuit	Continuous	Lamp Load Circuit	Resistive Circuit	Inductive Circuit
AN3022-1	81401	ON	OFF	ON								
AN3022-2	81402	ON	NONE	OFF	55	7	25	15	55	4	15	10
AN3022-3	81403	ON	NONE	ON								
AN3022-4B	81404-RB	ON	NONE	OFF								
AN3022-6	81406	ON	OFF	*ON								
AN3022-7	81407	*ON	OFF	*ON								
AN3022-8	81408	*ON	NONE	OFF	55	5	20	10	55	2	15	7
AN3022-9	81409	ON	NONE	*OFF								
AN3022-11	81411	ON	NONE	*ON								
AN3022-15B	81915-RB	ON	OFF	ON								

*Momentary

DRAWING AN-3021—SINGLE POLE MOLDED PHENOLIC BASE

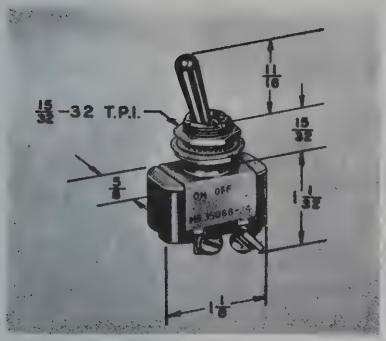
PART NUMBERS		CIRCUIT WITH TOGGLE LEVER IN			CURRENT CAPACITY (AMP.) 28 Volts DC				CURRENT CAPACITY (AMP.) 115 Volts 400 Cycles AC			
AN	A-H&H	One Extreme Position	Center Position	Other Extreme Position (Keyway Side)	Continuous	Lamp Load Circuit	Resistive Circuit	Inductive Circuit	Continuous	Lamp Load Circuit	Resistive Circuit	Inductive Circuit
AN3021-1	82650	ON	OFF	ON								
AN3021-2	82651	ON	NONE	OFF	40	5	20	15	40	3	10	10
AN3021-3	82658	ON	NONE	ON								
AN3021-10	82740	ON	OFF	NONE								
AN3021-5	82657	ON	OFF	Momentarily ON								
AN3021-6	82656	ON	OFF	Momentarily ON								
AN3021-7	82660	Momentarily ON	OFF	Momentarily ON	40	4	15	10	40	2	10	7
AN3021-8	82659	OFF	NONE	Momentarily ON								
AN3021-9	82661	ON	NONE	Momentarily OFF								
AN3021-11	82741	NONE	OFF	Momentarily ON								
AN3021-12	82742	ON	Momentarily OFF	NONE								

DRAWING AN-3027—DOUBLE POLE PHENOLIC BASE

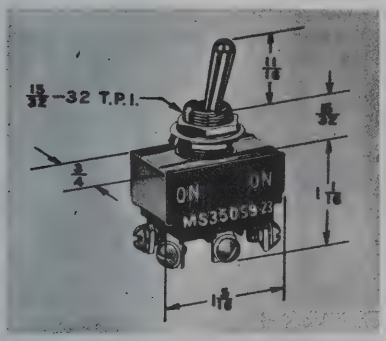
PART NUMBERS		CIRCUIT WITH TOGGLE LEVER IN			CURRENT CAPACITY (AMP.) per pole 28 Volts DC				CURRENT CAPACITY (AMP.) 115 Volts 400 Cycles AC			
AN	A-H&H	One Extreme Position	Center Position	Other Extreme Position (Keyway Side)	Continuous	Lamp Load Circuit	Resistive Circuit	Inductive Circuit	Continuous	Lamp Load Circuit	Resistive Circuit	Inductive Circuit
AN3027-1	82667	ON	OFF	ON								
AN3027-2	82669	ON	NONE	OFF	30	7	20	15	30	4	20	15
AN3027-3	82671	ON	NONE	ON								
AN3027-9	82700	ON	OFF	NONE								
AN3027-4	82675	ON	NONE	Momentarily OFF								
AN3027-5	82673	OFF	NONE	Momentarily ON								
AN3027-6	82677	ON	NONE	Momentarily ON	30	5	18	10	30	2	11	8
AN3027-7	82681	Momentarily ON	OFF	Momentarily ON								
AN3027-8	82679	ON	OFF	Momentarily ON								
AN3027-10	82701	ON	Momentarily OFF	NONE								
AN3027-11	82702	NONE	OFF	Momentarily ON								

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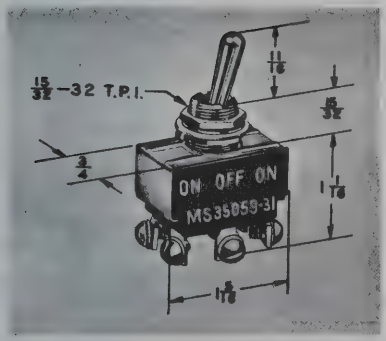
TOGGLE SWITCHES–MILITARY TYPE



MS35058-24
35058-AM



MS35059-23
35059-DM



MS35059-31
35059-HM

TOGGLE SWITCHES— MILITARY TYPE—MANUFACTURED OF MATERIALS AND IN ACCORDANCE WITH SPECIFICATION MIL-S-3950

DRAWING MS-35058—SINGLE POLE MOLDED PHENOLIC BASE

MS PART NO.	FORMER MS PART NO.	FORMER AN OR JAN. TYPE NO.		CIRCUIT UP POSITION	WITH TOGGLE LEVER IN		A-H & H PART NO.
					CENTER	DOWN POSITION KEYWAY SIDE	
MS-35058-21	MS-35058-5	AN-3021-1	ST40-E	ON	OFF	ON	35058-EM
MS-35058-22	—	—	—	ON	NONE	OFF	35058-WM
MS-35058-23	MS-35058-4	AN-3021-3	ST40-D	ON	NONE	ON	35058-DM
MS-35058-24	MS-35058-1	AN-3021-10	—	ON	OFF	NONE	35058-AM
MS-35058-25	MS-35058-3	AN-3021-12	—	ON	MOM. OFF	NONE	35058-CM
MS-35058-26	MS-35058-6	—	ST40-F	ON	NONE	MOM. ON	35058-FM
MS-35058-27	MS-35058-7	AN-3021-7	ST40-G	MOM. ON	OFF	MOM. ON	35058-GM
MS-35058-28	MS-35058-2	AN-3021-11	—	NONE	OFF	MOM. ON	35058-BM
MS-35058-29	—	—	—	ON	NONE	MOM. OFF	35058-XM
MS-35058-30	—	—	—	OFF	NONE	MOM. ON	35058-YM
MS-35058-31	MS-35058-8	AN-3021-6	ST40-H	ON	OFF	MOM. ON	35058-HM

DRAWING MS-35059—DOUBLE POLE MOLDED PHENOLIC BASE

MS-35059-21	MS-35059-5	AN-3027-1	ST50-P	ON	OFF	ON	35059-EM
MS-35059-22	—	—	—	ON	NONE	OFF	35059-WM
MS-35059-23	MS-35059-4	AN-3027-3	ST50-N	ON	NONE	ON	35059-DM
MS-35059-24	MS-35059-1	AN-3027-9	—	ON	OFF	NONE	35059-AM
MS-35059-25	MS-35059-3	AN-3027-10	—	ON	MOM. OFF	NONE	35059-CM
MS-35059-26	MS-35059-6	AN-3027-6	ST50-R	ON	NONE	MOM. ON	35059-FM
MS-35059-27	MS-35059-7	AN-3027-7	ST50-S	MOM. ON	OFF	MOM. ON	35059-GM
MS-35059-28	MS-35059-2	AN-3027-11	—	NONE	OFF	MOM. ON	35059-BM
MS-35059-29	—	—	—	ON	NONE	MOM. OFF	35059-XM
MS-35059-30	—	—	—	OFF	NONE	MOM. ON	35059-YM
MS-35059-31	MS-35059-8	AN-3027-8	ST50-T	ON	OFF	MOM. ON	35059-HM

ACCESSORIES



3391-194
Phenolic
Snap-on Button
(Specify Red or Black)



20590-1
Indicating Dial
(ON-OFF)



21172-2
Indicating Dial
(HIGH-LOW)



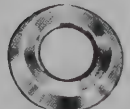
8947-151
Standard
Hex Nut



8991-3
Standard
Knurled Nut



20983-1
Dress Nut



1561-238
Top Nut for
Roto-Power
Lock Switches



1561-1488
Key
Removable Off
Position Only



1561-1487
Key
Removable Both
Positions



8991-1378
(Bronze)
Lockwasher for 1 5/32" Dia. Sleeves
MIL-S-3950
25098-3
Stainless Steel



20590-174
Locking Ring for 1 5/32" Dia. Sleeves
MIL-S-3950
25098-2
Stainless Steel



82299-F
(Fluorescent Tip)
82299-R
(RadioactiveTip)

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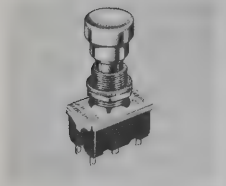
MIDGET Wiping Action SWITCHES



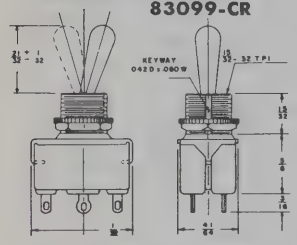
83058



83050-Y



83099-CR



TYPE A—MIDGET SWITCHES

Available with special features such as finishes, materials, types of levers, special length sleeves, and can be made completely sealed against sand, dust and moisture as required. Quick make and break action. Ratings — 1A 250V and 3A 125V AC-DC.

TYPE A — Solder lug terminal with double wiping blade mechanism — current carrying parts silver plated (gold plated current carrying parts also available). Circuits SPST through DPDT positive and momentary action.

COMMERCIAL TYPE
Fulcrum Pin Sleeve Assembly

Sleeve 15/32" lg. 15/32 - 32 thread.
Lock washers and locking rings not included as standard.

Circuit	Maintained	Momentary
SPST	83050	83070
SPDT	83052	83072
2 Cir.	83051	83071
DPST	83053	83073
DPDT	83054	83074

GOLD PLATED TERMINALS
For Low Voltage Applications
Fulcrum Pin Sleeve Assembly

Fulcrum pin type sleeve assemblies.

Circuit	Maintained	Momentary
Current carrying parts Gold plated .0001 over base metal.		
SPST	83050-Y	83070-Y
SPDT	83052-Y	83072-Y
2 Cir.	83051-Y	83071-Y
DPST	83053-Y	83073-Y
DPDT	83054-Y	83074-Y
Current carrying parts Gold plated .0003 over .0002-.0004 silver.		
SPST	83050-Z	83070-Z
SPDT	83052-Z	83072-Z
2 Cir.	83051-Z	83071-Z
DPST	83053-Z	83073-Z
DPDT	83054-Z	83074-Z

Underwriters Listed at 3 amp 125V AC and DC; 1 amp 250V AC and DC.

MILITARY TYPE
Ball Joint Sleeve Assembly

Materials and finishes to MIL-Specifications
Lock washers and locating rings furnished as standard.
Sleeve assemblies and terminals sealed.

Circuit	Maintained
SPST	83055
SPDT	83057
2 Cir.	83056
DPST	83058
DPDT	83059

MOMENTARY ACTION PUSH SWITCH
Commercial Type

Sleeve ½" lg. 15/32 - 32 thread — current carrying parts silver plated.

Circuit	Plain Metal Button	Metal button to accept snap-on button but less snap-on button
SPST	83090	83090-C
SPDT	83092	83092-C
2 Cir.	83091	83091-C
DPST	83093	83093-C
DPDT	83094	83094-C

PHENOLIC SNAP-ON BUTTON

Circuit	Black	Red
SPST	83090-CB	83090-CR
SPDT	83092-CB	83092-CR
2 Cir.	83091-CB	83091-CR
DPST	83093-CB	83093-CR
DPDT	83094-CB	83094-CR

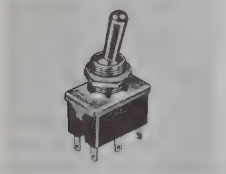
DOUBLE ACTION (PUSH-PUSH)
Commercial Type

Sleeve 9/16" lg. 15/32 - 32 thread — carrying parts silver plated.

Circuit	Plain Metal Button	Metal button to accept snap-on button but less snap-on button
SPST	83095	83095-C
SPDT	83097	83097-C
2 Cir.	83096	83096-C
DPST	83098	83098-C
DPDT	83099	83099-C

PHENOLIC SNAP-ON BUTTON

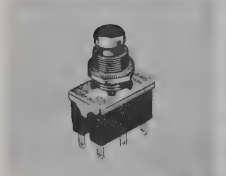
Circuit	Black	Red
SPST	83095-CB	83095-CR
SPDT	83097-CB	83097-CR
2 Cir.	83096-CB	83096-CR
DPST	83098-CB	83098-CR
DPDT	83099-CB	83099-CR



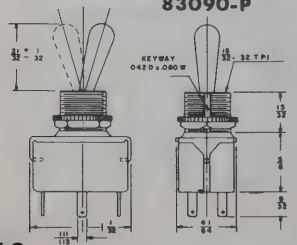
83054-P



83054-PY



83090-P



TYPE P—MIDGET SWITCHES

Available with special features such as finishes, materials, types of levers, special length sleeves, and can be made completely sealed against sand, dust and moisture as required. Quick make and break action. Ratings — 1A 250V and 3A 125V AC-DC.

TYPE P — Combination quick connect and solder lug terminal with single wiping blade mechanism and with current carrying parts silver plated (gold plated current carrying parts also available). Circuits SPST through DPDT in both positive and momentary action.

COMMERCIAL TYPE
Ball Joint Sleeve Assembly

Sleeve 15/32" lg. 15/32 - 32 thread.
Combination quick connect and solder lug terminals silver plated.
Lock washers and locating rings not included as standard.

Circuit	Maintained	Momentary*
SPST	83050-P	83070-P
SPDT	83052-P	83072-P
2 Cir.	83051-P	83071-P
DPST	83053-P	83073-P
DPDT	83054-P	83074-P

*Fulcrum Pin Sleeve Assembly

GOLD PLATED TERMINALS
For Low Voltage Applications
Fulcrum Pin Sleeve Assembly

Combination quick connect and solder lug terminals.
Fulcrum pin type sleeve assemblies.

Circuit	Maintained	Momentary
Current carrying parts Gold plated .0001 over base metal.		
SPST	83050-PY	83070-PY
SPDT	83052-PY	83072-PY
2 Cir.	83051-PY	83071-PY
DPST	83053-PY	83073-PY
DPDT	83054-PY	83074-PY
Current carrying parts Gold plated .0003 over .0002-.0004 silver.		
SPST	83050-PZ	83070-PZ
SPDT	83052-PZ	83072-PZ
2 Cir.	83051-PZ	83071-PZ
DPST	83053-PZ	83073-PZ
DPDT	83054-PZ	83074-PZ

MILITARY TYPE

Materials and finishes to MIL-Specifications
Lock washers and locating rings furnished as standard.
Sleeve assemblies and terminals sealed.

Circuit	Maintained
SPST	83055-P
SPDT	83057-P
2 Cir.	83056-P
DPST	83058-P
DPDT	83059-P

MOMENTARY ACTION PUSH SWITCH
Commercial Type

Combination push connect and solder lug terminal silver plated. Sleeve ½" lg. 15/32 - 32 thread. Current carrying parts silver plated.

Circuit	Plain Metal Button	Metal button to accept snap-on button but less snap-on button
SPST	83090-P	83090-PC
SPDT	83092-P	83092-PC
2 Cir.	83091-P	83091-PC
DPST	83093-P	83093-PC
DPDT	83094-P	83094-PC

PHENOLIC SNAP-ON BUTTON

Circuit	Black	Red
SPST	83090-PCB	83090-PCR
SPDT	83092-PCB	83092-PCR
2 Cir.	83091-PCB	89091-PCR
DPST	83093-PCB	83093-PCR
DPDT	83094-PCB	83094-PCR

DOUBLE ACTION (PUSH-PUSH)
Commercial Type

Sleeve 9/16" lg. 15/32 - 32 thread. Current carrying parts silver plated.

Circuit	Plain Metal Button	Metal button to accept snap-on button but less snap-on button
SPST	83095-P	83095-PC
SPDT	83097-P	83097-PC
2 Cir.	83096-P	83096-PC
DPST	83098-P	83098-PC
DPDT	83099-P	83099-PC

PHENOLIC SNAP-ON BUTTON

Circuit	Black	Red
SPST	83095-PCB	83095-PCR
SPDT	83097-PCB	83097-PCR
2 Cir.	83096-PCB	83096-PCR
DPST	83098-PCB	83098-PCR
DPDT	83099-PCB	83099-PCR

LISTED AS STANDARD BY UNDERWRITERS' LABORATORIES, INC.

ARR 17

SUBMINIATURE SWITCHES

TOGGLE TYPE



ACTUAL SIZE

CONTACT RATING: Low level to 5 amperes resistive at 29 volts DC or 115 volts AC

INITIAL CONTACT RESISTANCE: 0.01 ohms maximum

DIELECTRIC STRENGTH: 1000 volts rms at sea level

INSULATION RESISTANCE: 1000 megohms, minimum

VIBRATION: 5-28 cps at 0.5 inch double amplitude, 28-200 cps at 20g

SHOCK: 50g for 11 milliseconds

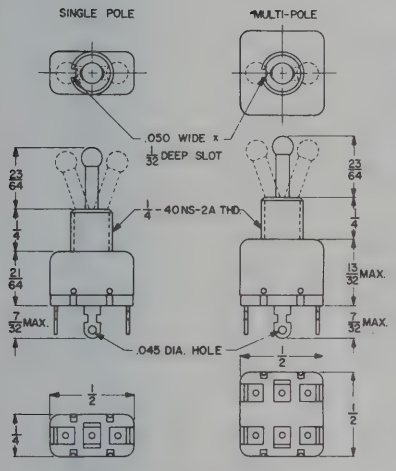
ELECTRICAL LIFE (Minimum): 20,000 make-and-break cycles

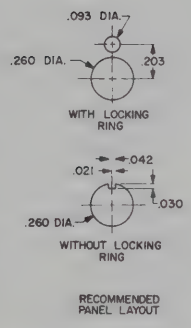
OPERATING LEVERS: Ball levers are standard. Bat levers will be supplied if specified. Available in nylon, aluminum or stainless steel.

OPTIONAL FEATURES: Bushing ⅛" longer on TS types. Handle ⅛" or ¼" longer.

Low-temperature rubber boot for panel sealing, where required. Catalog No. 18578-7 closed top gray is standard.

APPLICABLE MILITARY SPECS: MIL-S-3950 as applicable to SCL-6305





MOUNTING HARDWARE SUPPLIED:
TWO A.S.A. 1/4-40NS-2B HEX NUTS (81099) AND ONE LOCKING RING (18533-1)

CATALOG NUMBER	CONTACT ARRANGEMENT	SLOT	SLOT	SLOT
TC-3	SPDT	ON	OFF	ON
TE-3	SPDT	MOM ON	OFF	MAINT. ON
TG-3	SPDT	MOM ON	OFF	MOM ON
TM-3	SPDT	MOM ON	NONE	ON
TS-3	SPDT	ON	NONE	ON
TC-6	DPDT	ON	OFF	ON
TE-6	DPDT	MOM ON	OFF	MAINT. ON
TG-6	DPDT	MOM ON	OFF	MOM ON
TM-6	DPDT	MOM. ON	NONE	MAINT. ON
TS-6	DPDT	ON	NONE	ON

PUSH BUTTON TYPE



ACTUAL SIZE

CONTACT RATING: 2 amperes resistive at 29 volts DC, or 1 ampere at 115 volts AC

INITIAL CONTACT RESISTANCE: 0.05 ohms maximum

DIELECTRIC STRENGTH: 1000 volts rms at sea level

INSULATION RESISTANCE: 1000 megohms, minimum

VIBRATION: 5-28 cps at 0.5 inch double amplitude, 28-2000 cps at 20g

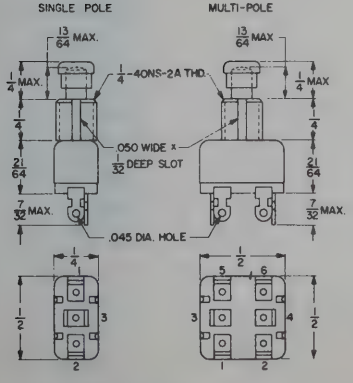
SHOCK: 50g for 11 milliseconds

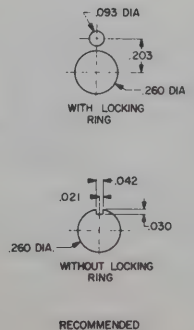
ELECTRICAL LIFE (Minimum): 20,000 make-and-break cycles pulsed at a rate of 100 cycles per minute

OPTIONAL FEATURES: Black, blue, brown, green, orange, red or yellow nylon cap in place of standard white cap (which is supplied with each switch and is readily snapped on or off plunger).

Low-temperature rubber boot for panel sealing, where required. Catalog No. 18577-7. Gray is standard. Nylon cap must be removed for boot.

WEIGHT: From 2.5 to 4.0 grams, maximum





CATALOG NUMBER	CONTACT ARRANGEMENT	CIRCUIT ARRANGEMENT (numbers for reference only)
PM-3	SINGLE POLE, DOUBLE THROW MOMENTARY CONTACT	1 2 3
PM-6	DOUBLE POLE, DOUBLE THROW MOMENTARY CONTACT	5 1 3 6 2 4
PM-7	3 POLE, SINGLE THROW MOMENTARY CONTACT N.O.	2 1 4 3 6 5
PM-8	3 POLE, SINGLE THROW MOMENTARY CONTACT N.C.	1 2 3 4 5 6

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RESALE PRICE LIST

MODELS SHOWN ARE REGULARLY STOCKED

MODEL	1-9	10-99	100 & Up
1561-238	.14	.12	.10
1561-488	.14	.12	.10
1561-GK	.72	.64	.54
1561-GZ	.80	.70	.59
1561-L	1.14	1.00	.84
1561-N	.59	.52	.44
1565-BH	.73	.64	.54
3391-E	.52	.46	.38
3391-GJ	.68	.60	.50
3391-GL	.68	.60	.50
3392	.67	.59	.50
3392-A	.83	.74	.62
3392-AR	.83	.74	.62
3591	1.04	.91	.77
3591-H	1.04	.91	.77
3592	.93	.82	.69
8947-151	.02	.02	.015
8991-3	.02	.02	.015
20590-174	.02	.02	.015
20590-1	.03	.03	.02
20599-NF	.58	.51	.43
20902-AZ	1.04	.91	.77
20902-CX	.88	.77	.65
20902-HU	1.06	.94	.79
20902-N	.88	.77	.65
20902-Q	1.06	.94	.79
20905-BT	1.17	1.03	.87
20905-BX	1.00	.88	.74
20905-FR	1.00	.88	.74
20905-KA	1.20	1.06	.89
20983-1	.07	.06	.05
20994-BF	.48	.43	.36
20994-CS	.48	.43	.36
20994-EW	.55	.49	.41
20994-LH	.48	.43	.36
21350-BF	.61	.54	.45
21350-EH	.61	.54	.45
21661-B	.80	.70	.59
21661-BE	.81	.71	.60
21858-X	1.30	1.14	.96

MODEL	1-9	10-99	100 & Up
80050	3.02	2.66	2.24
80054-S	.77	.68	.57
80144-C	2.58	2.27	1.91
80224	4.59	4.04	3.40
80238	1.44	1.27	1.07
80421	2.26	1.99	1.68
80421-U	2.26	1.99	1.68
80511	.36	.32	.27
80511-E	.36	.32	.27
80511-CE	.46	.40	.34
80512-IB	.41	.36	.30
80541	.68	.60	.50
80541-E	.68	.60	.50
80541-ER	.68	.60	.50
80600	.97	.86	.72
80600-BJ	.97	.86	.72
80600-F	.97	.86	.72
80600-WD	1.19	1.05	.88
80602	1.69	1.48	1.25
80602-CA	1.69	1.48	1.25
80602-M	1.69	1.48	1.25
80630	1.44	1.26	1.06
80631-A	1.44	1.26	1.06
80634	5.47	4.81	4.05
80638-D	3.40	2.99	2.52
80726-C	1.05	.92	.78
80825	6.00	5.75	5.50
80863	1.30	1.14	.96
80938-C	2.13	1.88	1.58
80949	3.15	2.72	2.29
80950	7.00	6.17	5.19
80952	5.25	4.62	3.89
80964-C	.58	.51	.43
80975	8.10	7.10	6.10
80976	3.40	2.99	2.52
80979-G	1.37	1.20	1.01
80983	7.78	6.80	3.89
80988	9.74	8.52	7.30
80991	.48	.43	.36
80994-BD	.48	.43	.36

ARR-19 ARR 19

RESALE PRICE LIST

MODELS SHOWN ARE REGULARLY STOCKED

MODEL	1-9	10-99	100 & Up
81015-AW	.64	.57	.47
81015-K	.64	.57	.47
81016-Y	.74	.65	.55
81017-JA	.74	.65	.55
81021-AV	.76	.67	.56
81021-BP	.76	.67	.56
81024-GB	.94	.83	.70
81027-CB	1.08	.95	.80
81027-CE	1.08	.95	.80
81045-FB	.92	.81	.68
81057-N	1.45	1.27	1.07
81075	1.08	.95	.80
81078	1.23	1.08	.91
81081-G	1.20	1.06	.89
81083	1.35	1.18	1.00
81085-G	1.69	1.49	1.25
81086	1.64	1.44	1.21
81087	1.57	1.38	1.16
81089	1.86	1.63	1.38
81574	.22	.20	.16
82014-D	1.70	1.49	1.26
82022-CD	1.17	1.03	.86
82024-CD	1.45	1.27	1.07
82024-HD	1.45	1.27	1.07
82149-DAW	1.39	1.22	1.03
82304	1.23	1.08	.91
82305-B	1.35	1.18	1.00
82403	.66	.58	.49
82600	.55	.49	.41
82601	.48	.42	.36
82601-P	.48	.42	.36
82602	.65	.57	.48
82603	.55	.49	.41
82603-P	.55	.49	.41
82604	.65	.57	.48
82605	.55	.49	.41
82605-P	.55	.49	.41
82606	.88	.77	.65
82607	.75	.66	.55
82608	1.09	.95	.80
82609	.88	.77	.65
82609-P	.88	.77	.65
82610	1.09	.96	.80
82611	.88	.77	.65
82612	1.77	1.56	1.31
82614	2.25	1.98	1.66
82616	2.25	1.98	1.66
82617	1.87	1.65	1.39
82619	1.65	1.45	1.22
82633	3.18	2.79	2.35
82650ST40E	1.41	1.24	1.04
82651ST40A	1.17	1.03	.87
82653ST42A	.86	.76	.64
82658ST40D	1.41	1.24	1.04
82669ST50K	1.57	1.38	1.16
82670ST52K	1.04	.92	.77
82671ST50N	1.89	1.66	1.40
82679ST50T	2.04	1.80	1.51
82680ST52T	1.36	1.19	1.00
82681ST50S	2.04	1.80	1.40
82720	.69	.61	.51
82730	1.15	1.01	.85
82736	1.35	1.19	1.00
82737	1.15	1.01	.85
83025	.61	.53	.45
83039	1.15	1.01	.85
83028-S	.77	.68	.57
86510	.65	.58	.48
86599-QE	.65	.58	.48
86595	.65	.58	.48
100006	2.33	2.05	1.63
100006-KA	2.33	2.05	1.63

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

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POSITIVE ACTION SWITCHES

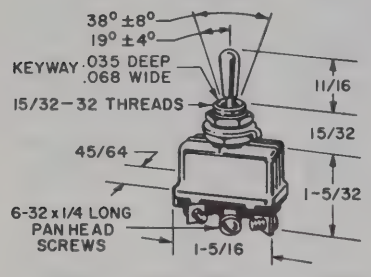
Especially designed for aircraft, missile and electronic applications. Made in two types — one with lever seals, the other environment sealed. Lever seal is bonded to the bushing and lever — will withstand a 15 ft. head of water, or between 6.5 to 7 lbs. per sq. inch. The environment sealed switches have seals under each contact and also a seal between switch base and the shell and are designed to pass a glycol temp. cycling test submerged for 20,000 operations per minute. The contact wiping action keeps contacts clean and smooth. Superior design, smooth operation. Screw terminals are tin-dipped to facilitate soldering if required.

Current Rating, All Switches

Current Capacity (Amps. per Pole) 28 V. DC

Current Capacity (Amps. per Pole) 115 V. — 400 cycles AC

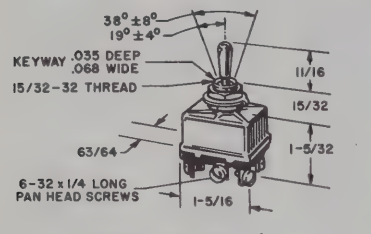
Current Capacity (Amps. per Pole) 115 V. — 60 cycles AC



5436

One Pole — Environment Sealed — Per MIL-S-8834 Specification

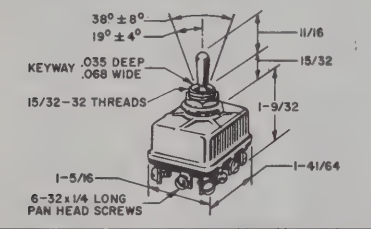
Birnbach No.	C-H	"MS" No.	Type	Circuit
5436-21	8836K1	MS25306-21	SPDT	On-Off-On
5436-22	8836K9	MS25306-22	SPST	On-None-Off
5436-23	8836K4	MS25306-23	SPDT	On-None-On
5436-24	8836K6	MS25306-24	SPST	On-Off-None
5436-25	8836K8	MS25306-25	SPST	On-Mom.Off-None
5436-26	8836K5	MS25306-26	SPDT	On-None-Mom.On
5436-27	8836K2	MS25306-27	SPDT	Mom.On-Off-Mom.On
5436-28	8836K7	MS25306-28	SPST	None-Off-Mom.On
5436-29	8836K10	MS25306-29	SPST	On-None-Mom.Off
5436-30	8836K11	MS25306-30	SPST	Off-None-Mom.On
5436-31	8836K3	MS25306-31	SPDT	On-Off-Mom.On



5437

Environment Sealed — Two Pole

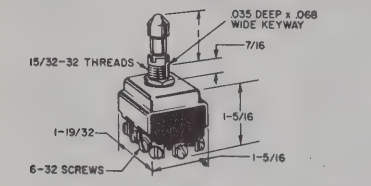
5437-21	8837K1	MS25307-21	DPDT	On-Off-On
5437-22	8837K9	MS25301-22	DPST	On-None-Off
5437-23	8837K4	MS25307-23	DPDT	On-None-On
5437-24	8837K6	MS25307-24	DPST	On-Off-None
5437-25	8837K8	MS25307-25	DPST	On-Mom.Off-None
5437-26	8837K5	MS25307-26	DPDT	On-None-Mom.On
5437-27	8837K2	MS25307-27	DPDT	Mom.On-Off-Mom.On
5437-28	8837K7	MS25307-28	DPST	None-Off-Mom.On
5437-29	8837K10	MS25307-29	DPST	On-None-Mom.Off
5437-30	8837K11	MS25307-30	DPST	Off-None-Mom.On
5437-31	8837K3	MS25307-31	DPDT	On-Off-Mom.On



5438

FOUR POLE

5438-21	8838K1	MS25308-21	4PDT	On-Off-On
5438-22	8838K9	MS25308-22	4PST	On-None-Off
5438-23	8838K4	MS25308-23	4PDT	On-None-On
5483-24	8838K6	MS25308-24	4PST	On-Off-None
5438-25	8838K8	MS25308-25	4PST	On-Mom.Off-None
5438-26	8838K5	MS25308-26	4PDT	On-None-Mom.On
5438-27	8838K2	MS25308-27	4PDT	Mom.On-Off-Mom.On
5438-28	8838K7	MS25308-28	4PST	None-Off-Mom.On
5438-29	8838K10	MS25308-29	4PST	On-None-Mom.Off
5438-30	8838K11	MS25308-30	4PST	Off-None-Mom.On
5438-31	8838K3	MS25308-31	4PDT	On-Off-Mom.On



5489

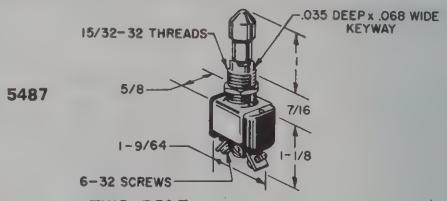
Lever Lock Switches — One, Two, Four Pole — Sealed Lever — MS 25125-6-7 Series — Per MIL-S-3950A

This series incorporates a lever lock mechanism designed to prevent accidental operation, thereby eliminating need for switch guards. The assembly of 2 die cast caps and a retaining clip spring assembled after the switch is mounted makes possible the locking feature. Switch is locked into position by the lever falling in position into deep slots in die cast caps. To operate switch from locked position the lever must be pulled straight out and moved to desired position.

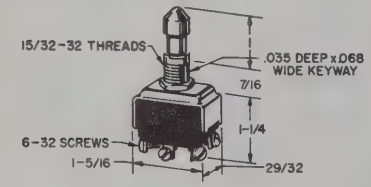
Nominal Rating per Pole
10 amps. 115 V. AC
20 amps. 28 V. DC

ONE POLE

5487-1	8857K39	MS25125-1	SPDT	On→ ←Off →←On
5487-2	8857K40	MS25125-2	SPDT	On ←Off → On
5487-3	8857K41	MS25125-3	SPDT	On Off ←On
5487-4	8857K45	MS25125-4	SPDT	On None ←On
5487-5	8857K42	MS25125-5	SPDT	On ←Off On
5487-6	8857K46	MS25125-6	SPDT	On ←Off On*
5487-7	8857K43	MS25125-7	SPDT	On→ Off ←On
5487-8	8857K44	MS25125-8	SPDT	On→ None ←On
5487-9	8857K49	MS25125-9	SPST	On→ ←Off None



5487



5488

TWO POLE

5488-1	8858K39	MS25126-1	DPDT	On→ ←Off →←On
5488-2	8858K40	MS25126-1	DPDT	On ←Off → On
5488-3	8858K41	MS21126-3	DPDT	On Off ←On
5488-4	8858K45	MS25126-4	DPDT	On None ←On
5488-5	8858K42	MS25126-5	DPDT	On ←Off On
5488-6	8858K46	MS25126-6	DPDT	On ←Off On*
5488-7	8858K43	MS25126-7	DPDT	On→ Off ←On
5488-8	8858K44	MS25126-8	DPDT	On→ None ←On
5488-9	8858K49	MS25126-9	DPST	On→ ←Off None

Lever Lock Switches — Four Pole — Per MIL-S-3950A

5489-1	8859K39	MS25127-1	4PDT	On→ ←Off →←On
5489-2	8859K40	MS25127-2	4PDT	On ←Off → On
5489-3	8859K41	MS25127-3	4PDT	On Off ←On
5489-4	8859K45	MS25127-4	4PDT	On None ←On
5489-5	8859K42	MS25127-5	4PDT	On ←Off On
5489-6	8859K46	MS25127-6	4PDT	On ←Off On*
5489-7	8859K43	MS25127-7	4PDT	On→ Off ←On
5489-8	8859K44	MS25127-8	4PDT	On→ None ←On
5489-9	8859K49	MS25127-9	4PST	On→ ←Off None

*Momentary Contact

Arrow indicates direction of movement against which lever is locked.

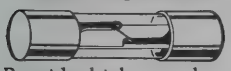
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BUSS Fuses

FUSETRON DUAL-ELEMENT Fuses and Fuse Holders

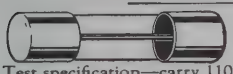
for Protection of TV, Radios, Instruments and Electronic Equipment

FAST ACTING FUSES for PROTECTION OF INSTRUMENTS, Etc.



Formerly called 8AG.
Dimension ¼ x 1 inch, Glass tube.
Provide high speed action necessary to protect sensitive instruments.
Listed by Underwriters' Laboratories Inc.
Test specification—carry 100%, open at 200% in 5 seconds.

Voltage	Symbol	Amperes	List Price
250 or less	AGX	1/500	$1.56
"	AGX	1/200	.65
"	AGX	1/100	.58
"	AGX	1/32	.51
250 or less	AGX	1/16	.32
"	AGX	1/10, 1/8, 3/16, 2/10	.23
"	AGX	1/4, 3/8, 4/10, 1/2 or 3/4	.15
"	AGX	1	.094
"	MKB	1/16 or 1/8	.51
125 or less	AGX	1½ or 2	.094

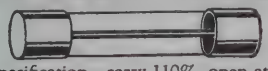


Formerly called 8AG
Dimension ¼ x 1 inch, Glass tube.
Test specification—carry 110%, open at 135% within 1 hour.
125 volt sizes are listed by Underwriters' Laboratories Inc.

Voltage	Symbol	Amperes	List Price
125 or less	AGX	3, or 4	$0.094
"	AGX	5	.06
32 or less	AGX	8, 10, 15 or 20	.06
"	AGX	25 or 30	.07

MJB & MJW FUSES NOW CALLED AGX

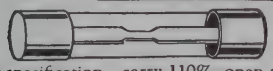
BUSS GLASS TUBE FUSES, ¼ x 1¼ inch



Formerly called 3AG

Test specification—carry 110%, open at 135% within 1 hour.
Listed by Underwriters' Laboratories Inc. for 250 volts or less.

Symbol	Amperes	List Price
AGC	1/500	$1.56
AGC	1/200	.65
AGC	1/100	.58
AGC	1/32	.51
AGC	1/16	.23
AGC	1/8	.23
AGC	15/100	.23
AGC	175/1000	$0.23
AGC	3/16, 2/10	.23
AGC	1/4, 3/10, 3/8	.15
AGC	45/100, 1/2, 3/4	.15
AGC	1, 1¼, 1½, 2	.094
MGB	1/16 or 1/8	.51
AGC	3	.084
MTH	4, 5 or 6	.12



Formerly called 3AG

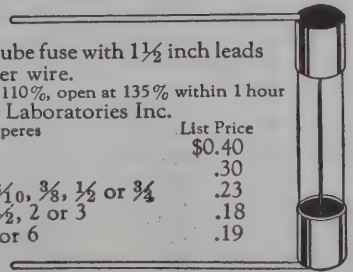
Test specification—carry 110%, open at 135% within 1 hour.

Voltage	Symbol	Amperes	List Price
125 or less	GLH	8 or 10	$0.18
32 or less	AGC	4	.084
"	AGC	5, 6, 7½, 8, 10 or 15	.06
"	AGC	20	.053
"	AGC	25 or 30	.07

20 ampere size is an SFE 20 fuse.
Sizes larger than 30 ampere are not recommended as clips or fuse holders would not permit fuse to carry such high currents. If surges or starting currents make heavier fuse necessary, use MDL Fusetron dual-element fuses.

MBW & MBB FUSES NOW CALLED AGC

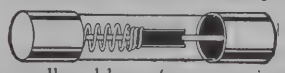
BUSS PIG-TAIL FUSES



¼ x 1¼ inch Glass tube fuse with 1½ inch leads of No. 20 tinned copper wire.
Test specifications—carry 110%, open at 135% within 1 hour
Listed by Underwriters' Laboratories Inc.

Voltage	Symbol	Amperes	List Price
250 or less	GJV	1/16	$0.40
"	GJV	1/8	.30
"	GJV	1/4, 3/10, 3/8, 1/2 or 3/4	.23
"	GJV	1, 1½, 2 or 3	.18
"	GJV	4, 5 or 6	.19

FUSETRON FUSES, ¼ x 1¼ inch



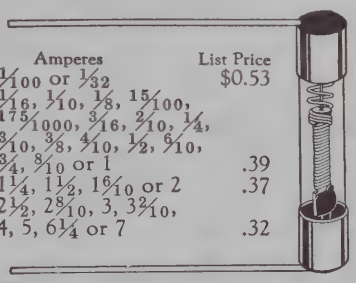
DUAL-ELEMENT SLOW BLOWING TYPE

Stop needless blows from starting currents or surges. Fuse link operates only on very high overloads or short-circuits. Thermal cutout functions on low overloads — cannot operate quickly at any load, so long time-lag is obtained. Yet protection is afforded against short-circuits or continued overloads.
Test specification—carry 110%, open at 135% within 1 hour.
Approximate blowing time: at 200% load **MDL** 25 sec. **MDX** 12 sec.
at 300% " " 8 " " 3 "
at 500% " " 3 " " ½ "
125 and 250 volt sizes listed by Underwriters' Laboratories Inc.

Voltage	Symbol	Amperes	List Price
250 or less	MDL	1/100 or 1/32	$0.43
250 or less	MDL	1/16, 1/10, 1/8, 15/100, 175/1000, 3/16, 2/10, 1/4, 3/10, 3/8, 4/10, ½, 6/10, 7/10, ¾, 8/10 or 1	.32
"	MDX	1¼, 1½, 1 8/10 or 2	.35
125 or less	MDL	1 2/10, 1¼, 1½, 1 8/10 or 2	.30
"	MDL	2½ or 2 8/10	.23
"	MDX	3, 3 2/10, 4 or 5	.23
"	MDX	6¼ or 7	.27
32 or less	MDL	3, 3 2/10, 4, 5, 6¼, 8, 10, 15, 20, 25 or 30	.23

FUSETRON PIG-TAIL FUSES

Leads are No. 20 tinned wire 1½ inch long. Listed by Underwriters' Laboratories Inc. Test specifications and performance, MDV 1/100 to 2 8/10 amps. same as MDL fuses. 3 to 7 amps. same as MDX fuses.



Voltage	Symbol	Amperes	List Price
250 or less	MDV	1/100 or 1/32	$0.53
"	MDV	1/16, 1/10, 1/8, 15/100, 175/1000, 3/16, 2/10, 1/4, 3/10, 3/8, 4/10, ½, 6/10, ¾, 8/10 or 1	.39
125 or less	MDV	1¼, 1½, 1 6/10 or 2	.37
"	MDV	2½, 2 8/10, 3, 3 2/10, 4, 5, 6¼ or 7	.32

BUSS INDICATING FUSES, ¼ x 1¼ inch



Fibre Tube. Silverplated indicating pin extends from end of fuse when fuse is blown. This pin can also be used to actuate a signal by using fuses in BUSS HKA Fuseholders or BUSS Signal Fuse Blocks. GLD fuses in sizes larger than 5 amperes have dual tube construction. They can be used in BUSS Signal Fuse Blocks but not in HKA Fuseholders.
125 volt sizes listed by Underwriters' Laboratories Inc.
Test specifications—carry 110%, open at 135% in one hour or less.

Voltage	Symbol	Amperes	List Price
125 or less	GLD	¾	$0.70
"	GLD	1, 2, 3, or 5	.53
32 or less	GLD	8, 10, 12 or 15	.74

GBA FUSES

GBA fuses are the same as BUSS GLD fuses EXCEPT that the indicating pin is RED. This results in a more vivid indication of an open fuse when the fuses are used in BUSS HLD fuseholders.

GBA fuses have same electrical and physical characteristics as BUSS GLD fuses. They are made in the same ampere sizes up to 5 ampere, and are also priced the same.

To specify; give symbol **GBA** and amperes.

BUSSMANN MFG. DIVISION McGraw-Edison Co.

BUSS Fuses

FUSETRON DUAL-ELEMENT Fuses and Fuse Holders

for Protection of TV, Radios, Instruments and Electronic Equipment

FUSETRON FIBRE TUBE FUSES

13/32 x 1½ inch



Dual-Element — Slow Blowing Type. Avoid needless blows from starting currents or surges. Have fuse link that operates only on very high overloads or short-circuits, and thermal cutout on low overloads. Thermal cutout cannot operate quickly at any load, hence long time-lag is obtained. Yet protection is provided against short-circuits or continued overloads.

Test specification—carry 110%, open at 135% within 1 hour.
Approximate blowing time: at 200% load 25 seconds.
at 300% load 8 seconds.
at 500% load 5 seconds.

125 and 250 volt sizes listed by Underwriters' Labs., Inc.

Voltage	Symbol	Amperes	List Price
250 or less	FNM	1/10, 15/100, 2/10, 3/10, 4/10, 1/2, 6/10, 8/10, 1, 1 1/8, 1 1/4, 1 4/10, 1 6/10, 1 8/10, 2, 2 1/4, 2 1/2, 2 8/10, 3 2/10, 3 1/2, 4, 4 1/2, 5, 5 6/10, 6 1/4, 7, 8, 9 or 10	$0.38
125 or less	FNM	12 or 15	.38
32 or less	FNM	20, 25 or 30	.38

SIGNAL OR VISUAL INDICATING TYPE

FNA are FNM Fusetron fuses with silverplated indicating pin that extends from fuse when fuse blows. Pin can also be used to actuate a signal by using fuse in BUSS Signal Fuse Block. Fuses in sizes larger than 10 ampere have a dual tube construction. They can be used in BUSS Signal fuse blocks but not in the HPC-C fuseholder.

Voltage	Symbol	Amperes	List Price
250 or less	FNA	1/10, 15/100, 2/10, 3/10, 4/10, 1/2, 6/10, 8/10	$0.73
125 or less	FNA	1, 1 1/8, 1 1/4, 1 4/10, 1 6/10, 1 8/10, 2, 2 1/4, 2 1/2, 2 8/10, 3, 3 2/10, 3 1/2, 4, 4 1/2, 5, 5 6/10, 6, 6 1/4, 7, 8, 10	.73
"	FNA	12 or 15	.80
32 or less	FNA	20, 25 or 30	.80

BUSS FUSES 600 Volt. UL Listed. 13/32 x 1 3/8 inch.

Fibre tube. For protection of control circuits or wherever a fuse with "quick-blowing" characteristics is desirable. Listed by Underwriters' Laboratories Inc.

Voltage	Symbol	Amperes	List Price
600 or less	BBS	4/10, 3/4 or 8/10	$0.25
600 or less	BBS	1, 2, 3, 4 or 5	.23

Fuseholder for BBS fuses. Use HPC-L fuseholder or No. 3845 single pole, side barrier porcelain fuse block. Only BBS fuses (or others with exact same dimensions) will fit these holders. This assures replacement of proper size fuse.

BUSS Insulated TWIN-CLIPS

For ¼ inch FUSES.



Make it easy to replace blown pigtail fuses without cutting or unsoldering pigtails. Just snap Twin-Clips on blown fuse and insert ordinary or Fusetron fuse of same amperage as blown fuse.

Strong spring clip pressure assures good contact.

		List Price
No. 3434 BUSS Insulated Twin Clips	One pair	$0.22

HIGH INTERRUPTING CAPACITY FUSES

13/32 x 1½ inch



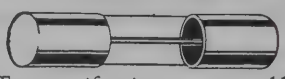
Glass fibre melamine tube with sand filler surrounding a silver fuse element. For use on circuits capable of delivering currents as high as 100,000 amperes at voltages of 600 or less. AC only.

Test specification—carry 110%, open at 135% in 1 hour or less.

Voltage	Symbol	Amperes	List Price
600 or less	KTK	1/10, 1/8, 2/10, 1/4, 3/10, 1/2, 3/4, 1, 1 1/2, 2, 3, 4, 5, 6, 8, 10, 15, 20, 25, 30	$1.33

BUSS GLASS TUBE FUSES

9/32 x 1¼ inch



Formerly called 4 AG.

Test specifications — carry 110%, open at 135% within 1 hour except 35 and 40 ampere which open at 300% in 2 to 4 seconds when tested in a standard 30 ampere test circuit.

Voltage	Symbol	Amperes	List Price
250 or less	AGS	1/16	$0.49
	AGS	1/8	.34
	AGS	1/4, or 1/2	.17
	AGS	1, 2, 2 1/2 or 3	.15
32 or less	AGS	5, 10, 15, 20, 25, 30	.13
	AGS	35, 40 or 50	.15

BUSS HIGH VOLTAGE FUSES



HVA and HVB — HVJ and HVL

Designed for protection of circuits up to 20 KW on DC and 30 KVA on AC.

Test specification—carry 110%, open at 135% within 1 hour.

Voltage	Symbol	Amperes	Diameter of caps	Length inches	List Price
1000 or less	HVA	3/8, 1/2, 3/4, 1, 1 1/2, 2	13/32	3	$0.32
2500 or less	HVB	1/2, 3/4, 1, 1 1/2 or 2	13/32	4 1/2	.42
5000 or less	HVJ	1/16, 1/8, 1/4, 3/8, 1/2, 3/4, 1, 1 1/2 or 2	13/16	5	.78
10000 or less	HVL	1/16, 1/8, 1/4, 3/8, 1/2, 3/4, 1, 1 1/2 or 2	13/16	10	1.56

13/32 x 1½ inch INDICATING FUSES

Has silver plated indicating pin that extends from fuse when open — gives visual indication or can actuate signal.

250 or less	MIC	1, 2, 3, 5, 10 or 15	$0.65
32 or less	MIC	20, 25 or 30	.65

250 volt sizes listed by Underwriters' Laboratories Inc.

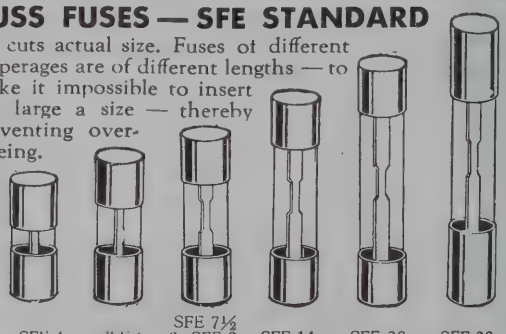
Fuses made in accordance with Military Specifications.

Red button on indicating pin extends from end of fuse when fuse opens.

			List Price
250 or less	MIN	1, 2, 3, 5, 10 or 15	$0.56
125 or less	MIN	20, 25 or 30	.56

BUSS FUSES — SFE STANDARD

All cuts actual size. Fuses of different amperages are of different lengths — to make it impossible to insert too large a size — thereby preventing over-fuseing.



SFE 4 — SFE 6 — SFE 7½ & SFE 9 — SFE 14 — SFE 20 — SFE 30

Glass tube — diameter ¼ inch. Length as per table below.

Test specification—carry 110%, open at 135% within 1 hour.

Listed by Underwriters' Laboratories Inc.

Made according to specifications of Society of Automotive Engineers.

Voltage	Symbol & Amperes	Length Inches	Pounds per 100	List Price
32 or less	SFE 4	5/8	.73	$0.07
"	SFE 6	3/4	.75	.07
"	SFE 7½	7/8	.80	.06
"	SFE 9	7/8	.80	.06
"	SFE 14	1 1/16	.82	.053
"	SFE 20	1 1/4	.87	.053
"	SFE 30	1 7/16	1.60	.07

BUSSMANN MFG. DIVISION McGraw-Edison Co.

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BUSS Fuses

FUSETRON DUAL-ELEMENT Fuses and Fuse Holders

for Protection of TV, Radios, Instruments and Electronic Equipment

TRON PIGTAIL FUSES

Sub-miniature — hermetically sealed — visual indicating

Tron fuses can easily be incorporated into miniaturized devices or components without sacrifice of space. Designed for installation in high shock and vibration ambients.

They may be potted or encapsulated. Are self-protecting and operate without exterior flash or venting. Glass tube construction permits visual inspection of element.

Available in ratings from 1/100 to 15 amperes — for use on circuits of 125 volts or less where available fault current is not over 50 amperes. Color coded to indicate ampere rating.

Made with 1½ inch axial pigtails or with 1 inch right angle pigtails. Leads are of No. 24 tinned copper wire for ratings 1/100 thru 5 amp. — No. 18 tinned copper wire for ratings 7 thru 15 amp.

Test specifications —
Characteristic A — Carry 100% load, open within 10 seconds at 200% load.
Characteristic B — Carry 100% load, open within 10 seconds at 150% load.

GFA TRON Fuses Body size only .145 x .300 inches

Symbol & Amperes	Test Specification	Color Code One End	Color Code Other End	*Approximate Resistance in Ohms	List Price
GFA 1/20	A	Yellow	Yellow	20.0	$0.67
GFA 1/16	A	Brown	Brown	9.0	.67
GFA 1/10	A	Red	Red	4.0	.67
GFA 1/8	A	Orange	Orange	3.0	.67
GFA 15/100	B	Red	Yellow	2.1	.67
GFA 2/10	B	Red	Blue	1.8	.67
GFA 1/4	B	Red	Purple	0.9	.67
GFA 3/10	A	Green	Green	0.7	.67
GFA 4/10	A	Blue	Blue	0.48	.67
GFA 1/2	B	Orange	Green	0.35	.67
GFA 6/10	B	Orange	Blue	0.25	.67
GFA 3/4	B	Orange	Purple	0.22	.58
GFA 1	B	Yellow	Green	0.17	.58
GFA 1½	B	Yellow	Purple	0.12	.58
GFA 2	B	Green	Blue	0.07	.58
GFA 3	B	Blue	Purple	0.05	.58
GFA 4	B	Purple	Brown	0.040	.58
GFA 5	B	Brown	Black	0.035	.58
GFA 7	A	Purple	Green	0.013	.58
GFA 8	A	Green	Black	0.011	.58
GFA 15	A	Black	Purple	0.004	.58

GLN and GLX TRON Fuses

Body size only .140 x .300 inches

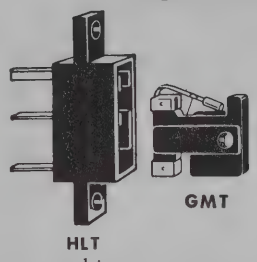
Symbol & Amperes	Test Specification	Color Code One End	Color Code Other End	*Approximate Resistance in Ohms	List Price
GLN 1/100	A	Red	Orange	130.0	$1.84
GLN 1/32	A	Red	Brown	23.0	1.55
GLN 1/20	A	Yellow	Yellow	20.0	1.55
GLN 1/16	A	Brown	Brown	9.0	1.55
GLN 1/10	A	Red	Red	4.0	1.55
GLN 1/8	A	Orange	Orange	3.0	1.55
GLN 3/10	A	Green	Green	0.7	1.55
GLN 4/10	A	Blue	Blue	0.48	1.55
GLX 15/100	B	Red	Yellow	2.1	2.03
GLX 2/10	B	Red	Blue	1.8	2.03
GLX 1/4	B	Red	Purple	0.9	2.03
GLX 1/2	B	Orange	Green	0.35	2.03
GLX 6/10	B	Orange	Blue	0.25	2.03
GLX 3/4	B	Orange	Purple	0.22	2.03
GLX 1	B	Yellow	Green	0.17	2.03
GLX 1½	B	Yellow	Purple	0.12	2.03
GLX 2	B	Green	Blue	0.07	2.03
GLX 3	B	Blue	Purple	0.05	2.03
GLX 4	B	Purple	Brown	0.040	2.03
GLX 5	B	Brown	Black	0.035	2.03

*Cold resistance obtained on Wheatstone Bridge. Other ratings are available with a nominal test charge
Approximate Unit weight 0.33 grams. Shipping weight 0.116 lbs. per 100.

BUSS GMT Fuses — HLT Fuseholders

Signal Indicating

Alarm Activating



For multiple circuit apparatus where space is at a premium

GMT fuses and HLT fuseholders permit multiple mounting of fuses in limited space, for protection of communication equipment, business machines, computers, control circuits or any equipment operating at 300 volts or less.

Holders take panel mounting space of only ¼ inch horizontal by 1 15/32 inches vertical.

Fuses give visual indication when blown by release of a spring indicator. The spring carries a colored plastic flag, in a different color for each fuse ampere rating.

The indicator spring when released makes contact with an alarm terminal in the fuseholder, which can be connected to activate a signal circuit.

Blown fuses are readily replaced without use of insulated tools. When mounted on minimum centers, removal of fuse is easy by use of a wire hook.

Buss GMT Fuses

Available Ratings and Color Code

300 volts or less

Test specification — carry 100% for 10 minutes; open at 150% within 5 minutes.

Symbol & Amperes	Color of Indicator	Symbol & Amperes	Color of Indicator
GMT 18/100	YELLOW	GMT 1⅓	WHITE
GMT ¼	VIOLET	GMT 2	ORANGE
GMT ½	RED	GMT 3	BLUE
GMT 65/100	BLACK	GMT 5	GREEN
GMT ¾	BROWN	GMT 7½	BLACK-WHITE
GMT 1	GRAY	GMT 10	RED-WHITE

Symbol GMT (All Sizes) — List Price $0.66

Buss HLT Fuseholders

Buss HLT fuseholders take all sizes of GMT fuses.

HLT — List Price $0.69

GMW Fuse and HWA Fuseholder

Sub-miniature fuseholder combination



Body size only .270 x .250 inches

Offering a light weight, space-saving protective device for space-tight applications in multiple circuit apparatus. GMW fuse has transparent window for visual inspection of element. Fuse may be used alone for mounting into printed circuit boards.

HWA holder can be panel mounted easily — or soldered on printed circuit boards.

AF knob for holder makes holder water-proof from front of panel.

Test specifications — carry 100%, open at 200% within 10 seconds or less.
Interrupting rating — 300 ampere at 125 volts

Symbol	Ampere	List Price
GMW	1/200, 1/100, 1/64, 1/32 and 1/16	$1.12
GMW	1/10, 2/10, ¼, 3/10, 4/10, ½, 6/10, ¾, 1, 1½, 2, 3, 4, and 5	.86
HWA	fuseholder only, takes all sizes of GMW fuses	.94
AF	knob for HWA fuseholder	.13

BUSSMANN MFG. DIVISION McGraw-Edison Co.

BUSS Fuses

FUSETRON DUAL-ELEMENT Fuses and Fuse Holders

for Protection of TV, Radios, Instruments and Electronic Equipment

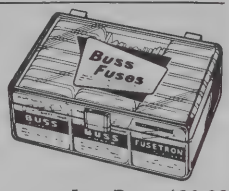
BUSS GRASSHOPPER FUSES



Give a visible signal or activate an alarm circuit when blown. Color coded to indicate type and amperage.

Symbol	Amps	Volts	Color Code	List Price
35A	1⅓	90 or less	White	$0.38
35B	1⅓	90 or less	White	.38
35B	2	90 or less	Orange	.38
35C	2	90 or less	Orange	.38
35D	1⅓	90 or less	White	.77
35E	3	90 or less	White	.42
35F	½	90 or less	Red	.38
35G	3	90 or less	Blue	.38
35H	5	90 or less	Green	.38
35R	1 8/100	90 or less	Yellow	.49
35T	65/100	90 or less	Tan	.56
35J	½	160 or less	Red	.56
35K	1⅓	160 or less	White	.77
35L	2	160 or less	Orange	.77
35M	3	160 or less	Blue	.69
35N	5	160 or less	Green	.69
35P	¾	160 or less	Tan	.49
35S	¼	160 or less	Pink	.56

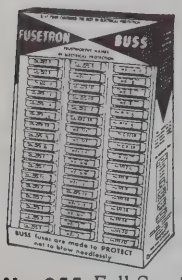
BUSS FUSE TV Service Kit Assortment



Contains 101 of the most popular fuses — 20 slide-cover boxes — and five pairs of BUSS No. 4121 Twin Clips for use in replacing blown pigtail fuses. All packed in a clear plastic box.

Symbol, **TV-STD** List Price $20.90

BUSS ELECTRONIC FUSE ASSORTMENTS



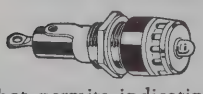
. . . with handy inventory feature

Helps serviceman have fuse he needs right in front of him . . . no delay in work to find a fuse. Keeps all the fuse stock normally needed for complete servicing of TV sets in smallest possible space.

Each 5-in box has its own shelf list. Size and type of fuse shown on label at back of shelf . . . when shelf is empty label shows what fuses need to be immediately reordered.

	List Price
No. 255 Full-Service Electronic Fuse Assortment (255 fuses — 30 different sizes)	$43.31
No. 130 Special Electronic Fuse Assortment (130 fuses — 26 different sizes)	$21.84

PANEL MOUNTED VISUAL INDICATING FUSEHOLDER for ¼ x 1¼ inch GBA Fuse (or GLD fuse)





Has transparent, bayonet type knob that permits indicating pin of open fuse to be readily seen.

Gives positive identification of open circuit even if power is off.

Vibration cannot cause failure because terminals are held mechanically and by solder.

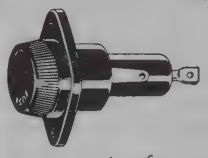
Neoprene washer and steel locking nut furnished with each holder.

Body is molded phenolic, can be used on panels up to 5/16 inch thick.

Normal current carrying capacity; 30 ampere.

	List Price
HLD takes any size GBA fuse (or GLD fuse).....	$0.66
No. 5487 Knob Only — will fit HKP holder, makes it visual indicating when used with GBA fuse.....	.28

PANEL MOUNTED HOLDERS for 13/32 x 1½ inch Fuses



Screw type knob. Molded phenolic body. Holder attached to panel by screws or rivets. Strong coil spring provides contact pressure on ends of fuse. Normal current carrying capacity 30 amperes. Listed by Underwriters' Laboratories for 15 ampere rating for any voltage up to 250.

HPC (for FNM and KTK fuses) ..... List Price $0.89

HPC-C (Same as above, but has transparent knob) ..... List Price $1.11

HPC-L Holder for 13/32 x 1⅜ inch Fuses.

Like **HPC** Holder. Has Underwriters' Laboratories approved listing for 5 ampere rating and any voltage up to 600.

HPC-L (for BBS fuses) ..... List Price $0.89

PANEL MOUNTED HOLDERS for ¼ Inch Fuses





Can be used on panels up to 5/16 inch thick. Bayonet type knob. No screw driver is needed.

Side terminal is held mechanically as well as by solder. Heat of soldering wire to it will not cause it to loosen.

Vibration will not cause failure of terminals as they are designed to stand severe service.

Neoprene washer and steel locking nut furnished with each holder.

Wire hole in terminals; .115 inch.

Normal current carrying capacity; 30 amperes.

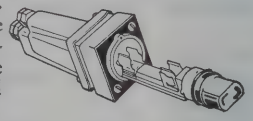
Listed by Underwriters' Laboratories Inc.

	List Price
HJM for ¼ x 1 inch fuses (AGX, SFE 14)	$0.58
HJM-CC (Same as HJM but projects shorter distance behind panel).....	.58
HKP for ¼ x 1¼ inch fuses (ABC, AGC, SFE20, MDL, MDX, MTH)	.58
HKP-CC (Same as HKP but projects shorter distance behind panel)	.58

Above holders also available with quick-connect terminals

PANEL MOUNTED, LAMP INDICATING FUSEHOLDERS for ¼ x 1¼ and 13/32 x 1½ inch fuses

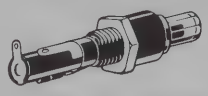
Made to Military Specifications.



Available as single or two pole units. Transparent knob permits neon indicating light to be readily seen. Body of molded alkyd.

Type	Pole	Fuse Size Inches	Circuit Voltage	Max. Amp. Rating	List Prices
HGB-C	Single	¼ x 1¼	90 to 250	30	Prices
HGA-C	Two	¼ x 1¼	90 to 250	30	on
HGC	Single	13/32 x 1½	90 to 500	30	Request

LAMP INDICATING FUSEHOLDERS



For panel mounting ¼ x 1 and ¼ x 1¼ inch fuses. Bayonet type knob. Molded phenolic body. Strong coil spring provides contact pressure at ends of fuse. Transparent knob permits indicating light to be readily seen.

Type	Fuse Size Inches	Circuit Voltage	Max. Amp. Rating	Type Lamp	List Price
HKL	¼ x 1¼	90 to 250	20	Neon	$2.39
HKL-X	¼ x 1¼	90 to 250	20	Neon	2.39
HKR	¼ x 1¼	22 to 33	20	Incand.	3.91
HKX	¼ x 1¼	22 to 33	20	Incand.	3.91
HKT	¼ x 1¼	13 to 22	20	Incand.	3.91
HKU	¼ x 1¼	4 to 6	20	Incand.	3.91
HJL	¼ x 1	90 to 250	20	Neon	2.39

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BUSS Fuses

FUSETRON DUAL-ELEMENT Fuses and Fuse Holders

for Protection of TV, Radios, Instruments and Electronic Equipment

BUSS MINIATURE GLASS TUBE FUSES

5 mm x 20 mm (.197 x .769 inches)



Designed for protection of miniaturized circuits or equipment. Commonly used in equipment of foreign make.

Test specifications — Carry 100% load indefinitely.
Open at 200% load within 10 seconds.

Voltage	Symbol	Amperes	List Price
125 volts or less if available fault current is not over 50 amps.	GMA	1/8	$0.48
	GMA	1/4, 1/2, or 7/10	.36
	GMA	1, 1 3/10, 1 1/2, or 2	.30
	GMA	3, 4, 5, 6, or 10	.30

GJU fuses now called GMA.



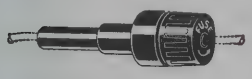
HKA SERIES

Lamp Indicating, Signal Activating holders for 1/4 x 1 1/4 inch BUSS type GLD fuses

Used on circuits of 125 volts or less. Flashes a light, rings a bell, trips a relay or gives other signals to tell you when and where a fuse blows.

Symbol		List Price
HKA	for 1/4 x 1 1/4 inch GLD fuses, 3/4 to 5 amps. GLD fuses listed under Indicating fuses.	$5.22

IN-THE-LINE HOLDERS for 1/4 inch fuses



For mounting fuse in wire. Holders consist of body and bayonet type knob — two contacts ready to be staked on ends of wire — and a contact pressure spring.

Holders can also be mounted in panel up to 5/16 inch thick by means of a No. 9969 Spring nut (Nut not furnished). Flat area on holder permits locking against rotation.

Normal current carrying capacity: 15 amperes. Maximum Voltage: 250.

Contacts designed to take different size wire. For 18 to 22 wire add "-A" to symbol. For 14 to 16 wire add "-B" to symbol. (Example HHJ-A).

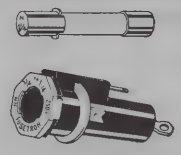
Symbol	Fuse Size Inches	List Price
HHJ	1/4 x 1 1/4	$0.28
HHI	1/4 x 1 or 1 1/16	.28
HHH	1/4 x 7/8	.28
HIG	1/4 x 3/4	.28
HIF	1/4 x 5/8	.28

SERIES HD and HA

These holders are the same in all details and dimensions as the HH and HI series — EXCEPT that the holding ears in the bayonet knob are of molded phenolic instead of being of metal.

Symbol	Fuse Size Inches	List Price
HDJ	1/4 x 1 1/4	$0.22
HDI	1/4 x 1 or 1 1/16	.22
HDH	1/4 x 7/8	.22
HAG	1/4 x 3/4	.22
HAF	1/4 x 5/8	.22
No. 9969	Spring nut for panel mounting above holders	.041

FUSETRON and BUSS MATCHED FUSES and FUSEHOLDERS



Safeguard against use of wrong size and type of fuse. FUSETRON Type N are "slow-blowing" fuses for use where harmless surges or starting currents might cause ordinary fuses to open needlessly. Use in Type HN fuseholder.

BUSS Type C are "quick-blowing" fuses for fast interruption of fault current. Use in Type HC fuseholder.
Listed by Underwriters' Laboratories Inc.

FUSETRON FUSE			FUSEHOLDER	
Symbol & Amperes	List Price	Net Price	Symbol & Range	List Price
N 1/100	$0.46	$0.28		
N 1/32	.46	.28		
N 1/16	.33	.20		
N 1/10	.33	.20	HN	
N 1 5/100	.33	.20	0 to 3/10	$0.23
N 2/10	.33	.20		
N 1/4	.33	.20		
N 3/10	.33	.20		
N 4/10	.33	.20	HN	
N 1/2	.33	.20	3/10 to 1/2	.23
N 6/10	.33	.20		
N 7/10	.33	.20	HN	
N 3/4	.33	.20	1/2 to 3/4	.23
N 8/10	.33	.20		
N 1	.33	.20	HN	
N 1 1/4	.30	.18	3/4 to 1 1/4	.23
N 1 6/10	.30	.18	HN	
N 1 3/4	.30	.18	1 3/10 to 1 3/4	.23
N 2	.30	.18	HN	
N 2 1/2	.28	.17	1 3/4 to 2 1/2	.23
N 2 8/10	.28	.17		
N 3 2/10	.28	.17	HN	
N 3 1/2	.28	.17	2 1/2 to 3 1/2	.23
N 4	.28	.17	HN	
N 5	.28	.17	3 1/2 to 5	.23
N 6 1/4	.28	.17	HN	
N 7	.28	.17	5 to 7	.23

BUSS FUSE			FUSEHOLDER	
Symbol & Amperes	List Price	Net Price	Symbol & Range	List Price
C 1/32	$0.49	$0.29		
C 1/16	.32	.19		
C 1/8	.24	.14	HC	
C 3/16	.24	.14	0 to 3/10	$0.23
C 1/4	.19	.11		
C 3/10	.19	.11		
C 3/8	.19	.11	HC	
C 1/2	.19	.11	3/10 to 1/2	.23
C 3/4	.19	.11	HC 1/2 to 3/4	.23
C 1	.11	.066	HC	
C 1 1/4	.11	.066	3/4 to 1 1/4	.23
C 1 1/2	.11	.066	HC	
C 1 3/4	.11	.066	1 1/4 to 1 3/4	.23
C 2	.11	.066	HC	
C 2 1/2	.11	.066	1 3/4 to 2 1/2	.23
C 3	.11	.066	HC	
C 3 1/2	.14	.084	2 1/2 to 3 1/2	.23
C 4	.14	.084	HC	
C 5	.14	.084	3 6/10 to 5	.23
C 6	.14	.084	HC	
C 7	.14	.084	5 to 7	.23
C 8	.20	.12	HC	
C 10	.21	.13	7 to 10	.23

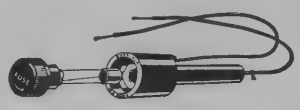
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BUSS Fuses
FUSETRON DUAL-ELEMENT Fuses and Fuse Holders
for Protection of TV, Radios, Instruments and Electronic Equipment

BUSS In-the-Line or Panel Mounted FUSE and HOLDER COMBINATIONS

For voltages up to 300



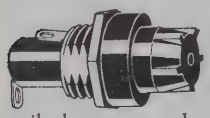
Safeguards against use of wrong type and size of fuse. Fuse and knob are in one piece — when fuse opens, entire fuse-knob assembly is replaced.

Fuseholder can be mounted in-the-line — or panel mounted for which a snap-in steel clip is available for mounting on any panel 1/32 to 1/16 inch thick.

Holders come with 6 inch leads of No. 18 solid copper insulated wire, unless specified otherwise.

		List Price
HLR	holder safeguards against use of wrong type of fuse — (takes all ampere sizes of GLR and GMF fuses)	$0.25
HLQ	holder is size limiting type and is made in 6 fuse ranges. Takes either GLQ or GMQ fuses up to the largest ampere size marked in holder	.28

SPACE SAVER Panel Mounted FUSEHOLDER For 1/4 x 1 1/4 inch fuses or 9/32 x 1 1/4 inch fuses



A compact, space saver fuseholder only 1 5/8 inches long — extends just 29/32 inches behind front of panel.

Takes 1/4 x 1 1/4 inch fuses and can easily be converted to take 9/32 x 1 1/4 inch fuses simply by changing the screw type knob.

Knob is designed for easy gripping even with gloves.

Fuseholder is of molded phenolic and will withstand sever vibration, shock and other environmental conditions.

Neoprene washer and zinc plated, chromate dipped steel fastening nut furnished with each holder.

Normal current carrying capacity; 30 amperes for any voltage up to 250.

Symbol		List Price
HLF	for 1/4 x 1 1/4 inch fuses	$0.58
HCL	for 9/32 x 1 1/4 inch fuses	.58

BUSS Add-On Fuse Blocks for 13/32 x 1 1/2 inch Fuses

Single-pole fuseblock and separate end barrier assemble into unit of one or more poles. Units lock together. New poles can be added to either end of existing block. Made of molded phenolic. Marking strips to identify each circuit available.

Type	Description	List Price
3742	End-Barrier Only	$0.18
3743	One-Pole Block Only	1.25
Marking Strip in 50 inch length		.61

When ordering, specify number of end barriers and one-pole blocks desired. Only one end barrier needed for each assembled fuse block of any number of poles.

BUSS STANDARD FUSE BLOCKS

Available from 1 to 12 poles. Have laminated black phenolic base. Clips of strong spring, Albaloy plated, highly resistant to corrosion with great gripping strength. Types 3823 and 3828 have solder terminals firmly seated in small base. Type 3833 has screw terminals on full base that provides ample insulation around terminals.

Cat. No. Type	Base Dim.	No. Poles	List Each
For 1/4 x 1 1/4" Fuses — Solder Terminals			
3823-1	1/2 x 1 5/8	1	$0.24
3823-2	1 1/8 x 1 5/8	2	.48
3823-3	1 3/4 x 1 5/8	3	.72
3823-4	2 3/8 x 1 5/8	4	.96
3823-5	3 x 1 5/8	5	1.20
3823-6	3 5/8 x 1 5/8	6	1.44
3823-7	4 1/4 x 1 5/8	7	1.68
3823-8	4 7/8 x 1 5/8	8	1.92
3823-9	5 1/2 x 1 5/8	9	2.16
3823-10	6 1/8 x 1 5/8	10	2.40
3823-11	6 3/4 x 1 5/8	11	2.64
3823-12	7 3/8 x 1 5/8	12	2.88
For 1/4 x 1" Fuses — Solder Terminals			
3828-1	1/2 x 1 3/8	1	$0.24
3828-2	1 1/8 x 1 3/8	2	.48
3828-3	1 3/4 x 1 3/8	3	.72
3828-4	2 3/8 x 1 3/8	4	.96
38 8-5	3 x 1 3/8	5	1.20
3828 6	3 5/8 x 1 3/8	6	1.44
3828-7	4 1/4 x 1 3/8	7	1.68
3828-8	4 7/8 x 1 3/8	8	1.92
3828-9	5 1/2 x 1 3/8	9	2.16
3828-10	6 1/8 x 1 3/8	10	2.40
3828-11	6 3/4 x 1 3/8	11	2.64
3828-12	7 3/8 x 1 3/8	12	2.88
For 1/4 x 1 1/4" Fuses — Screw Terminals			
3833-1	25/32 x 2 3/8	1	$0.52
3833-2	1 11/16 x 2 3/8	2	1.04
3833-3	2 19/32 x 2 3/8	3	1.56
3833-4	3 1/3 x 2 3/8	4	2.08
3833-5	4 13/16 x 2 3/8	5	2.60
3833-6	5 11/16 x 2 3/8	6	3.12
3833-7	6 7/32 x 2 3/8	7	3.64
3833-8	7 1/8 x 2 3/8	8	4.16
3833-9	8 1/32 x 2 3/8	9	4.68
3833-10	8 15/16 x 2 3/8	10	5.20
3833-11	9 27/32 x 2 3/8	11	5.72
3833-12	10 3/4 x 2 3/8	12	6.24

Other standard and special fuses, fuse blocks, fuse clips and fuse holders

If the fuses, fuse blocks, fuse clips and holders shown do not fit your requirements ask for information on other types.

Fuses and fuse mountings to meet JAN and Military specifications also are available.

If you have a special problem in protection send description or sketch giving number of circuits, type of fuse, terminals, etc., desired. We welcome such inquiries.

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LIMITRON FUSES

For Protection of Semi-Conductor Rectifiers

Another Outstanding Development by the Makers of BUSS Fuses

These Limitron fuses are especially designed for the protection of semi-conductor rectifiers. They provide extremely fast opening on overload and fault currents, with a high degree of restriction of the let-thru current.

If each diode is protected by a Limitron fuse, the fuse will open very quickly when the current drawn exceeds the rating of the diode.

Thus when a short-circuit occurs in a diode the fuse opens and takes that diode out of the circuit. This protects other good diodes in the rectifier which might otherwise be damaged.

For time-current characteristic charts ask for BUSS bulletin HLS.

Test specification for all types of BUSS rectifier fuses — carry 100% of rating; open at 1000 seconds on overloads between 120% and 180% of rating; open within 1 second at 250% of rating.



1/4" x 1 1/4"

Symbol & Ampere	Volts	Price Each	Symbol & Ampere	Volts	Price Each
GBB 1	130	$0.54	GBB 9	130	$0.54
GBB 1¼	"	.54	GBB 10	"	.54
GBB 2	"	.54	GBB 12	65	.54
GBB 3	"	.54	GBB 15	"	.54
GBB 5	"	.54	GBB 20	"	.54
GBB 6	"	.54	GBB 25	"	.54
GBB 7	"	.54	GBB 30	"	.54
GBB 8	"	.54			



13/32" x 1 1/2"

Symbol & Ampere	Volts	Price Each	Symbol & Ampere	Volts	Price Each
KAA 1	130	$0.80	KAA 9	130	.80
KAA 2	"	.80	KAA 10	"	.80
KAA 3	"	.80	KAA 12	"	.80
KAA 4	"	.80	KAA 15	"	.80
KAA 5	"	.80	KAA 20	"	.80
KAA 6	"	.80	KAA 25	"	.80
KAA 7	"	.80	KAA 30	"	.80
KAA 8	"	.80			

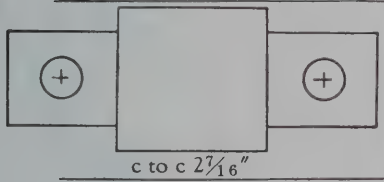


13/16" x 2"

KAH 35	130	$1.97	KAA 70	130	$3.70
KAH 40	"	1.97	KAA 80	"	3.70
KAH 45	"	1.97	KAA 100	"	3.70
KAH 50	"	1.97	KAA 150	"	3.70
KAH 60	"	1.97	KAA 200	"	3.70
			KAA 225	"	3.70
			KAA 250	"	3.70
			KAA 300	"	3.70
			KAA 350	"	3.70
			KAA 400	"	3.70



c to c 2 3/16" — 1 29/32"



c to c 2 7/16"

KAA 450	130	$7.50
KAA 500	"	7.50
KAA 600	"	7.50
KAA 650	"	7.50
KAA 800	"	7.50
KAA 1000	"	7.50



13/32" x 1 1/2"

KAW 1	130	$0.80
KAW 2	"	.80
KAW 4	"	.80
KAW 5	"	.80
KAW 7	"	.80
KAW 10	"	.80
KAW 15	"	.80
KAW 20	"	.80
KAW 30	"	.80



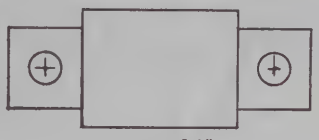
9/16" x 2"

Symbol & Ampere	Volts	Price Each
KAB 1	250	$0.90
KAB 2	"	.90
KAB 3	"	.90
KAB 4	"	.90
KAB 5	"	.90
KAB 6	"	.90
KAB 7	"	.90
KAB 8	"	.90
KAB 9	"	.90
KAB 10	"	.90
KAB 12	"	.90
KAB 15	"	.90
KAB 17½	"	.90
KAB 20	"	.90
KAB 25	"	.90
KAB 30	"	.90



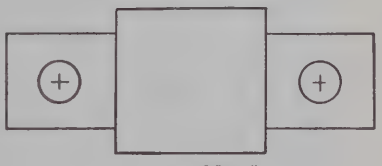
c to c 2 7/16"

KAB 35	250	$3.60
KAB 40	"	3.60
KAB 45	"	3.60
KAB 50	"	3.60
KAB 60	"	3.60



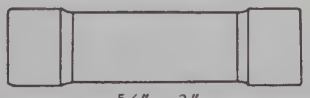
c to c 2 3/8"

KAB 70	250	$5.50
KAB 80	"	5.50
KAB 90	"	5.50
KAB 100	"	5.50
KAB 150	"	5.50
KAB 175	"	5.50
KAB 200	"	5.50



c to c 2 25/32"

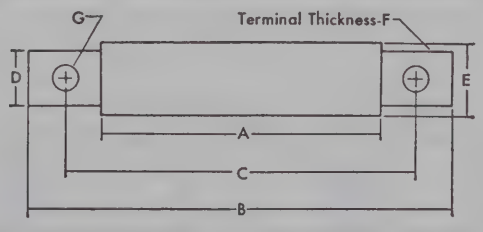
KAB 225	250	$7.10
KAB 250	"	7.10
KAB 300	"	7.10
KAB 350	"	7.10
KAB 400	"	7.10
KAB 500	"	7.10
KAB 600	"	7.10
KAB 800	"	7.10



5/8" x 3"

KAJ 35	600	$2.20
KAJ 40	"	2.20
KAJ 45	"	2.20
KAJ 50	"	2.20
KAJ 60	"	2.20

Symbol & Ampere	Volts	Price Each	Symbol & Ampere	Volts	Price Each
KAC 1	600	$1.20	KAC 60	600	$ 3.45
KAC 2	"	1.20	KAC 70	"	4.25
KAC 3	"	1.20	KAC 80	"	4.25
KAC 4	"	1.20	KAC 90	"	4.25
KAC 5	"	1.20	KAC 100	"	4.25
KAC 6	"	1.20	KAC 110	"	6.45
KAC 7	"	1.20	KAC 125	"	6.45
KAC 8	"	1.20	KAC 150	"	6.45
KAC 9	"	1.20	KAC 175	"	6.45
KAC 10	"	1.20	KAC 200	"	6.45
KAC 12	"	1.20	KAC 225	"	9.20
KAC 15	"	1.20	KAC 250	"	9.20
KAC 17½	"	1.20	KAC 300	"	9.20
KAC 20	"	1.20	KAC 350	"	9.20
KAC 25	"	1.20	KAC 400	"	9.20
KAC 30	"	1.20	KAC 425	"	13.10
KAC 35	"	3.45	KAC 450	"	13.10
KAC 40	"	3.45	KAC 500	"	13.10
KAC 45	"	3.45	KAC 600	"	13.10
KAC 50	"	3.45	KAC 800	"	13.10



Ampere Rating	A	B	C	D	E	F	G
0-30	1 7/8	2 7/8	2 1/2	13/32	9/16	1/16	1/4
35-60	2 27/32	4 3/8	3 5/8	1/2	13/16	3/32	9/32
65-100	3	5	4	3/4	1	1/8	13/32
110-200	3	5 1/2	4 3/8	1 1/8	1 1/2	3/16	13/32
225-400	3	6 1/4	4 3/4	1 5/8	2	1/4	9/16
425-800	3 1/16	6 1/4	4 3/4	2	2 1/2	1/4	9/16

BUSSMANN MFG. DIVISION McGraw-Edison Co.

Centralab. Miniature Switches, Parts



JV-9000 Series

SERIES PA-2000 1½" DIAMETER CERAMIC SWITCHES

Insulated with L-533 steatite; only 1½" dia. (¾" smaller than standard switches). Same ratings as larger switches. Features maximum voltage flashover; high Q, low loss steatite body; minimum intercircuit capacity; insulated front-back clips. Metal parts, except clips and contacts, cadmium plated; withstand 25-hour salt spray test. Rated: 2.75 amps, 15 v. DC; 230 ma, 115 v. AC, make-break resistive load. Breakdown, 1500 v. AC rms between critical parts. One-piece shaft for accurate indexing. Adjustable stop or continuous rotation mtg. using single hole with locating lug. Bushing ¾"-32 thread, ⅜" long. Shaft, full round ¼" dia. x 2¼" long from mtg. surface. With mtg. nut, lockwasher and knob. Shpg. Wt., 3 oz. per section.
For switches to meet military specifications, write for prices and information.



PA-2000

SERIES PA-1000 1½" DIAMETER PHENOLIC SWITCHES

Insulated with type PBE laminated phenolic per MIL-3115-B. Same size as PA-2000 ceramic switches. Rated: 2 amps, 15 v. DC, 150 ma, 110 v. AC. Breakdown, 1000 v. AC. Positive, adjustable stop or continuous rotation; 30° or 60° detents available. Withstand 25-hour salt spray test. With knob. Shpg. Wt., 3 oz. per section.
Military specifications available as above.

MINIATURE ROTARY SWITCHES

No. Sect.	Total No. Poles	PA-2000 Ceramic CRL No. PA- Shtg.	Non-Shtg.	Total Pos.	PA-1000 Phenolic CRL No. PA- Shtg.	Non-Shtg.	Total Pos.
1	1	2000	2001	2—12	1000	1001	2—11
1	2	2002	2003	2—6	1002	1003	2—5
2	2	2004	2005	2—12	1004	1005	2—11
1	3	2006	2007	2—5	1006	1007	2—3
3	3	2008	2009	2—12	1008	1009	2—11
1	4				1010	1011	2
2	4	2010	2011	2—6	1012	1013	2—5
4	4	2012	2013	2—12	1014	1015	2—11
1	5	2014	2015	2—3			
5	5	2016	2017	2—12	1016	1017	2—11
1	6	2018	2019	2			
2	6	2020	2021	2—5	1018	1019	2—3
3	6	2022	2023	2—6	1020	1021	2—5
6	6	2024	2025	2—12	1022	1023	2—11
2	8				1024	1025	2
4	8	2026	2027	2—6	1026	1027	2—5
3	9	2028	2029	2—5			
1	12				1028	1029	2
2	10	2030	2031	2—3			
5	10	2032	2033	2—6	1030	1031	2—5
2	12	2034	2035	2			
6	12	2036	2037	2—6	1032	1033	2—5
3	15	2038	2039	2—3			
1	18	2040	2041	2			

SPECIAL CIRCUIT AND 60° INDEXING SWITCHES

1	1	2052*		2—10	1034*		2—10
1	1	2042†		2—10	1040†		2—10
2	2	2048‡	2049‡	2—12			
2	2	2050§		4			
1	1		2043††	2—6		1035††	2—6
2	2		2045††	2—6		1037††	2—6

*All shorted to common in full CCW, progressively opened and dropped with CW rotation. †All open in full CCW, progressively picked up and shorted to common with CW rotation. ‡Silver clips and contacts. §For switching dual lines. ††60° Indexing; 1½" spacing between sections.



PA-1000

SEPARATE SECTIONS

For use with 30° index assemblies No. PA-300, PA-301 and PA-302, except Nos. PA-17, PA-20 and PA-45, for use with 60° Index assemblies PA-304 and PA-305.

No. Poles	Indexing	PA-2000 Ceramic CRL No. PA- Shtg.	Non-Shtg.	Total Pos.	PA-1000 Phenolic CRL No. PA- Shtg.	Non-Shtg.	Total Pos.
1	30°	0	1	2—12	30	31	2—11
2	30°	2	3	2—6	32	33	2—5
3	30°	4	5	2—5	34	35	2—3
4	30°				36	37	2
5	30°	6	7	2—3			
6	30°	8	9	2			
1	30°	10*	19*	2—5	38*	39*	2—5
2	30°	11**	18**	2—11	40**	41**	2—11
1	30°	12††		2—10	43†		2—10
1	30°	13†		2—10	49††		2—10
1	60°	20	17	2—6		45	2—6

*Unused contacts one side of common connected and shorted out. **All unused contacts connected and shorted out. †Active contacts shorted to common in full CCW, progressively opened and dropped with CW rotation. ††All active contacts open in full CCW, progressively picked up and shorted to common with CW rotation.

SERIES JV-9000 HEAVY-DUTY POWER SWITCHES

Rotary power switch insulated with Grade L-533 steatite. Rated: 9 amps, 110v. AC; 30 amps, 5 v. DC; 15 ma, 2500 v. AC. Breakdown, 3000 v. AC rms between critical parts. Coin silver contacts; 20° indexing adjustable stop. Mtg. bushing ¾"-32 thread, ⅜" long. Sections 2⅜6" dia. Shipping Wt., 6 oz. per section.

SERIES JV-9000 ROTARY SWITCHES

CRL Number Shorting	Non-Shorting	Poles to Section	No. Sections	No. Poles	No. Positions
JV-9000	JV-9001	1	1	1	2—17
JV-9002	JV-9003	3	1	3	2—5
JV-9004	JV-9005	1	2	2	2—17
JV-9006	JV-9007	3	2	6	2—5
JV-9008	JV-9009	1	3	3	2—17
JV-9010	JV-9011	3	3	9	2—5
JV-9012	JV-9013	1	4	4	2—17
JV-9014	JV-9015	3	4	12	2—5
JV-9016	JV-9017	1	5	5	2—17
JV-9018	JV-9019	3	5	15	2—5
JV-9020	JV-9021	1	6	6	2—17
JV-9032	JV-9033	2	1	2	2—8
JV-9034	JV-9035	2	2	4	2—8
JV-9036	JV-9037	2	3	6	2—8
JV-9038	JV-9039	2	4	8	2—8

SERIES JV-9000 SEPARATE SECTIONS

CRL Number Shorting	Non-Shorting	Number Poles	Number Positions
JV-8	JVN-8	1	2—17
JV-9	JVN-9	3	2—5
JV-10	JVN-10	2	2—8
JV-18*	JVN-18*	1	2—18

*Rotor has 17 fingers making contact with 17 contacts on stator, leaving one contact open. By cutting off unwanted fingers this section can be adapted to special circuits, e.g., one off, nine progressively shorting positions.

SILVER CLIPS AND CONTACTS

CRL Number Shorting	Non-Shorting	Index	No. of Poles	No. of Positions
PA-16	PA-21	30°	1	2—12
PA-14	PA-23	30°	2	2—6
PA-15	PA-24	30°	4	2

INDUSTRIAL NET PRICES SERIES PA-2000 CERAMIC

CRL No. PA- Shtg.	Non-Shtg.	Unit Pkg., Net Each, Lots of 1-4	5-9	10-24	25-49	50-99	100-249	Bulk 100-300
2000	2001	$2.61	$2.18	$1.96	$1.86	$1.74	$1.57	$1.39
2002	2003	2.61	2.18	1.96	1.86	1.74	1.57	1.39
2004	2005	3.72	3.10	2.79	2.65	2.48	2.23	1.97
2006	2007	2.61	2.18	1.96	1.86	1.74	1.57	1.39
2008	2009	4.74	3.95	3.56	3.38	3.16	2.84	2.51
2010	2011	3.72	3.10	2.79	2.65	2.48	2.23	1.97
2012	2013	5.70	4.75	4.28	4.07	3.80	3.42	3.02
2014	2015	2.61	2.18	1.96	1.86	1.74	1.57	1.39
2016	2017	6.81	5.68	5.11	4.85	4.54	4.09	3.61
2018	2019	2.61	2.18	1.96	1.86	1.74	1.57	1.39
2020	2021	3.72	3.10	2.79	2.65	2.48	2.23	1.97
2022	2023	4.74	3.95	3.56	3.38	3.16	2.84	2.51
2024	2025	7.92	6.60	5.94	5.64	5.28	4.75	4.19
2026	2027	5.70	4.75	4.28	4.07	3.80	3.42	3.02
2028	2029	4.74	3.95	3.56	3.38	3.16	2.84	2.51
2030	2031	3.72	3.10	2.79	2.65	2.48	2.23	1.97
2032	2033	6.81	5.68	5.11	4.85	4.54	4.09	3.61
2034	2035	3.72	3.10	2.79	2.65	2.48	2.23	1.97
2036	2037	7.92	6.60	5.94	5.64	5.28	4.75	4.19
2038	2039	5.37	4.48	4.03	3.83	3.58	3.22	2.84
2040	2041	5.37	4.48	4.03	3.83	3.58	3.22	2.84
2042		2.37	1.98	1.78	1.69	1.58	1.42	1.25
2048	2049	5.37	4.48	4.03	3.83	3.58	3.22	2.84
2050		2.61	2.18	1.96	1.86	1.74	1.57	1.39
2052		2.37	1.98	1.78	1.69	1.58	1.42	1.25
	2043	2.37	1.98	1.78	1.69	1.58	1.42	1.25
	2045	3.30	2.75	2.48	2.35	2.20	1.98	1.75
0	1	1.32	1.10	.99	.94	.88	.79	
2	3	1.32	1.10	.99	.94	.88	.79	
4	5	1.32	1.10	.99	.94	.88	.79	
6	7	1.32	1.10	.99	.94	.88	.79	
8	9	1.32	1.10	.99	.94	.88	.79	
10	19	1.32	1.10	.99	.94	.88	.79	
11	18	1.32	1.10	.99	.94	.88	.79	
12		1.32	1.10	.99	.94	.88	.79	
13		1.32	1.10	.99	.94	.88	.79	
20	17	1.32	1.10	.99	.94	.88	.79	
14	23	2.16	1.80	1.62	1.54	1.44	1.30	
15	24	2.16	1.80	1.62	1.54	1.44	1.30	
16	21	2.16	1.80	1.62	1.54	1.44	1.30	

SERIES PA-1000 PHENOLIC

1000	1001	$1.98	$1.65	$1.49	$1.42	$1.32	$1.19	$1.05
1002	1003	1.98	1.65	1.49	1.42	1.32	1.19	1.05
1004	1005	2.82	2.35	2.12	2.01	1.88	1.69	1.49
1006	1007	1.98	1.65	1.49	1.42	1.32	1.19	1.05
1008	1009	3.57	2.98	2.68	2.55	2.38	2.14	1.89
1010	1011	1.98	1.65	1.49	1.42	1.32	1.19	1.05
1012	1013	2.82	2.35	2.12	2.01	1.88	1.69	1.49
1014	1015	4.17	3.48	3.13	2.97	2.78	2.50	2.21
1016	1017	4.92	4.10	3.69	3.51	3.28	2.95	2.60
1018	1019	2.82	2.35	2.12	2.01	1.88	1.69	1.49
1020	1021	3.57	2.98	2.68	2.55	2.38	2.14	1.89
1022	1023	5.55	4.63	4.17	3.96	3.70	3.33	2.94
1024	1025	2.82	2.35	2.12	2.01	1.88	1.69	1.49
1026	1027	4.17	3.48	3.13	2.97	2.78	2.50	2.21
1028	1029	3.57	2.98	2.68	2.55	2.38	2.14	1.89
1030	1031	4.92	4.10	3.69	3.51	3.28	2.95	2.60
1032	1033	5.55	4.63	4.17	3.96	3.70	3.33	2.94
1034		1.98	1.65	1.49	1.42	1.32	1.19	1.05
	1035	1.98	1.65	1.49	1.42	1.32	1.19	1.05
	1037	2.82	2.35	2.12	2.01	1.88	1.69	1.49
1040		1.98	1.65	1.49	1.42	1.32	1.19	1.05
30	31	.96	.80	.72	.68	.64	.58	
32	33	.96	.80	.72	.68	.64	.58	
34	35	.96	.80	.72	.68	.64	.58	
36	37	.96	.80	.72	.68	.64	.58	
38	39	.96	.80	.72	.68	.64	.58	
40	41	.96	.80	.72	.68	.64	.58	
43		.96	.80	.72	.68	.64	.58	
	45	.96	.80	.72	.68	.64	.58	
49		.96	.80	.72	.68	.64	.58	

SEPARATE INDEX ASSEMBLIES

Index assemblies for series PA-1000 and PA-2000 interchangeable.
CRL No. PA-300 Assembly—Contains PA-300 (30°) index, P-120 pointer knob, adjustable stop plate, two 1/4" spacers, two 5/32" spacers, four 3/16" spacers, 2½" tie bolts, nuts, lockwashers and fiber spacer washers. Rear shaft length 2". Use with 1 to 3 sections.
CRL No. PA-301 Assembly—Contains PA-301 index (30°), P-120 pointer knob, adjustable stop plate, two 1/4" spacers, two 5/32" spacers, ten 3/16" spacers, four 1 5/16" spacers, 5" tie bolts and hardware. Rear shaft length 4". Use with 4 to 6 sections.
CRL No. PA-302 Assembly—Contains PA-302 (30°) index, P-120 pointer knob, adjustable stop plate, four 3/16" spacers, two 5/32" spacers, sixteen 1/4" spacers, eight 1 5/16" spacers, 7" tie bolts and hardware. Rear shaft length 6". Use with 7 to 9 sections.
CRL No. PA-304 Assembly—Contains PA-304 (60°) index and hardware same as PA-300. Rear shaft length 2". Use with 1 to 3.
CRL No. PA-305 Assembly—Contains PA-305 (60°) index and hardware same as PA-301. Rear shaft length 4". 4 to 6 sections.

CRL No.	Indexing	Net Each, Lots of 1-4	5-9	10-24	25-49	50-99	100-249
PA-300	30°	$1.50	$1.25	$1.13	$1.07	$1.00	$0.90
PA-301	30°	1.98	1.65	1.49	1.42	1.32	1.19
PA-302	30°	2.58	2.15	1.94	1.84	1.72	1.55
PA-304	60°	1.50	1.25	1.13	1.07	1.00	.90
PA-305	60°	2.10	1.75	1.58	1.50	1.40	1.26

SERIES JV-9000 DIAL PLATES, INDEX ASSEMBLIES

CRL Nos. P-230, P-231 or P-232 — 2¾" Dia., etched aluminum on black background; 20°; marked 1-5 for P-230, 1-17 for P-231, and 1-8 for P-232. Packaged 5 of a number.

CRL No. JV-7 Index Assembly — Includes shaft, tie rods, spacers, nuts and lockwashers, adjustable stop pin, and 2" black bar knob.

INDUSTRIAL NET PRICES

CRL Number	Net Each, Lots of 1-4	5-9	10-24	25-49	50-99
JV-9000 thru JV-9003	$10.50	$ 8.75	$ 7.88	$ 7.49	$ 7.00
JV-9004 thru JV-9007	17.40	14.50	13.05	12.40	11.60
JV-9008 thru JV-9011	24.30	20.25	18.23	17.32	16.20
JV-9012 thru JV-9015	31.20	26.00	23.40	22.23	20.80
JV-9016 thru JV-9019	38.10	31.75	28.58	27.15	25.40
JV-9020 and JV-9021	45.30	37.75	33.98	32.28	30.20
JV-9032 and JV-9033	10.50	8.75	7.88	7.49	7.00
JV-9034 and JV-9035	17.40	14.50	13.05	12.40	11.60
JV-9036 and JV-9037	24.30	20.25	18.23	17.32	16.20
JV-9038 and JV-9039	31.20	26.00	23.40	22.23	20.80
JV-8 thru JV-10	6.90	5.75	5.18	4.92	4.60
JVN-8 thru JVN-10	6.90	5.75	5.18	4.92	4.60
JV-18 and JVN-18	7.50	6.25	5.63	5.35	5.00
JV-7 Index	4.50	3.75	3.38	3.21	3.00
P-230 thru P-232	.21	.18	.16	.15	.14

© U.C.P., Inc.

Rotary, Lever Switches


Ham Switch


2500 Series


1448, 1449


1461


1460


1472-3


1462


1484


1486


1452


A


B
Lever Action

SERIES 2500 1⅞" DIAMETER ROTARY SWITCHES

Made of highest quality (grade L-533) Steatite insulation. Meet critical requirements of RF circuit applications. Bushing ¾"-32 thread ⅜" long. Shaft 1⅞" long, ¼" full round. Sections 1⅞" dia. Positive index 30° with adjustable stop. Index assemblies and hardware are identical and interchangeable with those of the 1400 Series. Switches include pointer knob, nut and lockwasher. Rated: 2.75 amps. 15 v. DC; 230 ma, 115 v. AC. Breakdown, 1500 v. AC between critical parts. Shipping Weight, 5 oz. per section.

SERIES 1400 1⅞" DIAMETER ROTARY SWITCHES

Extremely compact design. Mounting bushings ⅜"-32 thread, ¾" long. Shafts 1⅞" from end of bushing; ¼" full round. Sections 1⅞" dia. Positive 30° index with adjustable stop. With mounting nut, lockwasher and pointer knob. Index assemblies and hardware are identical and interchangeable with those of 2500 series. Rated: 2.75 amps at 15 v. DC; 230 ma at 115 v. AC. Breakdown, 1000 v, AC rms. Shipping Weight, 4 oz. per section.

COMPLETE ROTARY SWITCHES

Ceramic Types CRL Number		No. Sections	No. Poles	No. Positions	Phenolic Types CRL Number	
Shorting	Non-Short.				Shorting	Non-Short.
2500	2501	1	1	2—6	1400	1401
2502	2503	1	1	2—11	1402	1403
2504	2505	1	2	2—5	1404	1405
2510	2511	2	2	2—6	1410	1411
2512	2513	2	2	2—11	1412	1413
2506	2507	1	3	2—3	1406	1407
2520	2521	3	3	2—6	1420	1421
2522	2523	3	3	2—11	1422	1423
		1	4	2	1408	1409
2514	2515	2	4	2—5	1414	1415
		4	4	2—6	1426	1427
		4	4	2—11	1428	1429
2516	2517	2	6	2—3	1416	1417
2524	2525	3	6	2—5	1424	1425
		2	8	2	1418	1419
		4	8	2—5	1430	1431

SEPARATE SECTIONS

Deluxe Types: .187" rotor slot, use P-270, P-271, P-272 indexes.

Ceramic Types CRL Number		No. Poles	No. Positions	Phenolic Types CRL Number	
Shorting	Non-Short.			Shorting	Non-Short.
TD	XD	1	2—6	AD	HD
UD	YD	1	2—11	BD	JD
RD	RRD	2	2—5	CD	KD
SD	SSD	3	2—3	DD	LD
VD	ZD	4	2	ED	MD
		4	2—3	EED	BBD
		1	2—5	FD**	AAD**
GGD*	FFD*	1	2—11	GD*	CCD*
PISD‡		1	2—10	PID‡	
NSD and PSD		Resistance Decade†		ND and PD	
QSD		Capacitance Decade		QD	

*All unused contacts connected and shorted out. ‡19 contacts, open in full CW, progressively picked up and shorted to common with CCW rotation. †Combine for resistance decade switch. **Unused contacts one side of common connected and shorted out.

SEPARATE INDEX ASSEMBLIES

Deluxe Type: 1-piece shaft .187" thick flat; use deluxe 1400 or 2500 Series sections. Units include index, pointer knob and hardware for complete assembly.

CRL No. P-270—For 1—3 sections; 2" rear shaft.
CRL No. P-271—For 3—5 sections; 4" rear shaft.
CRL No. P-272—For 5—10 sections; 8" rear shaft.

INDUSTRIAL NET PRICES
CERAMIC SWITCHES, SECTIONS

CRL Model Number	Net Each, Lots of					
	1-4	5-9	10-24	25-49	50-99	100-249
2500 thru 2507	$2.82	$2.35	$2.12	$2.01	$1.88	$1.69
2510 thru 2517	4.02	3.35	3.02	2.87	2.68	2.41
2520 thru 2525	4.16	4.30	3.87	3.68	3.44	3.10
All Sections	1.35	1.13	1.02	.97	.90	.81
PHENOLIC SWITCHES, SECTIONS						
1400 thru 1409	$2.52	$2.10	$1.89	$1.80	$1.68	$1.51
1410 thru 1419	3.06	2.55	2.30	2.19	2.04	1.84
1420 thru 1425	3.90	3.25	2.93	2.78	2.60	2.34
1426 thru 1431	4.50	3.75	3.38	3.21	3.00	2.70
AD, BD, CD, DD, ED	1.05	.88	.79	.75	.70	.63
HD, JD, KD, LD, MD	1.05	.88	.79	.75	.70	.63
EED and BBD	1.35	1.13	1.02	.97	.90	.81
FD, GD, PID, ND, PD	1.05	.88	.79	.75	.70	.63
QD, AAD, CCD	1.05	.88	.79	.75	.70	.63
INDEX ASSEMBLIES						
P-270	$1.65	$1.38	$1.24	$1.18	$1.10	$0.99
P-271	2.10	1.75	1.58	1.50	1.40	1.26
P-272	2.85	2.38	2.14	2.03	1.90	1.71

STEATITE HAM-TYPE SWITCHES

Heavy-duty Grade L-533 steatite insulation for ham applications. Available in 60° and 90° index. All metal parts except clips and contacts are cadmium plated steel; all units have phenolic shaft through switch sections. Positive index with adjustable stop; 60° units have 2—6 active positions; 90° units, 2—4. Single hole mounting: ⅜"-32 thread bushing ¾" long. Shaft ¼" dia., 2¼" long, full round. Rated: 250 milliamps at 115 v. AC; 5 milliamps at 1500 v. AC; 1.75 amps at 24 v. DC, will handle 15 watts; for tubes operating at voltages up to 1 kv and inputs to 150 watts. Unit complete includes mounting nut, lockwasher, pointer knob, and dial plate. Shipping Weight, 4 oz. per section.

NON-SHORTING HAM SWITCHES

CRL Number		No.	Net Each, Lots of					
60°	90°	Poles*	1-4	5-9	10-24	25-49	50-99	100-249
2542	2550	1	$2.37	$1.98	$1.78	$1.69	$1.58	$1.42
2543	2551	2	3.36	2.80	2.52	2.39	2.24	2.02
2544	2552	3	4.32	3.60	3.24	3.08	2.88	2.59
2545	2553	4	5.34	4.45	4.00	3.80	3.56	3.20
2546	2554	5	6.30	5.25	4.73	4.49	4.20	3.78
XXD†	ZZD†	1	1.20	1.00	.90	.86	.80	.72

*One pole per section. †Separate sections; use with "P" Series index assemblies.

ROTARY ACTION FLAT SWITCHES

Laminated phenolic insulation. Rated: 5.5 amps, 6 v. DC; 230 ma, 110 v. AC. Breakdown, 1000 v. AC rms. Bushing ⅜"-32 thread, ¾" long. Shaft ¼" dia., 2¼" long. Shipping Weight, 3 oz.

CRL No.	No. Poles	No. Pos.	Net Each, Lots of					
			1-4	5-9	10-24	25-49	50-99	100-249
1448†‡	6	3	$2.37	$1.98	$1.78	$1.69	$1.58	$1.42
1449†§	6	3	2.37	1.98	1.78	1.69	1.58	1.42
1450*†	4	2	1.65	1.38	1.24	1.18	1.10	.99
1451†‡	4	2	1.98	1.65	1.49	1.42	1.32	1.19
1488‡	6	3	3.60	3.00	2.70	2.57	2.40	2.16
1489§	6	3	3.60	3.00	2.70	2.57	2.40	2.16

*Positive index. †Non-shorting. ‡Spring return. §Combination positive and spring return index.

GENERAL PURPOSE SWITCHES

Laminated phenolic insulation. Rated: 1.75 amps, 24 v. DC; 230 ma. 115 v. AC. Breakdown, 1000 v. AC rms. Bushing ⅜"-32 thread, ¾" long except 1484, ¼". Positive index unless otherwise noted.

CRL No.	No. Poles	No. Pos.	Net Each, Lots of					
			1-4	5-9	10-24	25-49	50-99	100-249
1460	1	2	$1.08	$0.90	$0.81	$0.77	$0.72	$0.65
1461	1	3	1.08	.90	.81	.77	.72	.65
1462	2	2	1.08	.90	.81	.77	.72	.65
1463*†	1	2	1.08	.90	.81	.77	.72	.65
1464*†	2	2	1.08	.90	.81	.77	.72	.65
1465‡	1	4‡	1.80	1.50	1.35	1.28	1.20	1.08
1472*	2	3	1.08	.90	.81	.77	.72	.65
1473	2	3	1.08	.90	.81	.77	.72	.65
1483§	1	3	.75	.63	.57	.54	.50	.45
1484#	1	3	.90	.75	.68	.65	.60	.54
1486•	2	3	1.08	.90	.81	.77	.72	.65

*Non-shorting; all others shorting. †Spring return indexing. ‡3 active with AC-DPST line switch. §Remote speaker switch. #Remote auto radio speaker switch. •Remote stereo speaker switch.

ECONOMY LEVER ACTION SWITCHES

REPLACES PA-7000 SERIES

New nylon rotor design results in low cost for use singly or in groups. Have positive and/or spring return index design with shorting or non-shorting contacts. High quality laminated phenolic insulation, clips and contacts silver plated brass. Two hole type mounting bracket supplied with 6—32 thd tapped holes. Dimensions of single switch 1⅞" high x ¾" wide x 1¼" deep behind panel. Supplies with knob and mounting hardware. Rated 2.75 amps at 15 VDC, 230 MA at 115 VAC. Shipping Weight 4 oz.

CRL No.		No. Poles	No. Pos.	Index
Shorting	Non-Shorting			
1452	1454	2	3	Positive
1453	1455	2	3	Sp. Ret.
1466	1467	2	3	Pos. & Spr.
1456	1457	4	2	Sp. Ret.
1459	1458	4	2	Positive

Mounting Plates for Lever Switches—Type A made of .035" die cut steel, black crackle finish. Provides ¾" spacing between switches. Type B for use in electrical outlet boxes. Satin chrome steel with mounting holes 3⅜" between centers. Shpg. Wt., 4 oz.

CRL No.	Type	No. Switches	Size, Inches	CRL No.	Type	No. Switches	Size, Inches
P-1755	A	1	¾ x 2⅜	P-1759	A	5	3¾ x 2⅜
P-1756	A	2	1½ x 2⅜	P-221	B	2	2¾ x 4½
P-1757	A	3	2¼ x 2⅜	P-222	B	1	2¾ x 4½
P-1758	A	4	3 x 2⅜				

INDUSTRIAL NET PRICES

CRL Number	Net Each, Lots of					
	1-4	5-9	10-24	25-49	50-99	100-249
1452/4	$1.26	$1.05	$ .95	$ .90	$ .84	$ .76
1453/5	1.26	1.05	.95	.90	.84	.76
1466/7	1.26	1.05	.95	.90	.84	.76
1456/7	1.44	1.20	1.08	1.03	.96	.86
1459/8	1.44	1.20	1.08	1.03	.96	.86
Type A Plates	.30	.25	.23	.22	.20	.18
Type B Plates	.63	.53	.48	.46	.42	.38

SEPARATE INDEX ASSEMBLIES

Deluxe 90° and 60° Types: 2-piece shaft with phenolic rear, metal front; for high voltage operation; use XXD section for 90°; use ZZD section for 60°.

CRL No. 90°	CRL No. 60°	Rear Shaft	Suggested No. Sections
P-278	P-273	2"	1 to 2
P-279	P-274	4¼"	3 to 4
P-280	P-275	7"	5 to 8

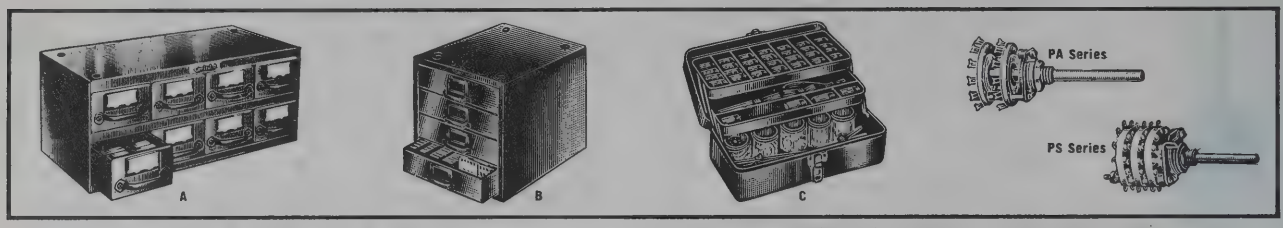
CRL Number Index Assembly	Net Each, Lots of					
	1-4	5-9	10-24	25-49	50-99	100-249
P-273 and P-278	$1.38	$1.15	$1.04	$0.99	$0.92	$0.83
P-274 and P-279	1.74	1.45	1.31	1.25	1.16	1.04
P-275 and P-280	2.16	1.80	1.62	1.54	1.44	1.40

DUAL SPEAKER SWITCH KIT

((Not Illustrated). Primarily designed for rear seat auto radio speaker applications. It is adaptable, however, to many commercial applications. Contains: 1484 switch, P-216 bracket-dial plate, P-401 knob, two self-tapping metal screws and instruction sheet.
CRL No. PK-300—
Net Each $1.05

481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351

Centralab® Switches, Hardware and Kits



MIL-S-3786A STYLE SRO3 MINIATURE CERAMIC SWITCHES

Designed to meet MIL-S-3786A. Insulated with Grade L-533 steatite, Dow Corning 200 silicone treated against surface moisture. Breakdown, 1000 v. AC rms between critical parts. Coin silver clips and contacts; hot tin-dipped terminals. Adjustable stops or continuous rotation on 30° index. Ceramic sections 1⅜" dia. x .125" th. Single hole mounting with locating lug at 1⅛" radius. Bushing, ⅜"-32NEF-2A threaded, ⅜" lg. from mtg. surface. Shaft ¼" dia. full round, 2¼" lg. from mtg. surface. With nut, lockwasher and P-120 pointer knob. Ratings: 450 ma at 115v. AC; 8 amps, 6 v. DC; 5.5 amps, 12 v. DC (make-break resistive load).

SERIES PA-6000 SWITCHES

CRL Number		Poles to Section	No. Sections	No. Poles	No. Positions
Shorting	Non-Short.				
PA-6000	PA-6001	1	1	1	2-11
PA-6002	PA-6003	2	1	2	2-5
PA-6004	PA-6005	1	2	2	2-11
PA-6006	PA-6007	3	1	3	2-3
PA-6010*	PA-6011*	4	1	4	2
PA-6012	PA-6013	2	2	4	2-5
PA-6018	PA-6019	3	2	6	2-3
PA-6024*	PA-6025*	4	2	8	2

*Fixed, 2-position stop.

SEPARATE INDEX ASSEMBLY

CRL No. PA-600—Used with PA-60, PA-70 or PA-80 separate sections to assemble special units of 1 to 4 sections; 30° indexing. Rear shaft 2" long.

SEPARATE SECTIONS, 30° INDEXING

Used with PA-600 index assembly. Hot solder-dipped terminals. Coin silver clips and contacts. Sections 1⅜" dia. Phenolic types rated 1000 v. AC rms breakdown between critical parts. Phenolic units .062" thick; others .125" thick.

Total Poles	No. Pos.	Phenolic Secs.		Mycalex Secs.		Ceramic Secs.	
		Shorting	Non-Short	Shorting	Non-Short	Shorting	Non-Short
1	2-11	PA-60	PA-61	PA-70	PA-71	PA-80	PA-81
2	2-5	PA-62	PA-63	PA-72	PA-73	PA-82	PA-83
3	2-3	PA-64	PA-65	PA-74	PA-75	PA-84	PA-85
4	2	PA-66	PA-67	PA-76	PA-77	PA-86	PA-87

INDUSTRIAL NET PRICES

CRL Number	Net Each, Lots of					
	1-4	5-9	10-24	25-49	50-99	100-249
PA-6000 thru PA-6003	$3.39	$2.83	$2.55	$2.42	$2.26	$2.03
PA-6004 and PA-6005	5.19	4.33	3.90	3.71	3.46	3.11
PA-6006 thru PA-6011	3.39	2.83	2.55	2.42	2.26	2.03
PA-6012 thru PA-6025	5.19	4.33	3.90	3.71	3.46	3.11
PA-600	1.50	1.25	1.13	1.07	1.00	.90
PA-60 thru PA-67	1.35	1.13	1.02	.97	.90	.81
PA-70 thru PA-77	1.98	1.65	1.49	1.42	1.32	1.19
PA-80 thru PA-87	1.98	1.65	1.49	1.42	1.32	1.19

NOTE: Items requiring certified test data and government source inspection are special. Prices and information supplied on request.

18 AND 24 POSITION SWITCHES

Laminated phenolic insulation, type PBE per MIL-P-3115B. Voltage breakdown between critical parts 1000 v. AC, rms. Bushing ¼" thd., ⅜" lg. Shaft ¼" dia., 2¼" lg. from mtg. surface. Rated 5.5 amps, 6 v. DC; 2.75 amps, 15 v. DC; 1.75 amps, 24 v. DC; 230 ma, 115 v. AC, rms. Shpg. Wt., 4 oz. per section. **PA-3000 Series**—18-position. Provides accurate crisp indexing in both single and multiple-section versions through the use of new 'hill-and-dale index. Sections 2¹¹⁄₁₆" w. x 2⅝" h. x 1⁄₁₆" thick. Positive 20° indexing. Adjustable stops or continuous rotation. **PA-4000 Series**—24-position. Sections 1¾" w. x 2⅝" h. x 1⁄₁₆" thick.

CRL No. PA-		*	No. Pos.	Net Each, Lots of					
Short.	Non-Short.			1-4	5-9	10-24	25-49	50-99	100-249
3000	3001	1	2-17	$2.04	$1.70	$1.53	$1.45	$1.36	$1.22
3002	3003	2	2-17	2.94	2.45	2.21	2.09	1.96	1.76
3004	3005	3	2-17	3.84	3.20	2.88	2.74	2.56	2.30
3006	3007	4	2-17	4.68	3.90	3.51	3.33	3.12	2.81
4000	4001	1	2-23	2.16	1.80	1.62	1.54	1.44	1.30
4002	4003	2	2-23	3.18	2.65	2.39	2.27	2.12	1.91
4004	4005	3	2-23	4.17	3.48	3.13	2.97	2.78	2.50
4006	4007	4	2-23	4.98	4.15	3.74	3.55	3.32	2.99

*Number of poles and number of sections.

SERIES PS 15⁄16" SUBMINIATURE ROTARY SWITCHES

Deluxe, ceramic insulated rotary switches that are ultra-small. Weigh less than 1 oz. each, yet have the same electrical ratings as switches much heavier and larger. Ideally suited for band switching, transistor circuits, aircraft instruments, etc. Insulation is Dow-Corning 200 Silicone treated L-533 steatite; resistance exceeds 10,000 megohms. **Size:** Ceramic sections ¼" thick spaced ¼" apart with ceramic spacing; spacing between front plate and first section, ⅜". All hardware except clips, contacts, and index spring are of cadmium plated steel. **Mounting:** Single hole with optional locating lug on ¾" radius. Bushing ¼-32 thread, ¼" long. Shaft ⅛" dia. x 1¼" long. **Rated:** Make and break, resistance load 3.5 amps at 6 volts DC, 160 milliamps at 110 v. AC. **Index:** Positive 30°; fixed stop.

CRL Number		Total Poles	No. of Positions	Poles Per Sec.	No. of Sections
Shorting	Non-Shorting				
PS-100	PS-101	1	11	1	1
PS-102	PS-103	2	11	1	2
PS-104	PS-105	2	5	2	1
PS-106	PS-107	3	11	1	3
PS-108	PS-109	3	3	3	1
PS-110	PS-111	4	5	2	2
PS-112	PS-113	4	2	4	1
PS-114	PS-115	6	5	2	3
PS-116	PS-117	6	3	3	2
PS-118	PS-119	8	2	4	2
PS-120	PS-121	9	3	3	3
PS-122	PS-123	12	2	4	3

SERIES PS (CONTINUED) SEPARATE SECTIONS

Ceramic* CRL No.		Phenolic† CRL No.		Total Poles	No. Pos.	Fixed Stop Indexing
Short.	Non-Short.	Short.	Non-Short.			
PS-20	PS-21	PS-40	PS-41	1	11	Use P-501 thru P-511
PS-22	PS-23	PS-42	PS-43	2	5	
PS-24	PS-25	PS-44	PS-45	3	3	
PS-26	PS-27	PS-46	PS-47	4	2	

Breakdown Voltage: *1500 v. AC rms; †1000 v. AC rms.

SEPARATE INDEX ASSEMBLIES

Designed for maximum of three sections. Includes: Index and shaft assembly; P-106 knob; six 3⁄32" spacers; two 1⁄16" spacers; two 1⁄8" spacers; two 3⁄16" spacers; two 1¼" tie bolts; nuts, lockwashers, washers; and 16 plastic spacer washers.

CRL Number	No. of Positions	CRL Number	No. of Positions
P-501	2	P-507	8
P-502	3	P-508	9
P-503	4	P-509	10
P-504	5	P-510	11
P-505	6	P-511	Continuous Rotation
P-506	7		

INDUSTRIAL NET PRICES

CRL Number		Net Each, Lots of					
Shorting	Non-Short.	1-4	5-9	10-24	25-49	50-99	100-249
PS-100	PS-101	$4.80	$4.00	$3.60	$3.42	$3.20	$2.88
PS-102	PS-103	6.00	5.00	4.50	4.28	4.00	3.60
PS-104	PS-105	4.80	4.00	3.60	3.42	3.20	2.88
PS-106	PS-107	7.20	6.00	5.40	5.13	4.80	4.32
PS-108	PS-109	4.80	4.00	3.60	3.42	3.20	2.88
PS-110	PS-111	6.00	5.00	4.50	4.28	4.00	3.60
PS-112	PS-113	4.80	4.00	3.60	3.42	3.20	2.88
PS-114	PS-115	7.20	6.00	5.40	5.13	4.80	4.32
PS-116	PS-117	6.00	5.00	4.50	4.28	4.00	3.60
PS-118	PS-119	6.00	5.00	4.50	4.28	4.00	3.60
PS-120	PS-121	7.20	6.00	5.40	5.13	4.80	4.32
PS-122	PS-123	7.20	6.00	5.40	5.13	4.80	4.32
PS-20 thru	PS-27	2.10	1.75	1.58	1.50	1.40	1.26
PS-40 thru	PS-47	1.68	1.40	1.26	1.20	1.12	1.01
P-501 thru	P-511	1.95	1.63	1.47	1.40	1.30	1.17

PACKAGED SWITCH HARDWARE

FOR 1400 AND 2500 SERIES SWITCHES

CRL No.	Description	Pkg. 100	CRL No.	Description	Pkg. 100
P-124	¼" metal spacer	$1.80	P-145	7" screw	$ 8.40
P-125	¾" metal spacer	1.80	P-146	9" screw	12.00
P-126	½" metal spacer	1.80	P-147	Nut	1.80
P-127	¾" metal spacer	1.80	P-148	Lockwasher	1.80
P-128	1" metal spacer	1.80	P-177	Phenol. spacer wshr.	1.80
P-136	1" screw	1.80	P-181	⅛" steatite spacer	4.80
P-137	1½" screw	1.80	P-187	¼" steatite spacer	4.80
P-138	2" screw	4.80	P-188	⅜" steatite spacer	4.80
P-139	2½" screw	4.80	P-189	½" steatite spacer	4.80
P-149	4¼" screw	8.40	P-190	⅝" steatite spacer	4.80
P-143	5" screw	8.40	P-192	1"steatite spacer	8.40

FOR PA-6000 SERIES MILITARY SWITCHES

P-395	Min. MIL screw	$8.40	P-397	Min. MIL lockwasher	$1.80
P-396	Min. MIL nut	1.80	P-398	MIL spacer washer	1.80

FOR PS-100 SERIES SUBMINIATURE SWITCHES

P-515	1⅛" screw	$8.40	P-520	1⁄8" steatite spacer	$1.80
P-516	Nut	1.80	P-521	3⁄32" steatite spacer	1.80
P-517	Lockwasher	1.80	P-522	1⁄16" steatite spacer	1.80
P-518	Flat washer	1.80	P-523	3⁄16" steatite spacer	1.80
P-519	Spacer washer	1.80	P-524	5⁄32" steatite spacer	1.80

FOR PA-1000 & PA-2000 SERIES MINIATURE SWITCHES

CRL No.	Description	Pkg. 100	CRL No.	Description	Pkg. 100
P-319	Min. stop plate	$4.80	P-348	1⁄4" steatite spacer	$ 4.80
P-325	1⁄8" steatite spacer	4.80	P-350	15⁄16 steatite spacer	4.80
P-326	3⁄16" steatite spacer	4.80	P-352	1" steatite spacer	4.80
P-328	1⁄4" steatite spacer	4.80	P-362	1" screw	1.80
P-329	5⁄32" steatite spacer	4.80	P-370	2" screw	4.80
P-330	3⁄16" steatite spacer	4.80	P-374	2½" screw	4.80
P-332	3⁄8" steatite spacer	4.80	P-382	4" screw	8.40
P-334	7⁄16" steatite spacer	4.80	P-384	5" screw	8.40
P-336	1⁄2" steatite spacer	4.80	P-388	7" screw	12.00
P-340	5⁄8" steatite spacer	4.80	P-390	Nut	1.80
P-342	11⁄16" steatite spacer	4.80	P-392	Lockwasher	1.80
P-344	3⁄4" steatite spacer	4.80	P-394	Phen. spacer washer	1.80

CENTRALAB SWITCH KITS

STANDARD KITS (FIG. A)

Convenient, ready source of stock sections, indexes and hardware. Packed in heavy gauge steel, 8-drawer Equipto cabinet, 23¼" w. x 9½" h. x 12" d. with blue, baked enamel finish.

CRL No. SWK-810 Kit—PA-1000 series miniature phenolic parts: 106 pieces of 1½" dia. phenolic sections, 32 index assemblies with spacers, nuts, washers, knobs and dial plates. Makes up to 32 regular or special switches. Net Each $177.00

CRL No. SWK-820 Kit—PA-2000 series miniature ceramic parts: 102 pieces of 1½" dia. steatite sections, 32 index assemblies with spacers, washers, nuts, knobs and dial plates. Makes up to 32 regular or special switches. Net Each $210.00

JUNIOR SIZE SWITCH KITS (FIG. B)

Packed in attractive light blue and gray 4-drawer steel cabinets 10" x 11½" x 10". With balanced stock of index assemblies and separate sections for every application.

CRL No. SWK-410 Kit—PA-1000 series miniature phenolic parts: 48 phenolic 1½" dia. sections, 13 index assemblies and hardware for making 13 phenolic regular or special switches. Net Each $73.00

CRL No. SWK-420 Kit—PA-2000 series miniature ceramic parts: 52 ceramic 1½" dia. switch sections, 13 complete index assemblies and hardware for making 13 ceramic regular or special switches. Net Each $95.80

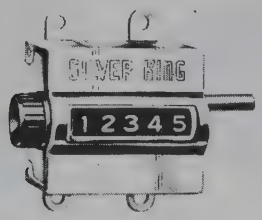
CUSTOM SWITCH KIT (FIG. C)

Contains parts and tools necessary for any prototype designer to construct the special switch he needs. Packed in metal cabinet, set up and ready to use. Makes 25 four-section miniature rotary phenolic or ceramic switches with factory precision. Contact nibbling tool can cut any contact arrangement you need.

CRL No. PK-20-S Kit—Complete. Net Each $150.00

© U.C.P., Inc.

CM-54 SILVER KING® REVOLUTION COUNTER



Rugged, reliable, long lived. Extensively used for measuring machines, engine revolution counting, coil winding, and a wide range of built-in applications. Adds "forward" revolutions; subtracts reverse revolutions. Oversize shaft and bearings. One turn of reset knob resets to zero. Positive action, modern design.

SPECIFICATIONS

Count Life: 200 million, conservative rating.

Counts per Minute: 4000 CPM when adding; 2000 CPM when subtracting.

Mounting: Four 17/64" mounting holes.

Dimensions: Approximately 4" wide x 5½" long x 2⅜" deep.

ONE COUNT PER REVOLUTION OF DRIVE SHAFT (4000 RPM)

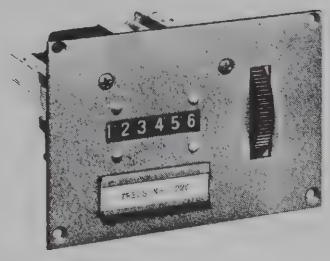
Model	Arm Action	Shaft Extension	Catalog Number	
			With 5 Extra Large Number Wheels	With 7 Extra Large Number Wheels
Knob Reset	Top Coming	Right	CM-54AS501B	CM-54AS701B
		Left	CM-54AS502B	CM-54AS702B
	Top Going	Right	CM-54BS501B	CM-54BS701B
		Left	CM-54BS502B	CM-54BS702B
Key Reset	Top Coming	Right	CM-54AK501B	CM-54AK701B
		Left	CM-54AK502B	CM-54AK702B
	Top Going	Right	CM-54BK501B	CM-54BK701B
		Left	CM-54BK502B	CM-54BK702B

10 COUNTS PER REVOLUTION OF DRIVE SHAFT (400 RPM)

Knob Reset	Top Coming	Right	CM-54AS501A	CM-54AS701A
		Left	CM-54AS502A	CM-54AS702A
	Top Going	Right	CM-54BS501A	CM-54BS701A
		Left	CM-54BS502A	CM-54BS702A
Key Reset	Top Coming	Right	CM-54AK501A	CM-54AK701A
		Left	CM-54AK502A	CM-54AK702A
	Top Going	Right	CM-54BK501A	CM-54BK701A
		Left	CM-54BK502A	CM-54BK702A

①Non-reset models available on order. Please consult factory.
②Key reset models do not subtract reverse revolutions.
③Ten counts per revolution of drive shaft, change last digit of catalog number to A.
④Double shaft extension (not regular stock), change ninth digit in catalog number to 3.
⑤Also available—10 counts per 3 shaft revolutions and 12 counts per shaft revolution. Consult factory.

CE-800 PANELMOUNT WIZARD® COUNTER



The CE-800B Panelmount Wizard is extensively used for centralized installations; for mounting on instrument panels; and for a great variety of built-in applications. The counter consists of CE-800 mechanism with a plate for mounting through an instrument panel or other flat surfaces. Compact, neat. May be wired and installed from the front.

SPECIFICATIONS

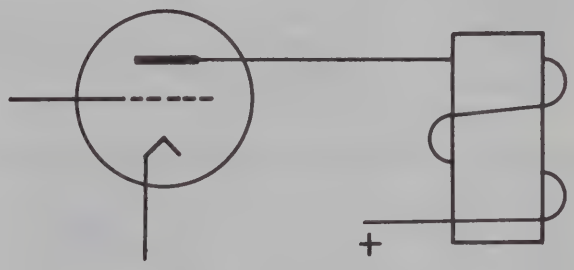
Type: Wizard Electric Counter mechanism designed with plate for panel installation.

Mount: Plate mounted; optional with bracket instead of plate. Specify when ordering.

Type	Volts AC	Catalog Number	Volts DC	Catalog Number
Panelmount	24	CE-800BS601	24	CE-800BS6016
	120	CE-800GS602	120	CE-800BS6018
	240	CE-800BS604	240	CE-800BS6019

①For Key reset models, change S to K in above catalog numbers.
②6v, 12v, and 48v DC models are also available. Specify V/F. Consult factory.

ACTUATION IN PLATE CIRCUIT OF ELECTRONIC TUBES



WIZARD ELECTRIC COUNTER to match plate circuit impedance

5 watts input permits direct actuation in the plate circuit, as shown in diagram. When ordering CE-800 for plate circuit actuation, please furnish make and number of tube, plus complete information about the circuit; or specify voltage and number of coil required, as shown in table.

ITT-1

DC Voltages	Amperes	DC Resistance Ohms	When Furnished	Coil Number
120	.042	2740	Standard	135056D-38AA20
	.033	3400	When Specified	135056D-38CT20
240	.022	10480	Standard	135056D-41DA20
	.016	14350	When Specified	135056D-41DD20

ITT GENERAL CONTROLS GC

MERCURY COUNTERS
MECHANICAL NON-RESET COUNTERS

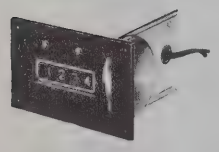
CE-40 MERCURY ELECTRIC COUNTERS



Basemount 4-Digit Reset

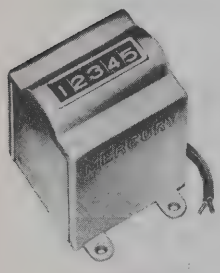
FEATURES

- √ 6 million count life—4-digit reset model
- √ 3 million count life—5-digit non-reset DC model
- √ 600 counts per minute



Panelmount 4-Digit Reset

Tamper-proof construction—cover clinches through bottom of frame, cannot be removed without dismantling counter. Number wheels are enclosed in case, which is close fitting and has plastic window enclosure. All mercury counters furnished standard with clear unbreakable plastic window. Non-reset models count to 99,999 and repeat. Reset models reset to zero with one complete turn of knob. Special Mercury counters available to meet UL specifications.



Basemount 5-Digit Non-Reset

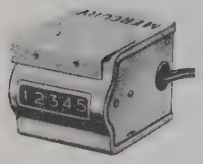
SPECIFICATIONS

Type: Electric counter—Basemount or panelmount—4-digit with knob reset or 5-digit non-reset

Count Life: 6 million, 4-digit reset; 3 million, DC 5-digit non-reset models. 600 counts per minute.

Actuation: Minimum closed period of .050 second and minimum open period of .050 second.

Electrical: 5 watts power consumption. Prolongs life of switch contacts and simplifies electric eye operation. Standard with 6″ leads.

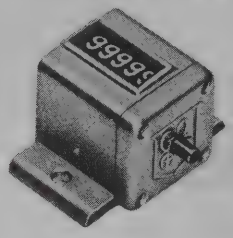


Panelmount 5-Digit Non-Reset

Model		Voltage①②③	Catalog Number④⑤
Knob Reset 4 Digits	Basemount	24v-60cy	CE-40AS401
		120v-60cy	CE-40AS402
		24v DC	CE-40AS4016
		110v DC	CE-40AS4018
	Panelmount	24v-60cy	CE-40BS401
		120v-60cy	CE-40BS402
		24v DC	CE-40BS4016
		110v DC	CE-40BS4018
Non-Reset 5 Digits	Basemount	24v-60cy	CE-40AN501
		120v-60cy	CE-40AN502
		24v DC	CE-40AN5016
		110v DC	CE-40AN5018
	Panelmount	24v-60cy	CS-40BN501
		120v-60cy	CE-40BN502
		24v DC	CE-40BN5016
		110v DC	CE-40BN5018

①Standard with 6″ leads.
②For special coil to meet UL specifications, add suffix "U" to catalog number. AC only.
③Other special voltages/frequencies available. Consult factory.
④Economy models and deluxe models with die cast Odometers are also available. Please consult factory.
⑤Mercury counters with terminals available on order.

CM-2 MECHANICAL NON-RESET COUNTER



Tamper-proof construction and compact size add value of the CM-2 use in the field of stamp handling; ticket dispensing; marketing and selling; turnstiles; voting machines; lockers; and office equipment. Left hand or right hand shaft extensions.

Type CM-2A Revolution Counter (10 count/rev.)—100 RPM of drive shaft or 1000 counts per minute.

Type CM-2B Revolution Counter (1 count/rev.)—1000 RPM of countershaft or 1000 counts per minute.

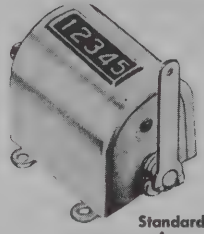
Type CM-2C Stroke Counter with Stops—500 counts per minute thru 40° angular movement of lever.④

Type CM-2D Rotary Ratchet Counter—For each 36° of shaft movement one count is made. 50 RPM of countershaft or 500 counts per minute.④

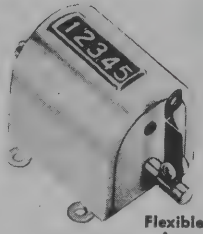
Mounting	Digits⑤	Catalog Number②③			
		Right Hand Shaft Extension		Left Hand Shaft Extension	
		Top-Coming	Top-Going	Top-Coming	Top-Going
Bottom Flange	5	CM-2A115	CM-2A125	CM-2A135	CM-2A145

①For models with one count per revolution, change 4th character in catalog number from A to B, e.g., CM-2A becomes CM-2B.
②For models with stroke counters, change A to C.
③For models with rotary ratchet counters, change A to D.
④Standard with lever arm. CM-2C and CM-2D only.
⑤For 3 thru 7 digit models, change last digit in catalog number to correspond with digits required.

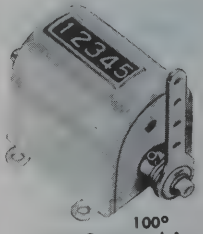
CM-10 NON-RESET STROKE COUNTERS



Standard Arm



Flexible Arm



100° Overtravel Arm

Small, rugged non-reset counters of remarkable accuracy and endurance. Especially suited for built-in applications and other service where space is limited and the duty light to moderate. Widely used on vending, amusement, and dispensing equipment, office machines, and light production equipment. Adjustable operating arm. Standard with double shaft extension—arm may be mounted on either side. Steel case and frame. Cadmium plate finish.

SPECIFICATIONS

Type: Stroke counter—5 digits.
Count Life: 3 million. **Counts Per Minute:** 400 cpm.
Arm Travel: 20° movement of arm operates counter.
Mounting: Four .120 holes for No. 4 screws.
Dimensions: 1-1/2″ wide x 3″ long x 1-7/16″ deep (arm not included).

ITT-2

Arm Action	Catalog Number		
	Standard Arm	Flexible Arm	100° Overtravel Arm
Top-Going	CM-10BN531	CM-10BN534	CM-10BN535
Top-Coming	CM-10AN531	CM-10AN534	CM-10AN535

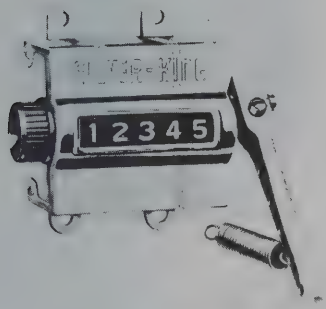
Base	Catalog Number—Hand Tally Models
Steel	CM-10AN532
(None)	CM-10AN533

RESET STROKE COUNTERS
MECHANICAL REVOLUTION

ITT GENERAL CONTROLS

CM-52 SILVER KING® STROKE COUNTER

200 Million Count Life



FEATURES

- √ 500 counts per minute
- √ Heavy duty construction
- √ Positive action
- √ Modern design
- √ Tamperproof one way, one-turn, reset to zero
- √ Unbreakable windows
- √ Easy-to-read figures
- √ Chrome plate finish



Hand Tally Model

The leader in reliability and long count life. Rugged, yet smooth operating. Widely used in automobile and aircraft factories; in stamping, metal working, die casting and plastic molding plants; foundries, printing plants, and factories of all kinds.

Extra count life saves four ways: 1) reduces cost of counters per million counts, 2) reduces inaccuracies inevitable with short-lived counters, 3) avoids operating delays, and 4) saves maintenance man-hours required to repair or replace short-lived counters.

Positive action—avoids skips and overcounts. All models equipped with coil spring for connecting operating arm. Reset knob or key normally located on side opposite shaft extension. Silver King is also offered with a special lever for hand operation. Lever is adjustable to any angle; counter can be used in either vertical or horizontal position. Silver Kings optionally available with cover secured to base with inside brackets—prevents removing cover without dismounting.

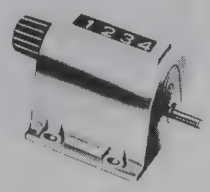
SPECIFICATIONS

Type: Stroke counter—Knob reset, key reset, or non-reset—Heavy duty.
Count Life: 200 million.
Counts Per Minute: 500 cpm, conservative rating.
Number Wheels: Large white figures on black background.
Mounting: Four 17/64 mounting holes.
Dimensions: 4″ wide x 5½″ long x 2⅜″ deep.

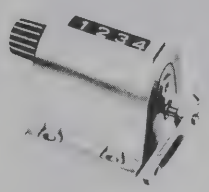
Arm Action	Shaft Extension	Catalog Number		
		Knob Reset	Key Reset	Non-Reset
With 5 Extra Large Number Wheels				
Top-Coming	Right	CM-52AS501A	CM-52AK501A	CM-52AN501A
	Left	CM-52AS502A	CM-52AK502A	CM-52AN502A
Top-Going	Right	CM-52BS501A	CM-52BK501A	CM-52BN501A
	Left	CM-52BS502A	CM-52BK502A	CM-52BN502A
With 7 Extra Large Number Wheels				
Top-Coming	Right	CM-52AS701A	CM-52AK701A	CM-52AN701A
	Left	CM-52AS702A	CM-52AK702A	CM-52AN702A
Top-Going	Right	CM-52BS701A	CM-52BK701A	CM-52BN701A
	Left	CM-52BS702A	CM-52BK702A	CM-52BN702A

①For hand tally models, change suffix **A** to **H** in catalog number. Top-coming models only.
②Tamperproof model (cover secured to base with inside brackets; prevent removal of cover without dismounting counter)—add suffix **04** to catalog number, e.g., CM-52AS501A becomes CM-52AS501A**04**.
③Double shaft extension N.R.S. (not regular stock)—change CM-52AS501A to CM-52AS503A.

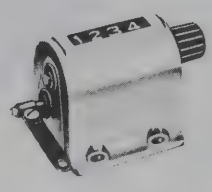
CM-22 JUNIOR KING RESET STROKE COUNTER



Less Arm



Cast Arm



Flexible Arm

Small counters for built-in application on office machines, vending machines, and industrial equipment where duty is moderate. Operating arms easily adjusted to required position. Slotted mounting holes for convenient mounting and easy alignment. Reset to zero with one complete turn of knob (normally located on side opposite shaft extension).

SPECIFICATIONS

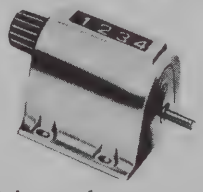
Type: Stroke counter—Knob reset—4 digits—Dustproof.
Count Life: 6 million.
Counts Per Minute: 400 cpm.
Arm Travel: 27°.
Mounting: 4 slotted mounting holes.
Dimensions: 1¾″ wide x 2¾″ long x 1½″ deep (arm not included).

Arm Action	Shaft Extension	Catalog Number		
		Less Arm	Cast Arm	Flexible Arm
Top-Coming	Right	CM-22AS401A	CM-22AS401C	CM-22AS401B
	Left	CM-22AS402A	CM-22AS402C	CM-22AS402B
Top-Going	Right	CM-22BS401A	CM-22BS401C	CM-22BS401B
	Left	CM-22BS402A	CM-22BS402C	CM-22BS402B

①For shaft extension at both ends, specify Double Shaft Extension, available at extra charge. Not regular stock.

Base	Catalog Number—Hand Tally Model	
	Right Hand Lever	Left Hand Lever
Steel	CM-22AS401D	CM-22AS402D
(None)	CM-22AS401E	CM-22AS402E

CM-24 JUNIOR KING MECHANICAL REVOLUTION COUNTER



The CM-24 Junior King is a 4-digit add/subtract revolution counter available in knob reset or non-reset models. Die cast enclosure. Speeds up to 12000 CPM; 10 counts per shaft revolution. Unit may be reset to zero by one complete turn of reset knob (normally located on side opposite shaft extension). Shaft diameter, ⅛″; extension, 9/16″.

SPECIFICATIONS

Mounting: 4 slotted mounting holes.
Count Life: 50 million, conservative rating.
Dimensions: 1¾″ high x 2¾″ long x 1½″ deep.

ITT-3

Reset①	Digits	Shaft Extension②	Catalog Number
Knob	4	Right	CM-24AS114
		Left	CM-24AS214

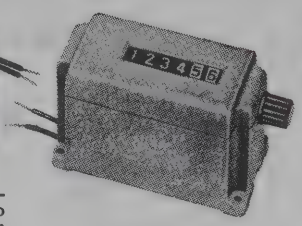
①Non-reset models available on order. Please consult factory.
②Double shaft extension available on order. Please consult factory.

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ELECTRIC COUNTERS & ACTUATORS



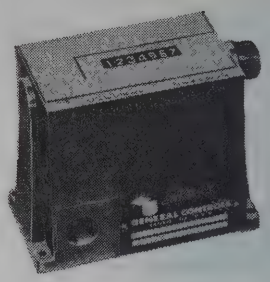
CE-600B Panelmount



CE-600A Basemount



CE-800B Panelmount



CE-800C Standard,
CE-800A Dustproof

PIC Electric Counters are actuated by electric impulses (12 to 150 AC or 12 to 220 DC) which may come from any suitable switch, relay, photoelectric unit or other circuit breaking device. Counters rated for 1000 counts per minute (cpm) require .030 second minimum closed period and .030 second minimum open period for each count. Counters rated at 600 cpm require .040 second minimum closed period and .060 second minimum open period for each count. Models are available for 12 to 230 v. AC and DC. Send for literature or write us for prices and deliveries.

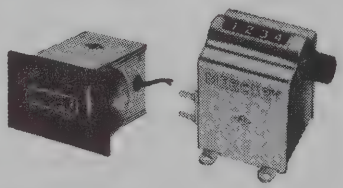
Also available in coin counting models.

CE-600 COUNTERS TO 999,999, WITH RESET

Count life of 50 million; 1000 cpm (with suitable actuation); seven watts power consumption. Built-in rectification provides reliable operation on all AC voltages to 150 v. Quiet operation; no AC hum when energized. Continuous duty coils and balanced armature. White figures on black wheels are easy to read; die cast, dust resistant enclosure. No. CE600AS602, 1.668" w. x 3.5" d. x 2.5" h.; No. CE600BS602, 4.4375" x 1.875" panel x 2.6875" d.; No. CE600BK602, 5.5" x 2.125" panel x 2.812" d. Models listed are for 115 v. AC, 60 cps.

CE-600AS602 Basemount with knob reset. 1 to 9 Net **$22.40**
CE-600BS602 Panelmount with knob reset. 1 to 9 Net **24.00**
CE-600BK602 Panelmount with key reset. 1 to 9 Net **33.00**

MERCURY COUNTERS TO 9,999, WITH RESET



For laboratory use and industrial service where duty is moderate. Estimated life six million counts. Counting rate 600 cpm, higher with electronic actuation. Has white figures on black wheels. Coils consume three watts. Tamper-proof metal enclosure has plastic window. Size: Basemount model, 2¼" x 1 23/32" x 2 1/4" h.; panelmount model, 2 13/16" x 1 15/16" panel x 2 27/64" d. For 115 v. AC, 60 cps.

CE-40AS402 Basemount. 1 to 9 Net **$15.25**
CE-40BS402 Panelmount. 1 to 9 Net **15.95**

TRY

HUGHES-PETERS

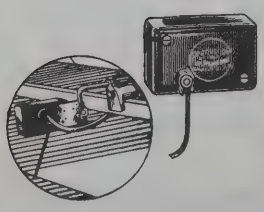
FIRST,

IT IS

PROBABLY

IN STOCK

SENSITIVE ACTUATOR ES-41



Widely used on folding machines. Requires only ¾ in.-oz. torque. Arm motion: 24° min., 59° max. reciprocal; 10° to 45° overthrow. Arm position adjustable, easily shortened or bent. Rated speed, 300 cpm. SPST contacts rated 2 amps; 120 v. AC. Body size, 2½" x 1⅝" x 1⅝" d. Furnished with straight spring steel arm 2 13/16" long.

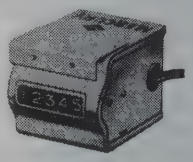
ES-41 Actuator. 1 to 9 Net **$8.40**

CE-800 SUPER-WIZARD COUNTER TO 999,999, WITH RESET

Has 200 million count life; 1000 cpm (with suitable actuation); only five watts power consumption. Built-in rectification provides top reliability from all AC voltages to 230 v. Continuous duty coils and balanced armatures for dependability. Large, white-on-black figures are easy to read. Standard enclosure has tamper-proof, die cast aluminum housing with staked window of unbreakable plastic; separate wiring compartment with independent cover is tapped for conduit. Dustproof enclosure has same housing with dustproof gasket seal and cement sealed window. Size: Standard and dustproof models, 3.12" w. x 5.94" l. x 4.69" h.; panelmount model, 5.19" x 3.50" panel x 4.39" d. Models listed are for 115 v. AC, 60 cps.

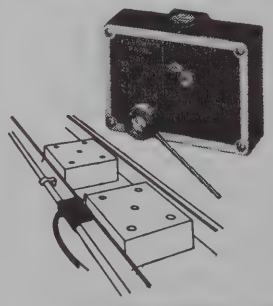
CE-800CS602 Std. enclosure, knob reset. 1 to 9 Net **$43.00**
CE-800AS602 Dustproof enclosure, knob reset. 1 to 9 Net . **47.25**
CE-800BS602 Panelmount, knob reset. 1 to 9 Net **41.50**

MERCURY COUNTERS TO 99,999, NO RESET



Counts to 99,999 and then repeats. Widely used in vending machines and similar applications where duty is moderate. Estimated life, three million counts. Counting rate, 600 cpm. Coil consumes three watts. Has white figures on black wheels. Tamper-proof metal enclosure with plastic window. Size: Basemount model, 2¼" x 1 23/32" x 2 27/64" h.; panelmount model, 1 23/32" x 2 23/64" x 1 3/16" h. For 120 v. AC, 60 cps operation.

CE-40BN502 Basemount. 1 to 9 Net **$7.75**
CE-40AN502 Panelmount. 1 to 9 Net **8.35**



HEAVY DUTY ACTUATOR ES-5

Arm has spring return. For operation by boxes, cans, packages, etc. Minimum torque of 3 oz.-in. Arm motion: 31° min., 65° max., reciprocal; 10° to 42° overthrow. Arm position adjustable. Rated speed 300 cpm. SPST contacts rated 10 amps, 120 v. AC. Size: 3 3/16" x 2 3/16" x 1 17/32". Furnished with lever as shown in upper illustration.

ES-5 Actuator. 1 to 9 Net.. **$9.85**

CE-620 ELECTRIC RESET ELECTRIC COUNTER

Developed to provide remote reset through manually, mechanically, electrically or electronically operated contacts. The CE620 includes a 6 digit CE600 electric counter with electrically operated reset mechanism mounted on a subpanel. Available with push button reset built into panel or with terminals provided for connecting remote contactor furnished by user. Also available in 7 digit and coin counting models.



CE-620BA602 Remote reset 120v 60 cy. 60 cy. 1 to 9 Net **$67.00**
CE-602BB602 Pushbutton reset 120v 60 cy. 1 to 9 Net **72.00**
Dimensions, overall 6" wide, 4" high, by ⅛" deep.

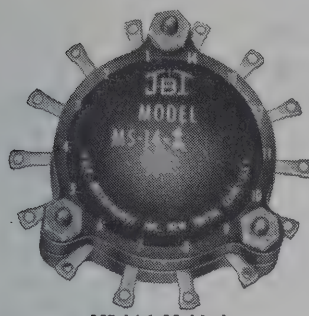
ITT GENERAL CONTROLS INC.

A SUBSIDIARY OF INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION

ROTARY SWITCHES — LAMINATED AND MOLDED

J-B-T INSTRUMENTS, INC.

J-B-T 27TH Year

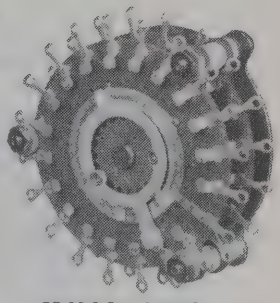


MS-14-1 Molded

- **INSTRUMENT AND TESTER TYPE**
- **14- AND 20-POSITION**
- **SINGLE AND MULTI-DECK**
- **MILITARY OR COMMERCIAL**

USES — J-B-T Rotary Selector Switches are extensively used in quality test equipment, portable instruments, inspection setups, and other military aerospace and commercial applications where trouble-free, dependable performance is of major importance.

FEATURES — **Extra Contacts** — 14- and 20-position designs provide extra switching capability. **Dependability** — Sturdy rotors and decks with rigid 3-post deck suspension; current-carrying parts heavily silverplated to meet 100 hour salt spray test; sharp detent mechanism to assure positive indexing; insulation resistance above 50,000 megohms. **Low Contact Loss** — Double-grip collector arms, and large area contacts, silver to silver; average contact resistance, .007 ohms or less. **Ample Dielectric** — Conservatively rated at 1 amp., 125 VAC, inductive load; maximum momentary capacity (not make-and-break), 5 amp. AC or DC; maximum voltage between contacts, 1500 VAC, R.M.S.; between decks and ground, 2000 VAC, R.M.S


SS-20-2 Laminated

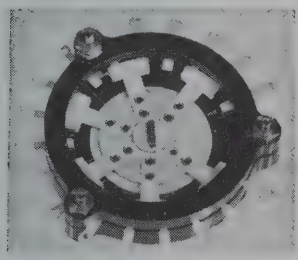
Enclosed — Molded models have all moving contacts enclosed to minimize dirt and corrosion.

Basic 14-Position: 13 circuits and "off" per deck in 2" circle (SS-14), or 2-3/32" circle (MS-14) with 25° 43' angular indexing. Supplied individually boxed with **1-1/4" Bar Knob, (KN-14),** not on bulk orders unless specified. For details, SS-14, 1 to 6 decks, see Print SK-42 Rev. B. MS-14, 1 to 6 decks, Print SK-111 Rev. D, 7 decks and over, Print SK-112 Rev. C.

Basic 20-Position: 19 circuits and "off" per deck in 2-23/32" circle (SS-20) or 2-5/8" circle (MS-20) with 18° angular indexing. Supplied individually boxed with 2" **Bar Knob (KN-16),** not on bulk orders unless specified. For details, SS-20, 1 to 6 decks, see Print SK-116 Rev. A. MS-20, 1 to 6 decks, Print SK-113 Rev. D, 7 decks and over, Print SK-114 Rev. C.

Military or Commercial Variations: Special switches too numerous to list now are being made. Typical are: laminated models with 14 or 20 live positions, no off, designated by suffix F as in SS-14-2F or SS-20-1F. Inquiries are invited.

*** **BONDED RUGGEDIZED TYPES** As indicated in the table, all molded rotary switches may be ordered with bonded construction as MS-14B or MS-20B types using cured laminations for ruggedization, shockproofing and further enclosure. This additional dependability factor adds only approx. 1/64" and 35c catalog price per deck.



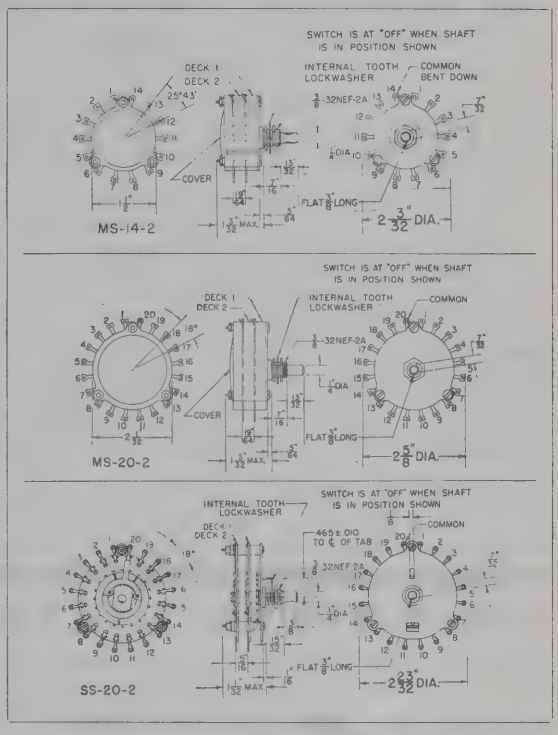
6-POLE DOUBLE-THROW PER DECK — 1 or 2 DECKS (DT Series). Widely used for simultaneous double-throw switching of 6 circuits per deck (18° throw). Fully enclosed — illustration shows protective cover cut-away. Circuit arrangement printed on switch front. If DTS Shorting Type, 1500 VAC R.M.S. between contacts and ground, 1000 VAC R.M.S. between contacts. See **MS-20-1-6DT, MS-20-1-6DTS,** and **MS-20-2-6DT** in table.

ETCHED DIAL PLATES

For switches below, also 20M Series on next page. Dull black finish, raised bright numerals, 2-3/4" dia.

EP-13	off thru 13	$.23
EP-14	1 thru 14	.23
EP-19	off thru 19	.23
EP-20	1 thru 20	.23





14-POSITION ROTARY SWITCHES — 25° 43' INDEXING SERIES SS-14, MS-14, MS-14B, MAS-14, and MAS-14B

Pos. Per Circ.	Cir. (Poles) Per Deck	Decks or Gangs	Short'g or Non-Sh.	LAMINATED (SS) Standard Model	Max(d) Depth Behind Panel	Boxed Inc. Knob	MOLDED (MS) Standard Model	Max. Depth Behind Panel	Boxed Inc. Knob	Bonded Model	Max. Depth Behind Panel	Boxed Inc. Knob	Adjustable Stop Model	Max. Depth Behind Panel	Boxed Inc. Knob	Bonded Adjustable Stop Model	Max. Depth Behind Panel	Boxed Inc. Knob
14	1	1	N-S	SS-14-1	27/32"	$2.30	MS-14-1	27/32"	$2.45	MS-14B-1	7/8"	$2.80	MAS-14-1	31/32"	$3.10	MAS-14B-1*	1"	$3.45
5(a)	2	1	N-S	SS-14-1A*	27/32"	2.45	—	—	—	—	—	—	—	—	—	—	—	—
14	1	1	S	SS-14-1S*	27/32"	2.35	MS-14-1S*	27/32"	2.50	MS-14B-1S*	7/8"	2.85	MAS-14-1S	31/32"	3.20	MAS-14B-1S*	1"	3.55
14	1	1	C-S(c)	SS-14-1CS*	27/32"	2.80	—	—	—	—	—	—	—	—	—	—	—	—
14	1	2	N-S	SS-14-2	1 3/32"	2.90	MS-14-2	1 3/32"	3.10	MS-14B-2	1 1/8"	3.80	MAS-14-2	1 7/32"	3.80	MAS-14B-2	1 1/4"	4.50
5(a)	2	2	N-S	SS-14-2A*	1 3/32"	3.20	—	—	—	—	—	—	—	—	—	—	—	—
14	1	2	S	SS-14-2S*	1 3/32"	3.00	MS-14-2S*	1 3/32"	3.20	MS-14B-2S*	1 1/8"	3.90	MAS-14-2S*	1 7/32"	3.95	MAS-14B-2S*	1 1/4"	4.65
14	1	3	N-S	SS-14-3	1 1/16"	3.50	MS-14-3	1 13/32"	3.75	MS-14B-3	1 15/32"	4.80	MAS-14-3	1 17/32"	4.60	MAS-14B-3*	1 13/32"	5.65
14	1	4	N-S	SS-14-4	1 23/32"	4.40	MS-14-4	1 23/32"	4.85	MS-14B-4	1 25/32"	6.25	MAS-14-4	1 27/32"	5.70	MAS-14B-4	1 15/16"	7.10
14	1	6	N-S	SS-14-6	2 13/32"	6.30	MS-14-6	2 13/32"	7.05	MS-14B-6	2 1/2"	9.15	MAS-14-6	2 17/32"	8.00	MAS-14B-6*	2 13/32"	10.10

20-POSITION ROTARY SWITCHES — 18° INDEXING SERIES SS-20, MS-20, and MS-20B

20	1	1	N-S	SS-20-1	23/32"	4.00	MS-20-1	27/32"	3.10	MS-20B-1	7/8"	3.45						
6(b)	2	1	N-S	SS-20-1A*	23/32"	4.15	—	—	—	—	—	—						
2	6	1	N-S	—	—	—	MS-20-1-6DT	27/32"	3.90	MS-20B-1-6DT*	7/8"	4.25						
2	6	1	S	—	—	—	MS-20-1-6DTS	27/32"	4.00	MS-20B-1-6DTS*	7/8"	4.35						
20	1	1	S	SS-20-1S*	23/32"	4.05	MS-20-1S	27/32"	3.15	MS-20B-1S*	7/8"	3.50						
20	1	2	N-S	SS-20-2	1 3/32"	4.75	MS-20-2	1 3/32"	3.90	MS-20B-2	1 1/8"	4.60						
2	6	2	N-S	—	—	—	MS-20-2-6DT	1 3/32"	5.50	MS-20B-2-6DT*	1 1/8"	6.20						
20	1	2	S	SS-20-2S*	1 3/32"	4.85	MS-20-2S	1 3/32"	4.00	MS-20B-2S*	1 1/8"	4.70						
20	1	3	N-S	SS-20-3	1 11/32"	5.85	MS-20-3	1 13/32"	5.00	MS-20B-3*	1 15/32"	6.05						
20	1	4	N-S	SS-20-4	1 23/32"	7.10	MS-20-4	1 23/32"	6.20	MS-20B-4	1 25/32"	7.60						
20	1	6	N-S	SS-20-6	2 11/32"	9.40	MS-20-6	2 13/32"	8.60	MS-20B-6	2 1/2"	10.70						

NOTES TO TABLES

* Standard Items, but not regularly stocked; check with your electronic parts distributor.

(a) 5 positions include 4 "live" and 1 "off."

(b) 6 positions include 5 "live" and 1 "off."

(c) Complete shorting—all contacts shorted except one in use.

(d) Dimensions given are for continuous rotation switches. On Standard SS-14 Models only, adjustable stops are also furnished, and when used, increase depth behind panel 3/32" and decrease effective bushing length 3/32".

Non-Shorting — Break before make **Shorting** — Make before break

PRICES NET, F.O.B., New Haven, Conn. Individually Boxed, Domestic Packed, Effective September 1, 1965

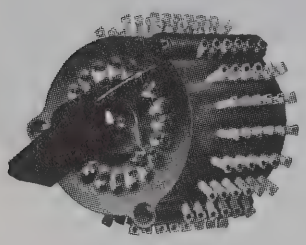
J-B-T 27TH Year

MULTI-POLE AND LEVER TYPE SWITCHES

J-B-T INSTRUMENTS, INC.

NEW MULTI-POLE MOLDED ROTARY SWITCHES, SERIES 20M.

• Superior Molded Material • All Models Bonded & Ruggedized • Panel Seal Available



Front View Showing Panel Locator which is Normally at 3 o'clock Position.



Rear View with Back Cover Cut Away to Show 4-Pole Construction with 4 Live Switching Contacts.

Although the new 20M- Series is ¼" longer behind the panel than the 20-position molded switches described on the preceding page, the two styles are otherwise interchangeable in dimensions. Providing 19 live positions and off, the 20M- offers these additional features:

1. **Increased Versatility of Circuitry** — up to and including four poles per deck;
2. **Upgraded Insulation Resistance and Dielectric Qualities** — by use of melamine stators and rotors (or other MIL-M-14 molded materials when specially ordered);
3. **Built-in Panel Locator or Non-Turn Device;**
4. **Extended Switch Life** — new contact design with rotor brushes of phosphor bronze heavily silver-plated;
5. **Bonded and Ruggedized Construction;**
6. **Radial Alignment of Multi-Pole Contact Surfaces** — by means of newly-designed double-ball detent with diaphragm-type springs.

VARIATIONS OF 20M- — Please request SK-142 for full dimensions and circuit diagrams. Besides the condensed listing in the accompanying table, various combinations of **shorting and non-shorting contacts for each deck** may be made. **Fixed stops** are built-in but may be provided for single-pole switches when specially ordered. **Over six decks** can be supplied for a reasonable number of poles; extra decks add 5/16" per deck and 5/16" per switch for rear support SU-3. **Ring-contact** (suffix R) may be specially ordered.

PANEL SEAL PS20M- SERIES — Sealed shaft and bushing meet the requirements of MIL-S-3786A for sealing. For details ask for SK-143. The seal (prefix PS) adds $1.75 per switch to catalog price.

SPECIFICATIONS AND TEST DATA — Available on request.

No. of Decks	Depth Behind Panel	Poles Per Deck	Model Number	Circuitry Per Pole	Rotation-Positions*	Boxed Incl. Knob
1	1-3/16	1	**20M-1201N**	19 live, 1 off	Continuous	**$3.75**
		1	**20M-1191N**	19 live, no off	1 thru 19	**3.75**
		2	**20M-2101N**	9 live, 1 off	20 thru 9	**4.15**
		3	**20M-3051N**	4 live, 1 off	20 thru 4	**4.50**
		4	**20M-4051N**	4 live, 1 off	20 thru 4	**4.85**
2	1½	1	**20M-1202N**	19 live, 1 off	Continuous	**5.00**
		2	**20M-2102N**	9 live, 1 off	20 thru 9	**5.80**
		3	**20M-3052N**	4 live, 1 off	20 thru 4	**6.50**
		4	**20M-4052N**	4 live, 1 off	20 thru 4	**7.20**
3	1-13/16	1	**20M-1203N**	19 live, 1 off	Continuous	**6.25**
		2	**20M-2103N**	9 live, 1 off	20 thru 9	**7.45**
		3	**20M-3053N**	4 live, 1 off	20 thru 4	**8.50**
		4	**20M-4053N**	4 live, 1 off	20 thru 4	**9.55**
4	2-2/16	1	**20M-1204N**	19 live, 1 off	Continuous	**7.70**
		2	**20M-2104N**	9 live, 1 off	20 thru 9	**9.30**
		3	**20M-3054N**	4 live, 1 off	20 thru 4	**10.70**
		4	**20M-4054N**	4 live, 1 off	20 thru 4	**12.10**
6	2-13/16	1	**20M-1206N**	19 live, 1 off	Continuous	**10.80**
		2	**20M-2106N**	9 live, 1 off	20 thru 9	**13.20**

* See MS-20 drawing on preceding page for location of positions.

Notes: (1) NON-shorting (N) type — (break-before-make) — is shown. For shorting type (S), add $.05 per pole per deck to catalog price. Example: 3 pole, 3 deck 20M-3053S is $8.95.

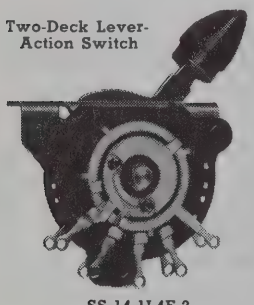
(2) Switch with all live positions per pole or less than maximum live positions can be provided by fixed stops.

(3) **Panel Seal** is available including shaft seal within bushing. Use suffix PS. Example: PS20M-1203N. See Print SK-143.

LEVER ACTION SWITCHES — 6, 5, 4, 3, and 2-Position — LAMINATED, MOLDED, & SUB-MINIATURE

LAMINATED 3- AND 4-POSITION, POSITIVE INDEXING. These lever switches are derived from the J-B-T SS-14 instrument-type rotaries. Specified for tube checkers, inspection equipment, communications systems, control consoles, and other uses where quality is important. 4-position types are interchangeable with 3-position except in length of throw — mounting holes for both, 1⅝" between centers. Individually-boxed switches come with mounting hardware and KN-17 knob as illustrated; bulk shipments, without knobs. **SINGLE DECK-** spacing between centers: recommended, ¾"; minimum, 9/16". **TWO DECK-** spacing: recommended, 15/16"; minimum, 13/16". ⅜" between decks matches TV twinlead wires. **SPRING RETURN TYPE-** single deck, 3-position switches may be ordered with spring return. Lever returns to position 11, giving momentary action at position 9 and 10. For dimensions, ask for drawing SK-138.

Two-Deck Lever-Action Switch

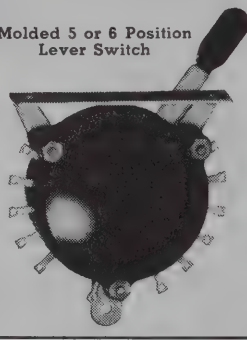


SS-14-1L4F-2

Positions Per Circuit	Circ. (Poles) Per Deck	Decks or Gangs	Short. Non-Short	Stand.* Contact Pos.	Model	Boxed Incl. Knob
3, no "off"	1	1	N-S	A	**SS-14-1L3**	**$1.00**
3, no "off"	2	1	N-S	B	**SS-14-1L3A**	**1.15**
3, no "off"	1	1	S	A	**SS-14-1L3S**	**1.05**
3, no "off"	1	1	N-S	A	**SS-14-1L3R†**	**1.15**
3, no "off"	1	1	S	A	**SS-14-1L3S-R†**	**1.20**
3, no "off"	1	2	N-S	A	**SS-14-1L3-2**	**1.70**
3, & "off"	1	1	N-S	C	**SS-14-1L4**	**1.10**
4, no "off"	1	1	N-S	D	**SS-14-1L4F**	**1.10**
4, no "off"	1	2	N-S	D	**SS-14-1L4F-2**	**1.90**
3, & "off"	1	1	S	C	**SS-14-1L4S**	**1.15**

*A—common at 12, contacts at 9, 10, 11; B—common at 9, 10, contacts at 6, 7, 8, 12, 13 14; C—common and off at 12, contacts at 9, 10, 11; D—common at 12, contacts at 8, 9, 10, 11.
†—Spring Return.

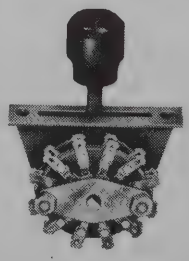
Molded 5 or 6 Position Lever Switch



MOLDED 5- and 6-POSITION, POSITIVE-INDEXING. 5 or 6 live positions, two circuits per deck, in enclosed lustrous black molded construction; adapted from the MS-20 series with electrical characteristics as shown on previous page. These models can simplify circuitry for sound systems, control, inspection, test, experimental, and hobby purposes. Individually-boxed switches come with KN-20 threaded black molded knob; bulk shipments, without knobs. For mounting data see SK-64, Rev. H on 5-position and SK-119, Rev. B on 6-position.

MS-20-1L5A-1, 5-position, 2-circuit (1 deck) **$3.25**

MS-20-1L6A-1, 6-position, 2-circuits (1 deck) **3.50**



Sub-Miniature 1 Dual Duty Deck



2 AND 3 POSITION, 1 TO 4 DECKS, 2 TO 8 POLES PER DECK.

SUB-MINIATURE LEVER SWITCHES — Derived from the high-performance sub-miniature switches described on the next page, the VL-7000 and the VL-5000 positive indexing series and the VSRL-7000 and VSRL-5000 spring return types provide excellence in lever switches. MIL materials throughout; crisp 30° indexing. Max. depth behind panel 1.250"; panel slot .962" x 0.62"; other details to SK-139, Rev. A and Catalog SM-32D. Typical switches are:

VL-71031N, single-pole, 3-position, one-deck, non-shorting **$4.80**

VSRL-71031N, same as above, with spring return to center position from either side **5.80**

VL-71032N, single-pole, 3-position, two-deck, non-shorting **7.05**

LEVER KNOBS

KN-17, black pointed with metal insert **$0.19**
KN-18, walnut, same as KN-19 ..... **0.06**
KN-19, black, round, flat-type, push-on **0.06**
KN-20, black, threaded, for MS-20-IL..... **0.14**

PRICES NET, F.O.B., New Haven, Conn. Individually Boxed, Domestic Packed, Effective September 1, 1965

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J-B-T 27TH Year

TOGGLE SWITCHES — HEAVY DUTY

J-B-T INSTRUMENTS, INC.

SINGLE-, DOUBLE-, & 4-POLE — GOVERNMENT QUALITY

Series MS25068, MS35058, and MS35059 to MIL-S-3950B Series ST40A-H, ST42-H, ST50K-T, ST52K-T to JAN-S-23, MIL-S-21195A (Ships), or DDAX Drawings

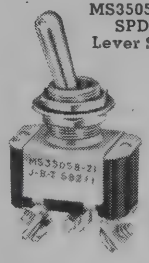
• **ALL HEAVY DUTY MS and AN** models use solid **coin silver contacts and rocker arms,** exclusive in J-B-T construction, to add overload protection and keep contact resistance under .005 ohms. **These and other features more than pay for themselves in trouble-free operation whether in normal use or exceptional environments.**

MIL-S-3950B SERIES — Single-pole MS35058 with suffix —21 and above, and double-pole MS35059 types with suffix —21 and above are recommended when maximum reliability is required. Temperature, endurance, and altitude requirements exceed earlier MS types (suffix —1 to —19), AN3021 and AN3027 switches to MIL-S-6745, and ST styles to JAN-S-23 and MIL-S-21195A(Ships). All MS switches contain a silicone rubber bushing seal to meet sand and dust and 15-foot head of water submersion tests.

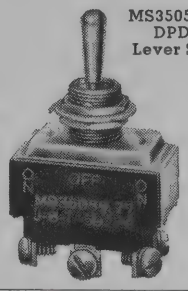
NOMINAL RATINGS: 20 Amp. at 125 VAC, 10 Amp. at 250 VAC.

SIZE: Single-hole; bushing 15/32"—32NS-2A by 15/32" high; toggle lever, 11/16" long. Bodies including terminals: **SP:** 1-1/8" x 5/8" x 1-1/16" deep; **DP:** 1-21/64" x 3/4" x 1-1/32" or 1-13/64" deep.

TERMINALS: MIL-S-3950B switches have solderable 6-32 screw terminals; ST40's and ST50's, screw terminals; ST42's and ST52's, solder lugs.



MS35058-21
SPDT
Lever Seal



MS35059-27
DPDT
Lever Seal

SINGLE AND DOUBLE POLE HEAVY DUTY WITH LEVER SEAL					
MIL-S-3950B	Model No.	2-9§	10-29	30-99	100-249
SPST — 2 term.					
On-X-Off	MS35058-22	$1.65	$1.24	$1.01	$ .82
On-Off-X	MS35058-24	1.71	1.28	1.05	.86
On-Off*-X	MS35058-25	1.95	1.46	1.20	.98
X-Off-On*	MS35058-28	1.96	1.47	1.20	.98
On-X-Off*	MS35058-29	1.88	1.41	1.15	.94
Off-X-On*	MS35058-30	1.88	1.41	1.15	.94
SPDT — 3 term.					
On-Off-On	MS35058-21	1.95	1.46	1.20	.98
On-X-On	MS35058-23	1.95	1.46	1.20	.98
On-X-On*	MS35058-26	2.10	1.58	1.29	1.05
On*-Off-On*	MS35058-27	2.10	1.58	1.29	1.05
On-Off-On*	MS35058-31	2.14	1.61	1.31	1.07
DPST — 4 term.					
On-X-Off	MS35059-22	1.85	1.70	1.33	1.09
On-Off-X	MS35059-24	1.85	1.70	1.33	1.09
On-Off*-X	MS35059-25	2.44	2.23	1.77	1.43
X-Off-On*	MS35059-28	2.29	2.09	1.66	1.34
On-X-Off*	MS35059-29	2.29	2.09	1.66	1.34
Off-X-On*	MS35059-30	2.15	1.96	1.55	1.26
DPDT — 6 term.					
On-Off-On	MS35059-21	2.15	1.96	1.55	1.26
On-X-On	MS35059-23	2.15	1.96	1.55	1.26
On-X-On*	MS35059-26	2.44	2.23	1.77	1.43
On*-Off-On*	MS35059-27	2.44	2.23	1.77	1.43
On-Off-On*	MS35059-31	2.44	2.23	1.77	1.43

SINGLE AND DOUBLE POLE HEAVY DUTY					
JAN-S-23	Model No.	2-9§	10-29	30-99	100-249
SPST — 2 term.					
On-X-Off	ST40A	$1.34	$1.01	$ .87	$ .70
On-X-Off*	ST40B	1.50	1.13	.97	.78
Off-X-On*	ST40C	1.50	1.13	.97	.78
SPDT — 3 term.					
On-X-On	ST40D	1.62	1.21	1.04	.84
On-Off-On	ST40E	1.62	1.21	1.04	.84
On-X-On*	ST40F	1.78	1.33	1.14	.92
On*-Off-On*	ST40G	1.78	1.33	1.14	.92
On-Off-On*	ST40H	1.78	1.33	1.14	.92
SPST — 2 term.					
On-X-Off	ST42A	1.26	.95	.76	.62
On-X-Off*	ST42B	1.41	1.06	.84	.69
Off-X-On*	ST42C	1.41	1.06	.84	.69
SPDT — 3 term.					
On-X-On	ST42D	1.50	1.12	.90	.73
On-Off-On	ST42E	1.50	1.12	.90	.73
On-X-On*	ST42F	1.67	1.25	1.00	.82
On*-Off-On*	ST42G	1.67	1.25	1.00	.82
On-Off-On*	ST42H	1.67	1.25	1.00	.82
DPST — 4 term.					
On-X-Off	ST50K	1.70	1.27	1.06	.85
On-X-Off*	ST50L	1.99	1.49	1.25	1.00
Off-X-On*	ST50M	1.99	1.49	1.25	1.00
DPDT — 6 term.					
On-X-On	ST50N	1.99	1.49	1.25	1.00
On-Off-On	ST50P	1.99	1.49	1.25	1.00
On-X-On*	ST50R	2.26	1.70	1.42	1.13
On*-Off-On*	ST50S	2.26	1.70	1.42	1.13
On-Off-On*	ST50T	2.26	1.70	1.42	1.13
DPST — 4 term.					
On-X-Off	ST52K	1.54	1.16	.97	.77
On-X-Off*	ST52L	1.73	1.30	1.08	.86
Off-X-On*	ST52M	1.73	1.30	1.08	.86
DPDT — 6 term.					
On-X-On	ST52N	1.73	1.30	1.08	.86
On-Off-On	ST52P	1.73	1.30	1.08	.86
On-X-On*	ST52R	2.01	1.51	1.26	1.00
On*-Off-On*	ST52S	2.01	1.51	1.26	1.00
On-Off-On*	ST52T	2.01	1.51	1.26	1.00



MS25068-27
4-pole DT
Lever Seal

OUTSTANDING 4-POLE SERIES

•There is no mistaking the light brown color and silver printing of these distinctive J-B-T 4-pole heavy-duty switches. The superior molded body, chosen after extensive tests, features high arc resistance and low shrinkage. As a result the switches exceed the rigorous electrical endurance requirements of MS25068.

Equally important, the internal construction uses rocker arms and contacts made of solid coin silver (not clad or brazed). The 8 models listed here have silicone rubber bushing seals and solderable 6-32 screw terminals, the same as other heavy-duty J-B-T MS switches. Dimensions same as MS35059 above except bodies including terminals: 1-11/32" long, 1-9/16" wide, 1-9/32" deep.

4-POLE HEAVY DUTY WITH LEVER SEAL					
MIL-S-3950B	Model No.	2-9§	10-29	30-99	100-249
4PST — 8 term.					
On-Off-X	MS25068-24	$4.20	$3.31	$2.78	$2.31
On-Off*-X	MS25068-25	4.96	3.91	3.29	2.73
X-Off-On*	MS25068-28	4.96	3.91	3.29	2.73
4PDT — 12 term.					
On-Off-On	MS25068-21	4.88	3.84	3.23	2.68
On-X-On	MS25068-23	4.96	3.72	3.10	2.48
On-X-On*	MS25068-26	5.26	4.15	3.49	2.90
On*-Off-On*	MS25068-27	5.26	4.15	3.49	2.90
On-Off-On*	MS25068-31	5.26	4.15	3.49	2.90

CROSS REFERENCE: AN, MS, AND ST MODEL NUMBERS WITH SIMILAR CIRCUITRY

SCREW TERMINAL				SOLDER LUG	
MIL-S-3950B See Notes A & B	JAN-S-23 & MIL-S-21195A	MIL-S-6745 See Note A	MIL-S-3950 See Notes A & B	JAN-S-23 & MIL-S-21195A (Ships)	MIL-S-3950 See Note A
SPST					
MS35058-22	ST40A	AN3021-2	#	ST42A	MS35058-9
MS35058-29	ST40B	AN3021-9	#	ST42B	MS35058-10
MS35058-30	ST40C	AN3021-8	#	ST42C	MS35058-11
MS35058-24	#	AN3021-10	MS35058-1	#	MS35058-12
MS35058-28	#	AN3021-11	MS35058-2	#	MS35058-13
MS35058-25	#	AN3021-12	MS35058-3	#	MS35058-14
SPDT					
MS35058-23	ST40D	AN3021-3	MS35058-4	ST42D	MS35058-15
MS35058-21	ST40E	AN3021-1	MS35058-5	ST42E	MS35058-16
MS35058-26	ST40F	#	MS35058-6	ST42F	MS35058-17
MS35058-27	ST40G	AN3021-7	MS35058-7	ST42G	MS35058-18
MS35058-31	ST40H	AN3021-5	MS35058-8	ST42H	MS35058-19
#	#	AN3021-6†	#	#	#

SCREW TERMINAL				SOLDER LUG	
MIL-S-3950B See Notes A & B	JAN-S-23 & MIL-S-21195A	MIL-S-6745 See Note A	MIL-S-3950 See Notes A & B	JAN-S-23 & MIL-S-21195A (Ships)	MIL-S-3950 See Note A
DPST					
MS35059-22	ST50K	AN3027-2	#	ST52K	MS35059-9
MS35059-29§	ST50L	AN3027-4§	#	ST52L	MS35059-10§
MS35059-30§	ST50M	AN3027-5§	#	ST52M	MS35059-11§
MS35059-24	#	AN3027-9	MS35059-1	#	MS35059-12
MS35059-28	#	AN3027-11	MS35059-2	#	MS35059-13
MS35059-25§	#	AN3027-10§	MS35059-3§	#	MS35059-14§
DPDT					
MS35059-23	ST50N	AN3027-3	MS35059-4	ST52N	MS35059-15
MS35059-21	ST50P	AN3027-1	MS35059-5	ST52P	MS35059-16
MS35059-26§	ST50R	AN3027-6§	MS35059-6§	ST52R	MS35059-17§
MS35059-27	ST50S§	AN3027-7§	MS35059-7§	ST52S§	MS35059-18§
MS35059-31§	ST50T§	AN3027-8§	MS35059-8§	ST52T§	MS35059-19§

Not included in this specification. **† AN3021-6 same as AN3021-5 with jumper.** **§ Same dimensions as MS35059-27.**

NOTE A: MS and AN types use internal sand and dust toggle seal and other high performance features involving extra cost over ST types. MS types to MIL-S-3950B have internal toggle seal to meet 15 ft. water submersion test. MIL-S-3950 models are superseded by MIL-S-3950B models.
NOTE B: For heavy-duty switches in the MS25068, MS35058, and MS35059 Series, MIL-S-3950B calls for SCREW TERMINALS ONLY. These terminals have SOLDERABLE FINISH and may be soldered after removal of screw.

PRICES NET, F.O.B., New Haven, Conn. Individually Boxed, Domestic Packed, Effective September 1, 1965

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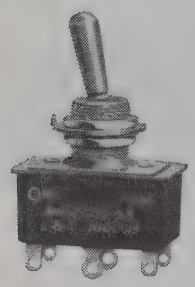
TOGGLE SWITCHES — MEDIUM DUTY — AND REED RELAYS

J-B-T INSTRUMENTS, INC. NEW HAVEN, CONN. 06508

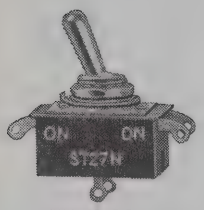
J-B-T 27TH Year

SINGLE & DOUBLE POLE — GOVERNMENT QUALITY

Series MS25098 and MS25100 to MIL-S-3950B; Series ST12-27 to JAN-S-23, MIL-S-21195A(Ships), or DDAX Drawings.



MS25100-23 DPDT
Rear Conn.,
Lever Seal



ST27N, DPDT
Side and Rear Conn.
¼" Bushing

● **MEDIUM DUTY** describes the current-carrying capacity—nominally 6 amp. at 125 VAC, 3 amp, at 250 VAC —rather than the life characteristics. Self-wiping heavily silver-plated double-grip contacts provide exceptional reliability. Typical uses: instruments, data processing, and communications circuits.

NEW DESIGN FOR MS25098 & MS25100—Significant internal changes now provide fast break, wide gap, and increased insulation values, to surpass the severe endurance tests of MIL-S-3950B. For example, after 20,000 cycles of operation at 65,000′ altitude with resistive load of 5 amps. at 125 VDC, contact resistance was well within the permissible limits. This development is especially important for the double-throw models MS25098-23 and MS25100-23. All MS medium-duty models contain: (a) silicone rubber bushing seal for sand, dust, and 15-foot head of water submersion tests, and (b) case-to-terminal sealing.

SIZE AND TERMINALS — Whether MS series to latest MIL-S-3950B, or ST series to Specification JAN-S-23 and MIL-S-21195A(Ships), all have solder terminals. Medium-duty types use 11/16" long, toggle lever, bushing 15/32"-32NS-2A by 15/32" (or 1/4"). Bodies including terminals are: 1-1/4" long, 11/16" wide, 29/32" deep, except ST16, -17, -26, —27 are 1-3/4" long and 21/32" deep.

SINGLE AND DOUBLE POLE MEDIUM DUTY WITH LEVER SEAL

MIL-S-3950B	Model No.	2-9§	10-29	30-99	100-249
SPST — 2 term.					
On-X-Off	MS25098-22	$1.38	$1.10	$1.04	$ .97
On-X-Off*	MS-25098-29	1.78	1.42	1.33	1.24
Off-X-On*	MS25098-30	1.78	1.42	1.33	1.24
SPDT — 3 term.					
On-X-On	MS25098-23	1.58	1.27	1.19	1.11
DPST — 4 term.					
On-X-Off	MS-25100-22	1.98	1.58	1.49	1.39
On-X-Off*	MS25100-29	2.30	1.84	1.73	1.61
Off-X-On*	MS25100-30	2.30	1.84	1.73	1.61
DPDT — 6 term.					
On-X-On	MS25100-23	2.15	1.72	1.60	1.50

SINGLE AND DOUBLE POLE MEDIUM DUTY

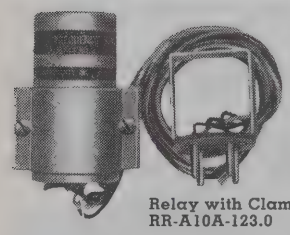
JAN-S-23	Model No.	2-9§	10-29	30-99	100-249
SPST — 2 term.					
On-X-Off	ST12A	$ .91	$ .73	$ .68	$ .64
On-X-Off*	ST12B	1.04	.83	.78	.73
Off-X-On*	ST12C	1.04	.83	.78	.73
On-X-Off	ST13A†	.91	.73	.68	.64
On-X-Off	ST16A‡	.91	.73	.68	.64
On-X-Off*	ST16B‡	1.04	.83	.78	.73
Off-X-On*	ST16C‡	1.04	.83	.78	.73
On-X-Off	ST17A†‡	.91	.73	.68	.64
SPDT — 3 term.					
On-X-On	ST12D	1.04	.83	.78	.73
On-X-On	ST13D†	1.04	.83	.78	.73
On-X-On	ST16D‡	1.04	.83	.78	.73
On-X-On	ST17D†‡	1.04	.83	.78	.73
DPST — 4 term.					
On-X-Off	ST22K	1.26	1.01	.95	.89
On-X-Off*	ST22L	1.38	1.11	1.04	.97
Off-X-On*	ST22M	1.38	1.11	1.04	.97
On-X-Off	ST23K†	1.26	1.01	.95	.89
On-X-Off	ST26K‡	1.26	1.01	.95	.89
On-X-Off*	ST26L‡	1.38	1.11	1.04	.97
Off-X-On*	ST26M‡	1.38	1.11	1.04	.97
On-X-Off	ST27K†‡	1.26	1.01	.95	.89
DPDT — 6 term.					
On-X-On	ST22N	1.38	1.11	1.04	.97
On-X-On	ST23N†	1.38	1.11	1.04	.97
On-X-On	ST26N‡	1.38	1.11	1.04	.97
On-X-On	ST27N†‡	1.38	1.11	1.04	.97

SEE FOOTNOTES BELOW

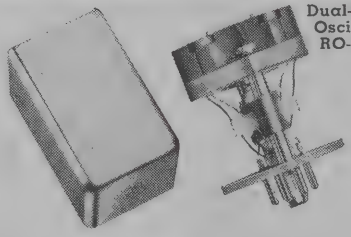
NOTES TO TABLES: § On orders for single switches, add 50c; X No position; * Momentary position; † Bushing ¼" high; ‡ Side connected terminals. Ask for Bulletin TS-6D concerning additional models and full technical data.

RELAYS & OSCILLATOR CONTROLS

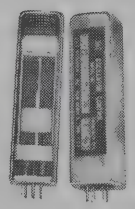
FREQUENCY-SENSITIVE RESONANT REED RELAYS AND OSCILLATOR CONTROLS



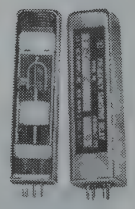
Relay with Clamp
RR-A10A-123.0



Dual-Reed
Oscillator Control
RO-B10B-188.0



Single-Reed
Oscillator Control
RO-D62E-250.3
(Vibration-Isolated
in All Planes)



Relay
RR-DO2E-250.3
(Vibration-Isolated)
in All Planes)

Applications: selective-calling mobile communication equipment, remote data transmission, and simultaneous or sequential coding and decoding. For further data ask for Bulletins 162R and D664.

J-B-T frequency-sensitive electro-mechanical relays (decoders) are highly stable control devices. They intermittently make and break contacts when a signal of the same frequency as the tuned reed is received. Although the reed has a high Q, the bandwidth at which the relay responds will be proportional to the input signal level.

RR-A11- and RR-A10 types are round, 4-pin plug-in relays, used primarily on existing mobile equipment.

RO-B Oscillator Controls (sometimes known as tone generators or encoders) are dual-reed units internally shock mounted and of sealed construction. These units control the frequency of oscillation in vacuum tube or transistor oscillator circuits. The RO-B type oscillator control is recommended where accurate and stable AC signals are required.

RR-D types are internally shock-mounted resonant reed relays, which are square, sealed units with 7-pin miniature plug. They now are the most widely used J-B-T relays.

RO-D types are single-reed, internally shock mounted oscillator controls for applications where space saving is of importance. Dimensionally they are identical to RR-D relays.

TYPICAL REED RELAY AND OSCILLATOR CONTROL SPECIFICATIONS

Model	Enclosure	Mounting & Connections	Frequency Range CPS	DC Coil Resistance (Standard)	Accuracy to	Change per °C —40° to + 100°C	Individually Boxed
RR-A-10A-Reed Relay	1" round x 2" long	Clamp & Harness* 4 Pin Fits Cinch Socket #9804	67 to 600	200 ohms	±0.3%	±0.005 %	$15.00**
RR-A11A-Reed Relay	1" round x 2" long	Plug In 4 Pin Fits Cinch Socket # 9804	67 to 600	200 ohms	±0.3%	±0.005 %	14.50**
RR-DO2E-Reed Relay	25/32" sq. x 31/32" lg sealed	7 Pin Miniature Plug In	67 to 1600	600 ohms	±0.1%	±0.0025%	19.00**
RO-B10B-Oscillator Control†	1 3/4" sq x 2 7/16" long sealed	Octal Plug In	67 to 600	2200 ohms/coil	±0.1%	±0.003 %	26.00**
RO-D62E-Oscillator Control	25/32" sq. x 31/32" lg sealed	7 Pin Miniature Plug In	67 to 1600	600 ohms	±0.1%	±0.0025%	18.00**

*** Supplied with 2-piece clamp and 4-wire cable terminated in a 4-pin base. ** Specify frequency with order. † Dual reed construction.**

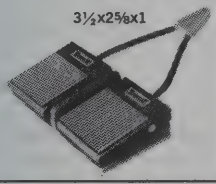
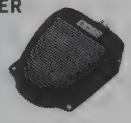
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J-B-T INSTRUMENTS, INC. Electrical Instruments, Testers, Switches and Other Components

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LINEMASTER

America's Footswitch Leader

TREADLITE  3½x2⅝x1 	T-51-S	SINGLE STAGE MOMENTARY	SPDT	7 AMP 125-250 VAC 1/6 H.P. 125 VAC	Lowest Cost Foot Switch Formed Steel Housing. Wt.—7 ozs. *Similar to T-51-SC Except Grounded 3 Conductor Cord and 3 Prong Series Plug.
	T-51-D	SINGLE STAGE MAINTAINED	SPDT		
	T-52-S	TWO STAGE MOMENTARY	BOTH STAGES SPDT		
	T-51-SC *T-51-SC3	T-51-S COMPLETE WITH 6' CORD SET & SERIES PLUG			
	T-51-S TWIN	TWO MOMENTARY SWITCHES ON ONE BASE	BOTH SPDT		
COMPACT  2⅞x2½x1⅛ 	491-S	MOMENTARY	SPDT	10A 125 VAC	Completely Enclosed Interior Switch. Formed Steel Housing. Wt.—7 oz. *Similar to 491-SC Except Grounded 8 Ft. 3 Conductor Cord and 3 Prong Series Plug.
	492-S	MOMENTARY	SPDT	20A 125-250 VAC	
	494-S	MOMENTARY	DPDT	10A 125 VAC 5A 250 VAC	
	491-SC *491-SC3	491-S COMPLETE WITH 6' CORD SET & SERIES PLUG			
	491-S TWIN	TWO MOMENTARY SWITCHES ON ONE BASE	BOTH SPDT		
CLIPPER  4½x3½x1½ 	632-S	MOMENTARY	SPDT	20A 125-250 VAC	Cast Iron Housing. Also Available with Safety Guard or 7" Wide Treadle. Wt.—2¼ lbs. Twin Has Connecting Interwiring Tube So That Only One Cable Is Used.
	632-D	MAINTAINED	SPDT	20A 125-250 VAC	
	634-S	MOMENTARY	DPDT	10A 125 VAC 5A 250 VAC	
	634-D	MAINTAINED	DPDT	10A 125 VAC 5A 250 VAC	
	632-S TWIN	TWO MOMENTARY SWITCHES ON ONE BASE	BOTH SPDT	20A 125-250 VAC	
JUNIOR  5½x3¼x1¼	121-S	MOMENTARY	SPDT	15A 125-250 VAC	Cast Aluminum Housing. Low Tapered Treadle Permits Easy Operation. Wt.—1 lb.
	122-S	MOMENTARY	SPDT	20A 125-250 VAC	
CADET  3⅝x1⅛	HB-2	MOMENTARY	SPDT	7A 125 VAC 1/6 H.P. 125 VAC	Round Switch Operates From Any Position. Switch Comes Complete With Cord set. Wt.—11 ozs.

MANY OTHER STANDARD MODELS ARE AVAILABLE—WRITE FOR CATALOG

"When awkward jobs hold you up—a LINEMASTER FOOT SWITCH is your third hand!"

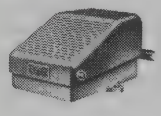
LINEMASTER SWITCH CORPORATION

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A Modern FOOTSWITCH for Every Use

PRECISION-BUILT • DEPENDABLE • RUGGED • ECONOMICAL • OVER 1000 APPLICATIONS

NAUTILUS  8x4x2¼	WP-541-S	MOMENTARY		SPDT	20A 125-250 VAC	Completely Waterproof. Can Be submerged.
	WP-541-D	MAINTAINED		SPDT	12A 125 VAC 6A 250 VAC	
SENIOR	MOMENTARY	MAINTAINED				
	4141-S	4141-D		DPST	20A 125-250 VAC&DC	Cast Iron Housing. Also Available With Complete Safety Guard. Wt.—5¼ lbs.
	4142-S	4142-D		DPDT	10A 125 VAC&DC 5A 250 VAC&DC	
	4143-S	4143-D		SPDT	15A 125 VAC&DC 10A 250 VAC&DC	
	4151-S	4151-D		DPST	15A 125-250 VAC 5A 575 VAC	
7x4x3¼	4351-S	4351-D		TPST	15A 125-230 VAC 5A 575 VAC	
HERCULES						
	531-SW	571-DW	SINGLE STAGE	SPDT	20 AMPS 125-480 VAC 1 H.P. 115-230 VAC	Cast Iron Housing. Wt.—7¼ lbs. Also Available With No Guard or Complete Hood. All Models Available in Explosion Proof Version.
	532-SW	572-DW	SINGLE STAGE	DPDT		
	533-SW	573-DW	SINGLE STAGE	TPDT		
	534-SW	574-DW	TWO STAGE	SPDT		
8⅞x4⅝x4½	535-SW	575-DW	THREE STAGE	SPDT		
POTENTIOMETER	2 WATT	5 WATT	SPECIFY MAXIMUM RESISTANCE REQUIRED			
 8⅞x4⅝x4½			2 WATT Ohms: 50 thru 1500 / 2500 thru 75000 Megohms: .1 thru 5.0		5 WATT Ohms: 2 thru 40 / 50 thru 1000 / 1500 thru 25000	Standard Model Wt. Approx. 7¼ lbs. Details on request
	500 thru 500-AH	505 thru 505-AH				
LEKTRO-LOK						
 5x2½x1⅛	L-2-S	TWO MOMENTARY SWITCHES SIDE BY SIDE		BOTH SIDES SPDT	15A 125-250 VAC	Stamped Metal Housing. Wt.—10 oz.
	L-4-S			BOTH SIDES DPDT	10A 125 VAC 5A 250 VAC	
EXECUTIVE						
 4⅝x4x1⅛	B-2-S	TWO MOMENTARY SWITCHES SIDE BY SIDE		BOTH SIDES SPDT	15A 125-250 VAC	Stamped Metal Housing. Wt.—14 oz.
	B-4-S			BOTH SIDES DPDT	10A 125 VAC 5A 250 VAC	
DUPLEX						
 8½x3½x2	475-S	MOMENTARY HEAVY SPRING		BOTH SIDES SPDT	15A 125-250 VAC	Cast Aluminum Housing. Wt.—1¾ lbs.
	476-S	MOMENTARY LIGHT SPRING				

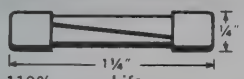
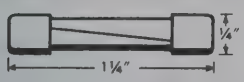
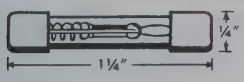
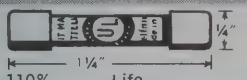
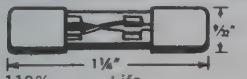
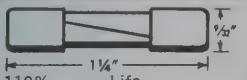
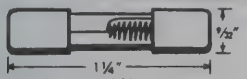
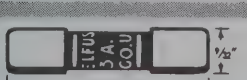
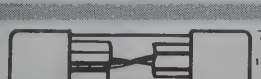
Linemaster also manufactures many other types of foot controls with electronic impulse circuits, gear driven potentiometers, air valves, special cordsets, finishes, etc.

LINEMASTER SWITCH CORPORATION

Printed in U.S.A.

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LITTELFUSE LITTELFUSE

Percentage of rating	Blow Time	Description	Amperes	Optional Resale Price Per Box of 5 Less than Std. Pkg.	Optional Resale Price Per 100 Fuses Std. Pkg. of 100 Fuses or More
		**3AG Fuses (42 volts or less) 311(000) Series** Quick to medium blowing fuses. Designed with straight type element positioned to center of fuse.	4 amp.	.25/5	4.20/c
			5, 6, 7½, 10, 15 amp.	.18/5	3.00/c
			(Note: For 3AG 20 amp. now obsolete, use SFE 20A)		
			25, 30 amp.	.21/5	3.50/c
			35 amp.	.25/5	4.20/c
110%	Life				
135%	0-1 hour				
200%	0-2 minutes				
		**3AG Fuses (250 volts or less) 312(000)** Quick acting fuses for low time lag applications. 312(000) Series approved by Underwriters' Laboratories.	1/100 amp.	1.74/5	29.00/c
			1/32 amp.	1.53/5	25.50/c
			1/16, 1/10, 3/16, 1/8, 15/100, .175, 2/10 amp.	.69/5	11.50/c
			1/4, 3/10, 3/8, 1/2, 6/10, 3/4 amp.	.45/5	7.50/c
			1, 1¼, 1½, 1⁶/₁₀, 2, 2½ amp.	.28/5	4.70/c
			3 amp.	.25/5	4.20/c
			4, 5, 6 amp.	.36/5	6.00/c
			8 amp. at 125 volts	.54/5	9.00/c
		318(000) Series Available under this series with 1½" No. 20 tinned copper leads in comparable amperages as shown. Series approved by Underwriters' Laboratories through 3 amps.	1/100, 1/16 amp.	1.20/5	20.00/c
			1/8, 15/100, 2/10, 3/16 amp.	.90/5	15.00/c
			1/4, 3/8, 1/2, 3/4 amp.	.69/5	11.50/c
			1, 1½, 2, 2½, 3 amp.	.54/5	9.00/c
			4, 5, 6 amp.	.57/5	9.50/c
			8 amp.	.69/5	11.50/c
110%	Life				
135%	0-1 hour				
200%	0-2 minutes				
		**3AG Slo-Blo Fuses (125 volts or less) 313(000)** Slow blow fuses with high time lag to withstand heavy current surges. Blows quickly on shorts. 313(000) series approved by Underwriters' Laboratories through 5 amperes.	1/100, 1/32 amp.	1.29/5	21.50/c
			1/16, 1/10, 1/8, 15/100, .175, 3/16, 2/10, 1/4, 3/10, 3/8, 4/10, 1/2, 6/10, 7/10, 3/4, 8/10, 1 amp.	.96/5	16.00/c
			1⅓₀, 1¼, 1½, 1⁶/₁₀, 2 amp.	.90/5	15.00/c
			2½, 2⁸/₁₀, 3, 3²/₁₀, 4, 5 amp.	.69/5	11.50/c
			6¼, 7, 8, 10, 15, 20, 25, 30 amps. at 32 volts	.69/5	11.50/c
		315(000) Series Available under this series with 1½" No. 20 tinned copper wire leads in comparable amperages as shown. Series approved by Underwriters' Laboratories through 3.2 amps.	1/100, 1/32 amp.	1.59/5	26.50/c
			1/16, 1/10, 1/8, 15/100, .175, 3/16, 2/10, 1/4, 3/10, 3/8, 4/10, 1/2, 6/10, 7/10, 3/4, 8/10, 1 amp.	1.17/5	19.50/c
			1²/₁₀, 1¼, 1½, 1⁶/₁₀, 2 amp.	1.11/5	18.50/c
			2½, 2⁸/₁₀, 3, 3²/₁₀, 4, 5 amp.	.96/5	16.00/c
110%	Life				
135%	0-1 hour				
200%	0-2 minutes				
110%	Life				
135%	0-1 hour				
200%	60 sec. max. 5 sec. min.				
		**3AG Indicating Fuses (125 volts or less) 334(000) Series** Medium acting fuses. Pin "pops out" when fuse is blown providing visual indication or the pin can strike a bus bar actuating an audible alarm circuit or a light-alarm circuit.	¾ amp.	2.10/5	35.00/c
			1, 1½, 2, 3, 4, 5 amp.	1.59/5	26.50/c
			6, 8, 10, 12, 15, 20 amp.	2.22/5	37.00/c
110%	4 hour min.				
135%	1 hour max.				
Length 1¼", Dia. ¼"					
		**3AB Fuses (250 volts or less) (steatite) 314(000) Series** Medium time lag steatite enclosed arc quenching powder filled fuses. Approved by Underwriters' Laboratories through 15 amperes.	⅛, ¼, ⅜, ½, ¾ amp.	.63/5	10.50/c
			1, 2, 3 amp.	.60/5	10.00/c
			5, 6, 7, 8, 10 amp.	.57/5	9.50/c
			12, 15, 20, 25 amp.	.60/5	10.00/c
			30 amp.	.72/5	12.00/c
110%	Life				
135%	0-1 hour				
200%	0-2 minutes				
		**4AG Aircraft Fuses (32 volts or less) (anti-vibration) 411(000) Series** Medium to slow fuses especially developed for aircraft use. Designed to withstand vibration, shock, fatigue and repeated off and on circuit operating conditions encountered in aircraft operation.	10, 15, 20, 25, 30 amp.	.39/5	6.50/c
			35, 40 amp.	.45/5	7.50/c
110%	Life				
135%	0-1 hour				
200%	0-2 minutes				
		**4AG Aircraft Fuses (250 volts or less) (anti-vibration) 412(000) Series** Quick acting fuses—for low time lag applications. Developed for aircraft use. Designed to withstand shock and fatigue and afford maximum protection.	1/16 amp.	1.47/5	24.50/c
			1/8, 15/100 amp.	1.02/5	17.00/c
			¼, ½ amp.	.51/5	8.50/c
			1, 1½, 2, 2½, 3 amp.	.45/5	7.50/c
			5, 8 amp.	.39/5	6.50/c
110%	Life				
135%	0-1 hour				
200%	0-2 minutes				
		**4AG Slo-Blo Fuses (250 volts or less) 413(000) Series** High time lag fuses for extra protection against sustained overloads. Designed to meet aircraft vibration test requirements. Spring-and-link element construction takes up thermal expansion and contraction and eliminates cyclic fatigue, crystallization and resulting fracture of link.	1/16, 1/10, 1/8, 15/100, 2/10, 1/4, 3/10, 4/10, 1/2, 6/10, 3/4, 8/10, 1, 1¼, 1½, 1⁶/₁₀, 2	1.26/5	21.00/c
			2½, 3, 3²/₁₀		
			4, 5, 6¼, 8, 10, 15, 20, 25, 30 at 32 volts	.96/5	16.00/c
110%	Life				
135%	0-1 hour				
200%	60 sec. max. 5 sec. min.				
		**4AB Fuses (250 volts or less) (steatite) 414(000) Series** Medium lag, steatite-enclosed, shatterproof fuses. Spring and link construction under 5 amperes. Mechanical depolarization, non-crystallizing features incorporated into ratings over 5 amperes.	1, 2, 3 amp.	.93/5	15.50/c
			5, 6, 8, 10, 15, 20 at 125 volts	.87/5	14.50/c
			25, 30 at 32 volts	.87/5	14.50/c
			35, 40 at 32 volts	.93/5	15.50/c
110%	Life				
135%	0-1 hour				
200%	0-2 minutes				
		**5AG Aircraft Fuses (32 volts or less) 511(000) Series** Medium to slow fuses for general aircraft applications. Design incorporates anti-vibration type element, twisted to 90° angle and mechanically depolarized construction.	10, 15, 20, 25, 30 amp.	.54/5	9.00/c
			35, 40, 50, 60 amp.	.57/5	9.50/c
110%	Life				
135%	0-1 hour				
200%	0-2 minutes				

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LITTELFUSE LITTELFUSE

Percentage of rating	Blow Time	Description	Amperes	Optional Resale Price Per Box of 5 Less than Std. Pkg.	Optional Resale Price Per 100 Fuses Std. Pkg. of 100 Fuses or More
110%	4 hour min.	**5AG Quick Acting Fuses (250 volts or less) 512(000) Series**			
135%	1 hour max.	Low time lag fuses where a larger and more rugged construction is desirable. Built with diagonally aligned fuse elements which assure accurate blowing even when the fuse element is expanded by heat.	1, 2, 3, 4 amp.	.57/5	9.50/c
200%	10 sec. max.		5, 8 amp.	.54/5	9.00/c
Length 1½", Dia. 13/32"					
110%	Life	**5AG Slo-Blo Fuses (250 volts or less) 513(000) Series**	½, 1, 2 amp.	1.59/5	26.50/c
135%	0-1 hour	High time lag fuses. Designed to withstand heavy current surges while affording maximum protection against shorts and damaging overloads.	3 amp	1.26/5	21.00/c
200%	60 sec. max. 5 sec. min.		5, 10, 15, 20 amp. at 32 volts	1.26/5	21.00/c
			25, 30 amp. at 32 volts	1.41/5	23.50/c
110%	Life	**5AB Aircraft Fuses (250 volts or less) 514(000) Series**	1, 2, 3, 3½ amp.	1.05/5	17.50/c
135%	0-1 hour	Medium time lag, bakelite enclosed, shatterproof fuses. Spring-link construction under 5 amperes. Mechanical depolarization, non-crystallizing features incorporated in ratings over 5 amperes. Recommended for applications where excessive shock and vibration are encountered.	5, 6, 6¼, 7, 8, 10, 15, 20, 25, 30 amp. at 32 volts	.99/5	16.50/c
200%	0-2 minutes		35, 40 amp. at 32 volts	1.05/5	17.50/c
100%	Life	**8AG Instrument Fuses (250 volts or less) 361(000) Series**	1/500 amp.	4.68/5	78.00/c
150%	0-10 sec.	Designed for high speed action to insure maximum protection of delicate electrical equipment.	1/250 amp.	1.95/5	32.50/c
			1/100 amp.	1.74/5	29.00/c
			1/32 amp.	1.53/5	25.50/c
			1/16 amp.	.96/5	16.00/c
			1/10, 1/8, 3/16, 3/10 amp.	.69/5	11.50/c
			¼, 3/8, 4/10, ½, ¾ amp.	.45/5	7.50/c
			1, 1½, 2, 3, 4, 5 20 amp. at 32 volts	.33/5	5.50/c
110%	Life	**8AG Fuses (250 volts or less) 362(000) Series**	1/8 amp.	.69/5	11.50/c
135%	0-1 hour	Medium time lag fuses for applications where size is a factor because of space limitation or the need to differentiate physically between two fuses in close proximity. Designed to standard N.E.C. blowing specifications. Approved by Underwriters' Laboratories.	¼, 3/8, ½, ¾ amp.	.45/5	7.50/c
200%	0-2 minutes		1 amp.	.28/5	4.70/c
			1½, 2, 3 amp. at 125 volts	.28/5	4.70/c
			5, 6, 8, 10, 12, 15, 20 amp. at 125 volts	.18/5	3.00/c
			25, 30 amp.	.21/5	3.50/c

LIMITED CURRENT FUSES & HOLDERS

A new approach to circuit protection completely eliminating the possibility of overfusing circuits. This has been accomplished by a combination of three different fuse lengths and seven different widths of bayonet locking tabs on the fuse caps.

The Limited Current Fuse Holder is designed to accept only the size, amperage, range and type (regular or slo blo) in its amperage range. The fuse locks into the holder by means of a bayonet lock which permits easy and quick insertion and removal of fuses.

110%	Life	**Limited Current LC fuses 250V type C 332(000) Series**	1/32 amp.	1.47/5	24.50/c
135%	0-1 hour	Quick acting—low time lag fuses, incorporating design features which adapt easily to television and similar applications.	1/16 amp.	.96/5	16.00/c
200%	0-2 minutes		1/8, 3/16 amp.	.72/5	12.00/c
			¼, 3/10, 3/8, ½, 4/10, 7/10, ¾ amp.	.57/5	9.50/c
			1, 1¼, 1½, 1¾, 2, 2½, 3 amp.	.33/5	5.50/c
			3½, 4, 5, 6 amp.	.42/5	7.00/c
			7 amp. at 125 volts	.42/5	7.00/c
			8 amp. at 125 volts	.60/5	10.00/c
			10 amp. at 125 volts	.63/5	10.50/c
110%	Life	**Limited current LC Slo Blo fuses 125V type N 333(000) Series**	1/100, 1/32 amp.	1.38/5	23.00/c
135%	0-1 hour	Slo Blo fuses for high tmie lag applications. Construction incorporates design features similar to 332(000) series.	1/16, 1/10, 15/100, 3/10, ¼, 3/10, 1/10, ½, 6/10, 7/10, ¾, 9/10, 1 amp.	.99/5	16.50/c
200%	60 sec. max. 5 sec. min.		1¼, 1 1/10, 1¾, 2 amp.	.90/5	15.00/c
			2½, 2 8/10, 3, 3 2/10, 3½, 4, 5, 6¼, 7 amp. at 32 volts	.84/5	14.00/c
				.84/5	14.00/c

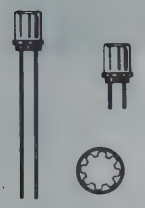
Limited Current Fuse Holders 346(000) Series)

Catalog Number	Type	Amperage Range	Opt. Less Than Std.	Net Price Std. Pkg. of 100	Catalog Number	Type	Amperage Range	Opt. Less Than Std.	Net Price Std. Pkg. of 100
346001	Regular	(C 1/32-3/10)	$.14 ea.	.12 ea.	346008	Slo-Blo	(N1/100-3/10)	$.14 ea.	$.12 ea.
346002	Regular	(Over C 3/10-½)	.14	.12	346009	Slo-Blo	(Over N 3/10-½)	.14	.12
346003	Regular	(Over C ½-¾)	.14	.12	346010	Slo-Blo	(Over N ½-¾)	.14	.12
346004	Regular	(Over C ¾-1¼)	.14	.12	346011	Slo-Blo	(Over N ¾-1¼)	.14	.12
346005	Regular	(Over C 1¼-1¾)	.14	.12	346016	Slo-Blo	(Over N 1¼-1¾)	.14	.12
346006	Regular	(Over C 1¾-2½)	.14	.12	346017	Slo-Blo	(Over N 1¾-2½)	.14	.12
346007	Regular	(Over C 2½ 3½)	.14	.12	346018	Slo-Blo	(Over N 2½-3½)	.14	.12
346012	Regular	(Over C 3½-5)	.14	.12	346019	Slo-Blo	(Over N 3½-5)	.14	.12
346013	Regular	(Over C 5-7)	.14	.12	346020	Slo-Blo	(Over N 5-7)	.14	.12
346014	Regular	(Over C 7-10)	.14	.12					

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LITTELFUSE LITTELFUSE

MICROFUSE



A completely different development in circuit protection for subminiature applications.

The PIGTAIL VARIETY (278000 series) is especially adaptable for soldered connections in minimum space.

The PLUG-IN VARIETY (272000 series) is designed for use with the No. 281001 sub-miniature fuse holder which is easily mounted to chassis or printed circuit board.

The SUB-MINIATURE FUSE HOLDER #281001 allows fast simple fuse replacement, will handle continuous currents up to 5 amps at 125V or less.

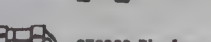
Size: 13/4" Dia. x 11/32". Available from 1/500 amp. through 5 amps. Maximum voltages — 125V. Blowing Specifications: Series 272000—278000. 110% Life; 200% 0-11 Seconds.

Amperes	OPTIONAL RESALE PRICE Per Box of 5 Less than Std.Pkg.	Per 100 Fuses Std. Pkg. of 100 Fuses or More
0 through .031 amp	5.13/5	85.50/c
.050A through 5 amp	4.29/5	71.50/c
281001 plug-in holder	.26 each	.22 each

SUBMINIATURE PICOFUSES

Unique concept in fusing for computer, micro-electronic and aero-space circuits. Designed for circuits of 125 volts or less where short-circuit currents as high as 300 amps occur. High accuracy in blowing time at 300% of rating and higher is ideal for sequential switching or in circuits requiring redundancy. Blow time 4 hours min. at 100% of rating; 5 secs. max. at 200%. Ceramic body only 7/32" lg. x 5/64" dia.; tin-coated copper leads .025" dia. Order **275** (prefix) for axial leads 1 3/16" long for diode clip or in-circuit mounting; **276** for radial leads 1 3/8" long for use in printed circuits or receptacles.

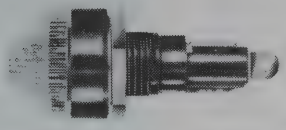
275000 Picofuse





276000 Picofuse	OPTIONAL RESALE PRICE Per Box of 5 Less than Std. Pkg.	Per 100 Fuses Std. Pkg. of 100 Fuses or more
1/8, 1/4 amp	3.60/5	60.00
3/8 thru 5 amp	2.25/5	37.50

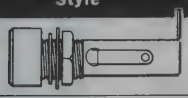
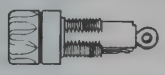
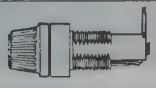
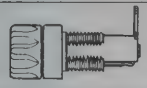
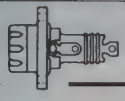
3AG INDICATING FUSE POST



Catalog Number	Voltage Range	Net Resale Price Less than Std. Pkg.	Std. Pkg. of 100
344006	2 1/2-7V	$2.35 ea.	$1.96 ea.
344012	7-16V	2.35 ea.	1.96 ea.
344024	16-32V	2.35 ea.	1.96 ea.
344125	100-125V	1.43 ea.	1.20 ea.
344250	200-250V	1.43 ea.	1.20 ea.

PHYSICAL CHARACTERISTICS

High temperature styrene knob (amber with incandescent bulbs—2 1/2 thru 32 volts—and clear with high degree vacuum neon bulbs 90-250 volts). Maximum current rating 20 amperes. Size: Overall Length 2 3/8"; front of Panel 13/16"; back of Panel 1 1/2"; mounting hole 5/8" Dia.; flat on one side.

Style	Catalog Number	Fuse Size	Description	Physical Size fuse	Mounting Hole Dia.	Overall Length	Back of Panel	Net Resale Price Less than Std. Pkg.	Std. Pkg. of 100
	341001 371001	3AG 8AG	Screwdriver Slot Knob Screwdriver Slot Knob	1 1/4 x 1 1/4 Dia. 1 x 1/4 Dia.	.505D .505D	2 7/32 2 7/32	1 23/32 1 23/32	.46 ea. .46 ea.	.38 ea. .38 ea.
	342001 372001	3AG 8AG	Finger Operated Knob Finger Operated Knob	1 1/4 x 1 1/4 Dia. 1 x 1/4 Dia.	.505D .505D	2 7/32 2 7/32	1 23/32 1 23/32	.46 ea. .46 ea.	.38 ea. .38 ea.
	342014		Miniature post with finger operated knob	1 1/4 x 1 1/4 Dia.	.510D	2 5/64	1 11/32	.35 ea.	.29 ea.
	342022		Miniature post with finger operated knob	1 1/4 x 1 1/4 Dia.	.510D	1 53/64	1 1/4	.40 ea.	.33 ea.
	342004		Miniature post with finger operated knob	1 1/4 x 1 1/4 Dia.	.510D	1 3/4	1 1/64	.40 ea.	.33 ea.
	342012	3AG	Miniature post with finger operated knob	1 1/4 x 1 1/4 Dia.	.510D	2 5/32	1 11/32	.35 ea.	.29 ea.
	442001	4AG	Fuse extractor post	1 1/4 x 5/32 Dia.	.635D	2 29/32	2 1/4	.96 ea.	.80 ea.
	570001	5AG	Finger operated knob —flange Mount	1 1/2 x 13/32 Dia.	.865D	2 5/32	1 15/32	2.63 ea.	2.19 ea.

CIRCUIT BREAKERS

125v A.C. 815(000) Series



Complete range of high quality circuit breakers 9 trip ratings to cover every replacement need, packaged for your convenience individually on a display card or 5 per box.

	Trip Rating	Skin Pkg. ea.*	Box/5 Bulk		Trip Rating	Skin Pkg. ea.*	Box/5 Bulk
8151.75	1.75	$ .84	$3.90/5	815003	3	$ .84	$3.90/5
815002	2	.84	3.90/5	8153.25	3.25	.84	3.90/5
8152.25	2.25	.84	3.90/5	815004	3.75	.84	3.90/5
81502.5	2.5	.84	3.90/5	81504.5	4.5	.84	3.90/5
8152.75	2.75	.84	3.90/5	815007	7	.84	3.90/5

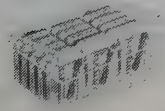
*Add C following part no.

#094084 Circuit Breaker 10 Bulk Asst.....$7.80 each
#094085 Circuit Breaker 10 Card Asst..... 8.40 each

Both assortments consisting of:
1 each 1.75, 2, 2.25, 2.5, 3, 3.25, 3.75, 4.5.
2 each 2.75 trip ratings.

FUSE CADDY Part 094037

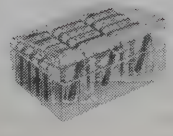
A handy fuse kit for instant accessibility—correct fuse at your fingertips every time. 18 individual compartments. Fuse caddy comes with 75 fuses, 15 different types, plus 3 spare compartments.



3AG 1/4A	3AG 5A	N 1/4 LC
3AG 1/2A	3AG 1/4A SB	N 1 LC
3AG 1A	3AG 1/2A SB	N 1 1/4 LC
3AG 2A	8AG 1/4	C 2 1/2 LC
3AG 3A	8AG 1/2	**Net Resale Price**

$7.39 ea.

LC FUSE CADDY Part 094041



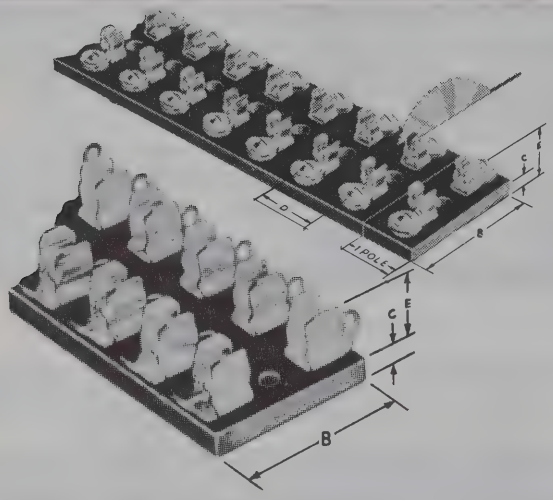
A handy all inclusive LC (Limited Current) Fuse Caddy for servicemen's tube caddy. One call is all. 18 individual compartments. LC Fuse Caddy comes with 75 fuses; 15 different types plus three spare compartments.

Net Resale Price
$10.00 ea.

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LITTELFUSE LITTELFUSE

FUSE MOUNTING PANELS



MOUNTINGS WITH SOLDER TERMINALS — TYPE "S" Phosphor-Bronze, bright-dipped finish Lug Clips are firmly anchored to black Bakelite base—have non-turning anchors. For 8AG (387000 series) and 3AG (357000 series) fuses.

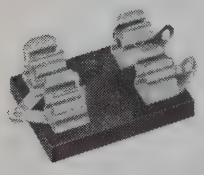
MOUNTINGS WITH SCREW TERMINALS—TYPE "T" Spaced to U/L requirements for equipment circuit protection. Nickel plated brass screw terminals, nickel plated fuse clips. For 3AG(356000 series), 4AG(456000 series) and 5AG(556000 series) fuses.

Open type fuse panels, stocked in 12-pole units as shown—we cut them to 2, 3, 4 or more poles as ordered, or you may cut them in your plant (⅛" allowance for saw cut).

Cat. No.	Fuse Type	Mtg. Type	Dim. "B"	Dim. "C"	Dim. "D"	Dim. "E"	Each less than 100	Each over 100
387001	8AG	S	1 3/8	3/16	5/8	21/32	.14	.12
357001	3AG	S	1 3/8	3/16	5/8	21/32	.14	.12
356001	3AG	T	2 3/8	7/32	29/32	1 1/16	.31	.26
456001	4AG	T	2 3/8	7/32	29/32	1 3/16	.40	.33
556001	5AG	T	2 3/4	9/32	31/32	1 1/32	.45	.38

Note: Above are single pole mountings. Prices and delivery by quotation for multiple pole types.

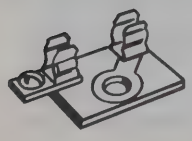
RECTIFIER MOUNTINGS



Mountings custom designed for Sarkes Tarzian silicon rectifiers series M500 and L1250. Mountings designed to your specifications are available upon request. Let our engineers assist you.

Cat. No.		Each less than 100	Each over 100
099062	1 pole	.14 each	.12 each
099063	2 poles	.29 each	.25 each

METER BACK MOUNTING Cat. No. 383002 (1059)—



Mounts directly on meter binding post. Will not touch other posts on smallest standard meter. Linen bakelite base, 1" x 1⅛". Length over screw terminal, 1½".

Net Resale Price	
Less than Std. Pkg.	Std. Pkg. of 10
.29 ea.	.25 ea.

STANDARD FUSE CLIPS

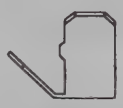
For the exacting performance often required in the electronics communications, radio, television, aircraft and marine equipment industries, we recommend our beryllium copper fuse clip. Beryllium copper clips have lower contact resistance and higher conductivity than ordinary fuse clips. They are silver plated, a finish well suited to fuse applications.



Ears



Earless



Lug

FUSE CLIPS
(Phosphor Bronze Bright Nickel Plated)

		Net Resale Price Less than Std. Pkg. ea.	Std. Pkg. of 100 ea.
3AG Fuse Clip	101001	.020	.017
3AG Fuse Clip (Earless)	101002	.020	.017
3AG Solder Terminal Clip Bright dip	101003	.028	.024
4AG Fuse Clip	103001	.035	.030
4AG Fuse Clip (Earless)	104002	.035	.030
5AG Fuse Clip	105001	.045	.038
5AG Fuse Clip (Earless)	105002	.045	.038
9/16" Dia. Fuse Clip	107001	.072	.060
9/16" Dia. Fuse Clip (Earless)	107002	.072	.060
13/16" Dia Fuse Clip	109001	.192	.160
13/16" Dia. Fuse Clip (Earless)	109002	.192	.160

FUSE CLIPS
(Beryllium Copper Silver Plated)

3AG Fuse Clip	121001	.045	.038
3AG Fuse Clip (Earless)	121002	.045	.038
3AG Solder Terminal Clip	121004	.10	.080
4AG Fuse Clip	123001	.072	.060
4AG Fuse Clip (Earless)	123002	.072	.060
5AG Fuse Clip	125001	.108	.090
5AG Fuse Clip (Earless)	125002	.108	.090
9/16" Dia. Fuse Clip	127001	.222	.185
9/16" Dia. Fuse Clip (Earless)	127002	.222	.185
13/16" Dia. Fuse Clip	129001	.522	.435
13/16" Dia. Fuse Clip (Earless)	129002	.522	.435

SNAP-ON MOUNTINGS



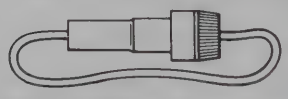
Time saver for pigtail replacement. Snap on blown pigtail, then use regular fuse in other side. No soldering. This Snap-On mounting has a cut out on both sides which makes the fuse accessible for replacement from both sides. They are available in bulk, on display cards of 24, or in handy merchandising plastic boxes of ten.

		Net Resale Price Less than Std. Pkg.	Std. Pkg.
Card of 24	No. 094024	$4.80 ea.	$4.00 ea.
Box of 10	No. 094025	2.06 ea.	1.72 ea.
Bulk	No. 350130		10.60/c

IN-LINE FUSE RETAINER Assortment 094020

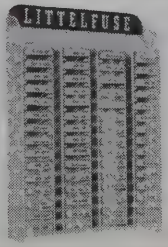


comes complete with 8-inch loop of wire and fuse inserted under spring tension. Assortment consists of 6 SFE 14 units, 3 SFE 9 and 3 SFE 20.



Net Resale Price
$5.10 ea.

FUSEMASTER 094047



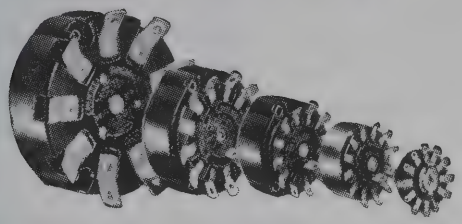
Versatile clear plastic fuse wall rack with 60 individual compartments for 60 different fuse types. Index inventory control card, pressure sensitive blank inventory labels for easy index adjustment; and an assortment of 100 popular fuses are furnished as a package under Fusemaster Assortment 094047.

Net Resale Price
$12.42 ea.

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OHMITE
resistors • rheostats • tap switches • relays
variable transformers • tantalum capacitors
semiconductor diodes • r.f. chokes

POWER TAP SWITCHES NON-SHORTING TYPE



Each switch is a non-shorting, single pole, rotary, multi-position unit, but switches can be ordered assembled 2 or 3 in tandem (2 maximum, for Model 111) to form multipole assemblies. All ceramic insulation, large, solid silver-to-silver contacts, and "slow-break" action especially designed for alternating current use establish new standards of dependability and performance. Switch shafts are electrically "dead"—insulated by strong ceramic hubs. Contacts and mechanism are entirely enclosed and protected (except for the Model 111).

MODEL 111 TAP SWITCH

Alternating Current Rating *15 Amps. 125 Volts* — Diameter 1¾" — Shaft Diameter ¼" — Standard Mounting: For ¼" panel maximum, by means of ⅜"-32 threaded bushing and hex. nut.

Depth Behind Panel		Single Unit		2 in Tandem	
		1⅛"		2¾"	
No. of Taps	Total Rotation	Stock Number	*Net 1-4	Stock Number	*Net 1-2
11	300°	111-11	$4.78	111-11-T2	$12.86
10	270°	111-10	4.66	111-10-T2	12.62
9	240°	111- 9	4.54	111- 9-T2	12.38
8	210°	111- 8	4.42	111- 8-T2	12.14
7	180°	111- 7	4.30	111- 7-T2	11.90
6	150°	111- 6	4.18	111- 6-T2	11.66
5	120°	111- 5	4.06	111- 5-T2	11.42
4	90°	111- 4	3.94	111- 4-T2	11.18
3	60°	111- 3	3.82	111- 3-T2	10.94
2	30°	111- 2	3.70	111- 2-T2	10.70
Recommended Knobs		Stock No. 5150 or 5116		Stock No. 5109 or 5110	

*Without Knob.

MODEL 212 TAP SWITCH

Alternating Current Rating *20 Amps. 150 Volts* — Diameter 2¼" — Shaft Diameter ¼" — Standard Mounting: For ¼" panel maximum, by means of ⅜"-32 threaded bushing and hex. nut. Tandem Mounting: For ¼" panel maximum, three No. 10-32 flat-head machine screws ⅜" long.

Depth Behind Panel		Single Unit		2 in Tandem		3 in Tandem	
		1¾"		4⅜6"		6⅝6"	
No. of Taps	Total Rotation	Stock No.	*Net 1-4	Stock No.	*Net 1-2	Stock No.	*Net Each
12	330°	212-12	$ 9.04	212-12-T2	$21.38	212-12-T3	$32.12
11	300°	212-11	8.86	212-11-T2	21.02	212-11-T3	31.58
10	270°	212-10	8.68	212-10-T2	20.66	212-10-T3	31.04
9	240°	212- 9	8.50	212- 9-T2	20.30	212- 9-T3	30.50
8	210°	212- 8	8.32	212- 8-T2	19.94	212- 8-T3	29.96
7	180°	212- 7	8.14	212- 7-T2	19.58	212- 7-T3	29.42
6	150°	212- 6	7.96	212- 6-T2	19.22	212- 6-T3	28.88
5	120°	212- 5	7.78	212- 5-T2	18.86	212- 5-T3	28.34
4	90°	212- 4	7.60	212- 4-T2	18.50	212- 4-T3	27.80
3	60°	212- 3	7.42	212- 3-T2	18.14	212- 3-T3	27.26
2	30°	212- 2	7.24	212- 2-T2	17.78	212- 2-T3	26.72
Recommended Knobs		Stock No. 5150 or 5116		Stock No. 5111 or 5112		Stock No. 5111 or 5112	

*Without Knob.

MODEL 312 TAP SWITCH

Alternating Current Rating *30 Amps. 300 Volts*, 150 V. A.C. between taps — Diameter 3 5/16" — Shaft Diameter ¼" — Standard Mounting: For ¼" panel maximum, three No. 10-32 flat-head machine screws ⅜" long.

Depth Behind Panel		Single Unit		2 in Tandem		3 in Tandem	
		2¼"		4⅝"		7"	
No. of Taps	Total Rotation	Stock No.	*Net 1-4	Stock No.	*Net 1-2	Stock No.	*Net Each
12	330°	312-12	$11.62	312-12-T2	$27.24	312-12-T3	$41.46
11	300°	312-11	11.44	312-11-T2	27.28	312-11-T3	40.92
10	270°	312-10	11.26	312-10-T2	26.92	312-10-T3	40.38
9	240°	312- 9	11.08	312- 9-T2	26.56	312- 9-T3	39.84
8	210°	312- 8	10.90	312- 8-T2	26.20	312- 8-T3	39.30
7	180°	312- 7	10.72	312- 7-T2	25.84	312- 7-T3	38.76
6	150°	312- 6	10.54	312- 6-T2	25.48	312- 6-T3	38.22
5	120°	312- 5	10.36	312- 5-T2	25.12	312- 5-T3	37.68
4	90°	312- 4	10.18	312- 4-T2	24.76	312- 4-T3	37.14
3	60°	312- 3	10.00	312- 3-T2	24.40	312- 3-T3	36.60
2	30°	312- 2	9.82	312- 2-T2	24.04	312- 2-T3	36.06
Recommended Knobs		Stock No. 5109 or 5110		Stock No. 5111 or 5112		Stock No. 5111 or 5112	

*Without Knob.

MODEL 412 TAP SWITCH

Alternating Current Rating *50 Amps. 300 Volts*, 150 V. A.C. between taps — Diameter 4 1/16" — Shaft Diameter ¼" — Standard Mounting: For ¼" panel maximum three No. 10-32 flat-head machine screws ⅜" long.

Depth Behind Panel		Single Unit		2 in Tandem		3 in Tandem	
		2 7/16"		5 1/32"		7⅝"	
No. of Taps	Total Rotation	Stock No.	*Net 1-4	Stock No.	*Net 1-2	Stock No.	*Net Each
12	330°	412-12	$15.46	412-12-T2	$35.32	412-12-T3	$52.98
11	300°	412-11	15.20	412-11-T2	34.80	412-11-T3	52.20
10	270°	412-10	14.94	412-10-T2	34.28	412-10-T3	51.42
9	240°	412- 9	14.68	412- 9-T2	33.76	412- 9-T3	50.64
8	210°	412- 8	14.42	412- 8-T2	33.24	412- 8-T3	49.86
7	180°	412- 7	14.16	412- 7-T2	32.72	412- 7-T3	49.08
6	150°	412- 6	13.90	412- 6-T2	32.20	412- 6-T3	48.30
5	120°	412- 5	13.64	412- 5-T2	31.68	412- 5-T3	47.52
4	90°	412- 4	13.38	412- 4-T2	31.16	412- 4-T3	46.74
3	60°	412- 3	13.12	412- 3-T2	30.64	412- 3-T3	45.96
2	30°	412- 2	12.86	412- 2-T2	30.12	412- 2-T3	45.18
Recommended Knobs		Stock No. 5111 or 5112		Stock No. 5111 or 5112		Stock No. 5111 or 5112	

*Without Knob.

MODEL 608 TAP SWITCH

Alternating Current Rating *100 Amps. 300 Volts* — Diameter 6" —Shaft Diameter ⅜"—Standard Mounting: For 1" panel maximum, three flat-head machine screws ¼"-20 x 1¼".

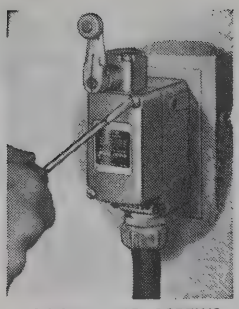
Depth Behind Panel		Single Unit		2 in Tandem		3 in Tandem	
		3 5/16"		6 13/16"		10 5/16"	
No. of Taps	Total Rotation	Stock No.	*Net 1-4	Stock No.	*Net 1-2	Stock No.	*Net Each
8	280°	608-8	$25.54	608-8-T2	$57.68	608-8-T3	$85.42
7	240°	608-7	25.20	608-7-T2	57.00	608-7-T3	84.40
6	200°	608-6	24.86	608-6-T2	56.32	608-6-T3	83.38
5	160°	608-5	24.52	608-5-T2	55.64	608-5-T3	82.36
4	120°	608-4	24.18	608-4-T2	54.96	608-4-T3	81.34
3	80°	608-3	23.84	608-3-T2	54.28	608-3-T3	80.32
2	40°	608-2	23.50	608-2-T2	53.60	608-2-T3	79.30
Recommended Knobs		Stock No. 5104 or 5115 or 5105		Stock No. 5104 or 5115 or 5105		Stock No. 5115	

*Without Knob.

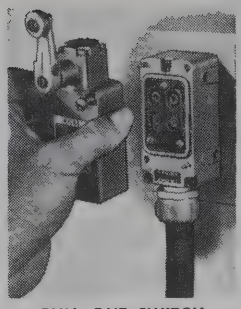
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"PLUG-IN LIMIT" SWITCHES



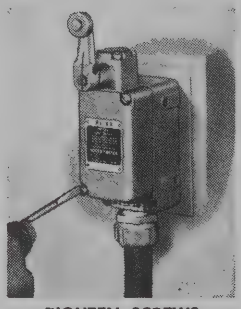
LOOSEN TWO SCREWS



PULL OUT SWITCH



PLUG IN REPLACEMENT

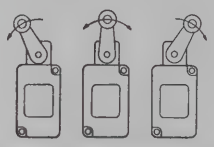


TIGHTEN SCREWS

CAN BE REPLACED IN SECONDS!

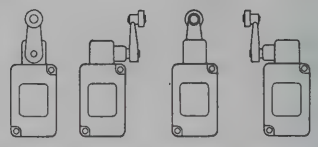
"Plug-in Limit" switches, Series **"200LS"** and **"300LS"**, are the latest advance in the limit switch field. These switches meet the requirements of high speed automatic production line control by offering minimum replacement time, high electrical rating and complete adjustability of actuation. The switch enclosure, including all moving parts (mechanical and electrical) can be plugged into the terminal block. Receptacles in the terminal block accept matching spring plugs of the basic switching unit, completing the link from terminals to contacts.

Series **"200LS"** is precisely positioned on the terminal by dowel pins (see photo at left). Two No. 10 captive screws hold the two housings together. **"200LS"** limit switches meet NEMA Control Standards for non-ventilated enclosures of type 4 (watertight) and type 6 (submersible).



ROTARY ACTUATORS OPERATE IN BOTH DIRECTIONS

Rotary actuator switches can be set to be operated electrically in both directions; or only to the left or the right. The lever, if set for one-way operation, may be rotated to the full overtravel position in the opposite direction without operating the switch or damaging the mechanism.

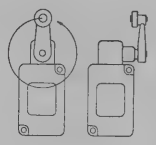


ACTUATOR HEADS MOUNT IN FOUR DIRECTIONS

By removing the four screws on the actuator head, the actuator may be moved in 90-degree increments to the desired application position. "O" ring seals between the actuator head and the switching enclosure and around the actuating shaft insure a watertight fit.

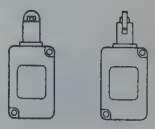
ROLLER ARMS ARE ADJUSTABLE

All rotary actuators have full 360-degree adjustability. The actuator firmly grips a knurled shaft. Roller levers may be faced in either direction with relation to the actuator head.



ROLLER PLUNGERS MOUNT IN TWO POSITIONS

By removing the four actuator head screws, the user may position the head either parallel or perpendicular to the front of the switch.



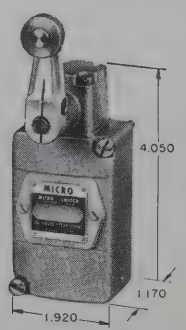
Catalog Listing **18PA1** terminal block is used with all **"200LS"** switches. It can be mounted from three sides, either with through-bolts or ¼"-20 machine screws. Installing a switch on the block and attaching sealed conduit to the ½"-NPT fitting makes a completely sealed assembly. Catalog Listing **201LS1** has a roller arm actuator constructed of rugged, forged aluminum. Catalog Listing **201LS501** is identical to the **201LS1** except for a built-in indicator lamp that tells at a glance the condition of the switch circuit. Electrical rating is 10 amps., 120 vac; ½ hp, 120 vac.

CHARACTERISTICS
201LS1 & 201LS501

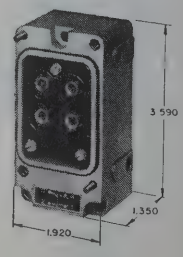
O.F.	3 lbs. max.
F.O.F.	4 lbs. max.
R.F.	½ lb. min.
P.T.	20° max.
D.T.	12° max.
O.T.	30° min.



201LS1



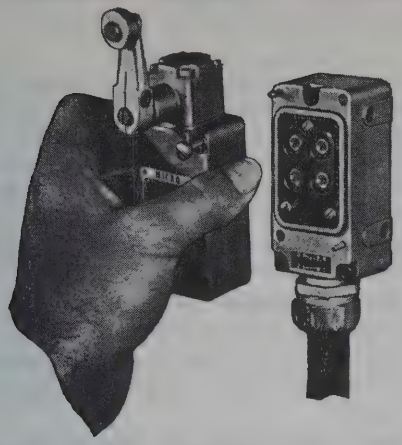
201LS501



18PA1

(Continued Next Page)

"PLUG-IN LIMIT" SWITCHES



Catalog Listing **201LS3** has a roller arm which is adjustable from one to three and one-half inches in length.

Catalog Listing **201LS10** has a rod actuator for low force applications. As factory furnished, these momentary type switches provide electrical actuation when operated in either direction. They can be easily converted to provide electrical actuation when operated in one direction only, clockwise or counter clockwise, yet still retain overtravel in the opposite direction.

Catalog Listing **206LS1** has a yoke-arm actuator and provides maintained contact action. When moved 55° from either extreme position, the actuator causes the internal switching unit to transfer circuit, then travels another 35° and remains there until driven back. Catalog Listing **208LS1** has a flexible steel spring actuator which enables operation from any direction.

Catalog Listing **202LS1** has a steel plunger for in-line actuation.

Catalog Listing **205LS1** has a steel roller-plunger for operation by cams or slides.

Catalog Listing **204LS1** has a side push plunger for actuating motion in line with plunger travel. Catalog Listing **203LS1** has a side roller plunger which fits into close quarters under cams and slides.

The replaceable basic switching unit for all **"200LS"** switches is Catalog Listing **2MN6**.

ELECTRICAL RATING

10 amps. 120, 240 or 480 vac; ½ hp 120 vac; 1 hp 240 vac; .8 amp. 115 vac; .4 amp. 230 vdc; .1 amp. .550 vdc. Pilot Duty Rating 600 vac max.

Contact Arrangement



Two-circuit double-break

CHARACTERISTICS

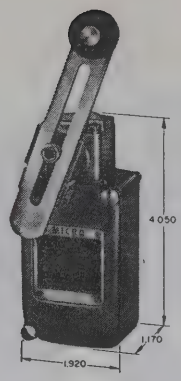
201LS3

*O.F.	3 lbs. max.
*F.O.F.	4 lbs. max.
*R.F.	½ lb. min.
P.T.	20° max.
D.T.	12° max.
O.T.	30° min.

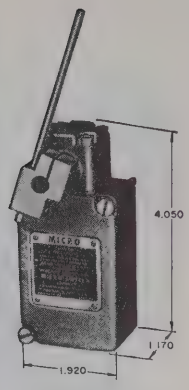
*At 1.5 in. max. lever length

201LS10

O.F.	5 oz. max.
F.O.F.	7 oz. max.
R.F.	1 oz. min.
P.T.	20° max.
D.T.	12° max.
O.T.	30° min.



201LS3



201LS10

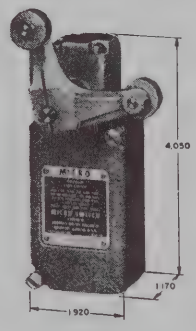
CHARACTERISTICS

206LS1

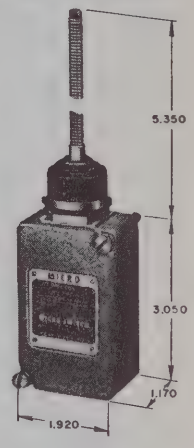
O.F.	2 lbs. max.
P.T.	55° max.
O.T.	35° min.
T.T.	90° ± 10°

208LS1

Operating Position 30° max.



206LS1



208LS1

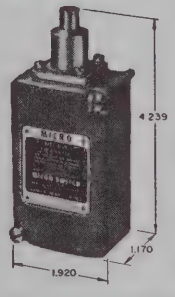
CHARACTERISTICS

202LS1

O.F.	6 lbs. max.
R.F.	2 lbs. min.
P.T.	.065 in. max.
D.T.	.020 in. max.
O.T.	.250 in. max.

205LS1

O.F.	9 lbs. max.
R.F.	2 lbs. min.
P.T.	.109 in. max.
D.T.	.040 in. max.
O.T.	.219 in. min.



202LS1



205LS1

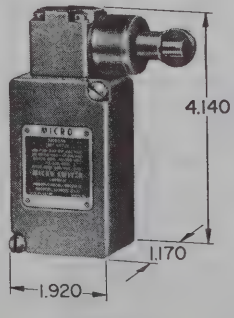
CHARACTERISTICS

204LS1

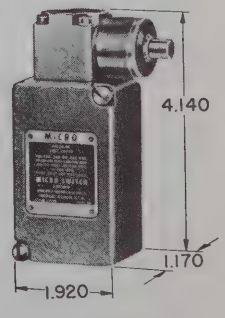
O.F.	9 lbs. max.
R.F.	2 lbs. min.
P.T.	.109 in. max.
D.T.	.040 in. max.
O.T.	.250 in. min.

203LS1

O.F.	9 lbs. max.
R.F.	2 lbs. min.
P.T.	.109 in. max.
D.T.	.040 in. max.
O.T.	.219 in. min.

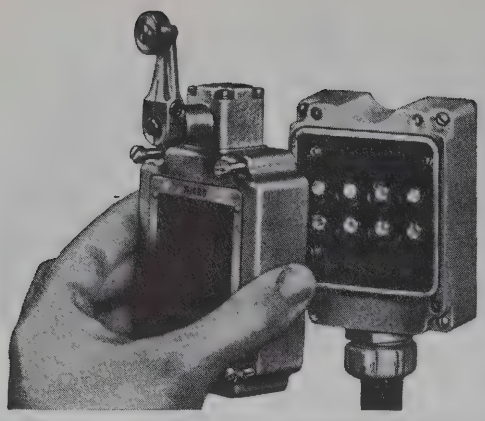


203LS1



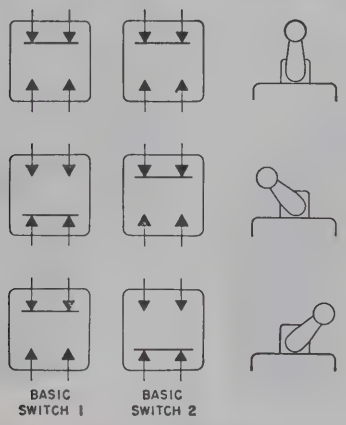
204LS1

CENTER NEUTRAL "PLUG-IN LIMIT" SWITCHES



These center neutral "Plug-in Limit" switches can do the work of two separate limit switches in many situations. Catalog Listing **301LS1** contains two basic switches, each with two-circuit double-break contact arrangement. With the actuator arm in the neutral position, neither basic switch is operated. One switch is operated when the actuator is rotated to the left; the other when the actuator is rotated to the right. Contact variations are shown below. Catalog Listing **301LS8** is the same as **301LS1** except both switches are actuated each side of the neutral position. Both switches have forged aluminum actuating arms that are adjustable through 360°.

Catalog Listing **18PA3** is used with all **"300LS"** switches. The single phenolic terminal block is easily wired and special clamps permit use of stripped wire or standard lug connectors. The enclosure can be mounted either from the front with four #10 through bolts or from the back with ¼-inch-20 UNC screws.



301LS1 CONTACT VARIATIONS

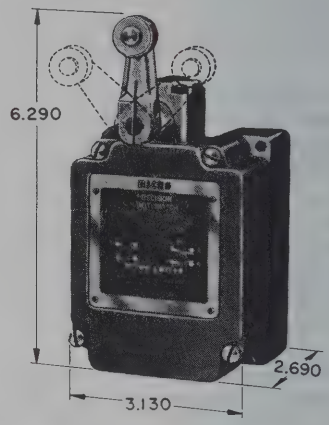
CHARACTERISTICS

	301LS1	301LS8
O.F.	3 lbs. max.	5 lbs. max.
F.O.F.	4 lbs. max.	6 lbs. max.
R.F.	½ lb. min.	½ lb. min.
P.T.	15° max.	15° max.
D.T.	10° min.	10° max.
O.T.	30° min.	30° min.
R.T.	5° min.	5° min.

Basic Switch Replacement 2MN6

ELECTRICAL RATING
(each basic switch)

10 amps. 120, 240 or 480 vac; ½ hp 120 vac; 1 hp 240 vac; .8 amp. 115 vac; .4 amp. 230 vdc; .1 amp. .550 vdc. Pilot Duty Rating 600 vac max.



SMALL 2-CIRCUIT LIMIT SWITCHES



1LS501

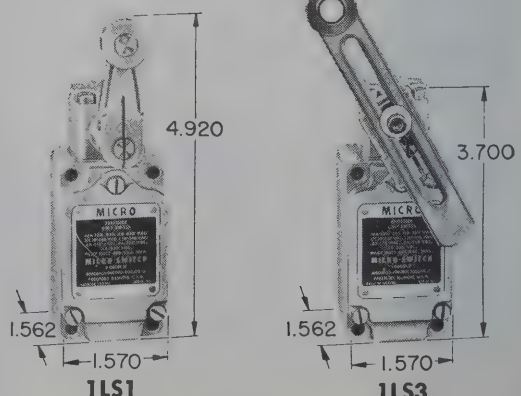
Type **"LS"** switches are completely oiltight, with all moving parts protected from the effects of dust and moisture. The high electrical capacity and adjustability features of these switches suit them to a variety of industrial applications. Type **"LS"** switches have the same actuator head, actuation, roller adjustment and roller plunger features as the "Plug-in Limit" switches shown on page 3. They may be mounted from either the front or through a panel from the back. Four .192-inch diameter mounting holes extend through the enclosure and will clear No. 10 screws. They are tapped from the back 9/16 inch with ¼-20NC threads for back mounting. The switching unit is easily wired or replaced by removing the cover plate, held in place by three captive screws. Catalog Listing **1LS501**. This switch combines all the features of the other **"LS"** switches with a built-in indicating lamp that tells at a glance the condition of the switch circuit. Dimensions and operating characteristics are the same as the **1LS1** shown below. Electrical rating is 10 amps., 120 vac; ½ hp 120 vac.

Catalog Listing **1LS1** has a roller arm actuator. Catalog Listing **1LS3** has a roller arm which is adjustable from one to three and one-half inches in length. Catalog Listing **7LS1** (see next page) has a flush mounted roller arm. Catalog Listing **1LS10** (see next page) has a rod actuator for low force applications. As factory furnished, these momentary type switches provide electrical actuation when operated in either direction. They can be easily converted to provide electrical actuation in one direction only, clockwise or counter-clockwise, yet still retain overtravel in the opposite direction. The actuators are field adjustable, locking in any position through 360°.

CHARACTERISTICS

1LS1	
O.F.	3 lbs. max.
F.O.F.	6 lbs. max.
R.F.	½ lb. min.
P.T.	20° max.
D.T.	12° max.
O.T.	30° min.
1LS3	
*O.F.	3 lbs. max.
*F.O.F.	4 lbs. max.
*R.F.	½ lb. min.
P.T.	20° max.
D.T.	12° max.
O.T.	30° min.

*At 1.5 in. max. lever length



1LS1 **1LS3**

(Continued Next Page)

SMALL 2-CIRCUIT LIMIT SWITCHES

Catalog Listing **6LS1** has a yoke-arm actuator and provides maintained contact action. When moved 55° from either extreme position, the actuator causes the internal switching unit to transfer circuit, then travels another 35° and remains there until driven back. Catalog Listing **8LS1** has a flexible steel spring actuator for operation in any direction.

Catalog Listing **2LS1** has a steel plunger for in-line actuation.

Catalog Listing **5LS1** has a steel roller-plunger for operation by cams or slides.

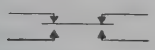
Catalog Listing **4LS1** has a side push plunger for actuating motion in line with plunger travel. Catalog Listing **3LS1** has a side roller plunger which fits into close quarters under cams and slides.

The replaceable basic switching unit for all **"LS"** switches is Catalog Listing **2MN1.**

ELECTRICAL RATING

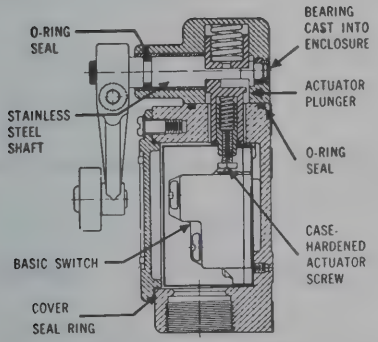
10 amps. 120, 240 or 480 vac; ½ hp 120 vac; 1 hp 240 vac; .8 amp. 115 vdc; .4 amp. 230 vdc; .1 amp. 550 vdc. Pilot duty rating 600 vac. max.

Contact Arrangement



Two-circuit double-break

ALL "LS" SWITCHES OFFER COMPLETELY SEALED ENCLOSURES



Along with providing sealing properties, the rugged aluminum-alloy housing protects the precision switching unit from physical damage, offers a means of mounting and provides a fitting for connecting conduit.

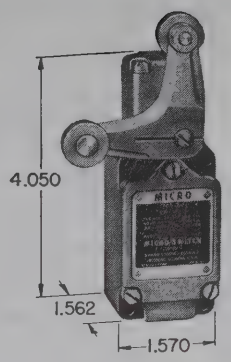
CHARACTERISTICS

6LS1

O.F.	2 lbs. max.
P.T.	55° max.
O.T.	35° min.
T.T.	90° ± 10°

7LS1

O.F.	3 lbs. max.
F.O.F.	6 lbs. max.
R.F.	½ lb. min.
P.T.	20° max.
D.T.	12° max.
O.T.	30° min.



6LS1



7LS1

CHARACTERISTICS

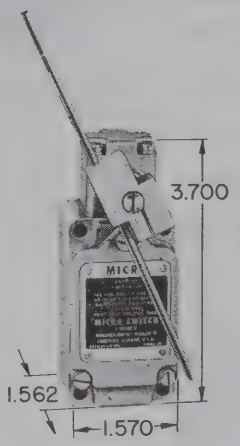
1LS10

*O.F.	5 oz. max.
*F.O.F.	7 oz. max.
*R.F.	1 oz. min.
P.T.	20° max.
D.T.	12° max.
O.T.	30° min.

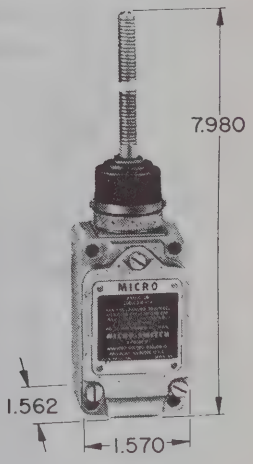
*At 5.56 in. max. lever length

8LS1

Operating position 30° max.



1LS10



8LS1

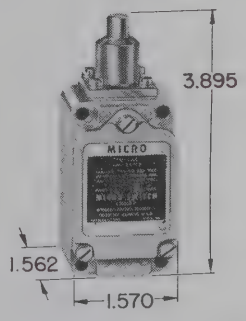
CHARACTERISTICS

2LS1

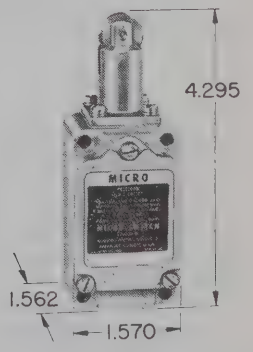
O.F.	6 lbs. max.
R.F.	2 lbs. max.
P.T.	.065 in. max.
D.T.	.020 in. min.
O.T.	.250 in. min.

5LS1

O.F.	6 lbs. max.
R.F.	2 lbs. min.
P.T.	.065 in. max.
D.T.	.020 in. min.
O.T.	.219 in. min.



2LS1



5LS1

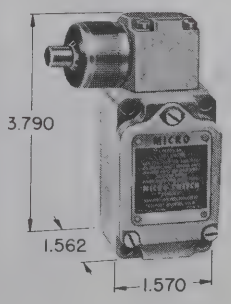
CHARACTERISTICS

4LS1

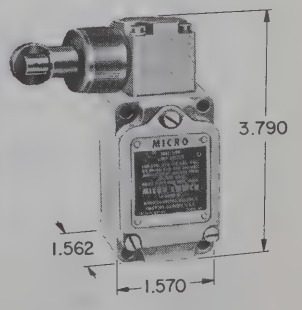
O.F.	9 lbs. max.
R.F.	2 lbs. min.
P.T.	.109 in. max.
D.T.	.040 in. max.
O.T.	.250 in. min.

3LS1

O.F.	9 lbs. max.
R.F.	2 lbs. min.
P.T.	.109 in. max.
D.T.	.040 in. max.
O.T.	.219 in. min.

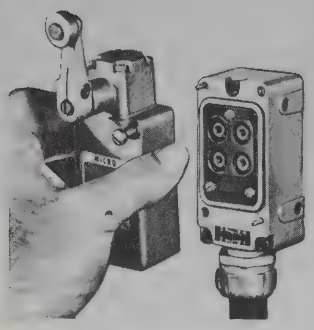


4LS1



3LS1

MICRO SWITCH "LS" Limit Switches



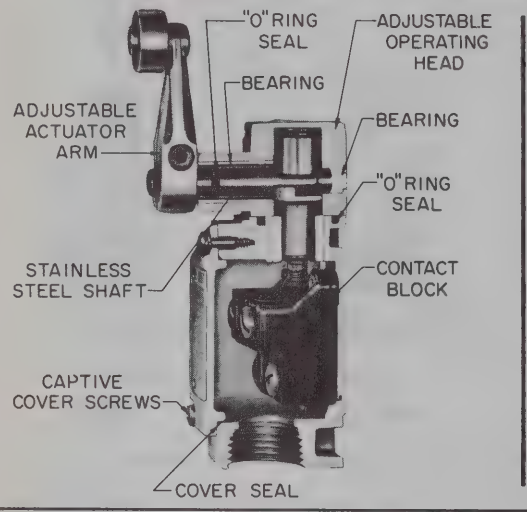
Compact and Plug-in Designs

MICRO SWITCH "LS" Series compact and plug-in limit switches are small in size but big in performance. Rugged construction and use of special materials assures accurate repeatability through millions of operations. They are completely versatile . . . field adjustability and interchangeability of components cuts your limit switch inventory. They are sealed . . . O-rings on the actuator shaft, between the head and housing and around the cover plate or mounting block protect all moving parts from oil, coolants, water, dust and chips.

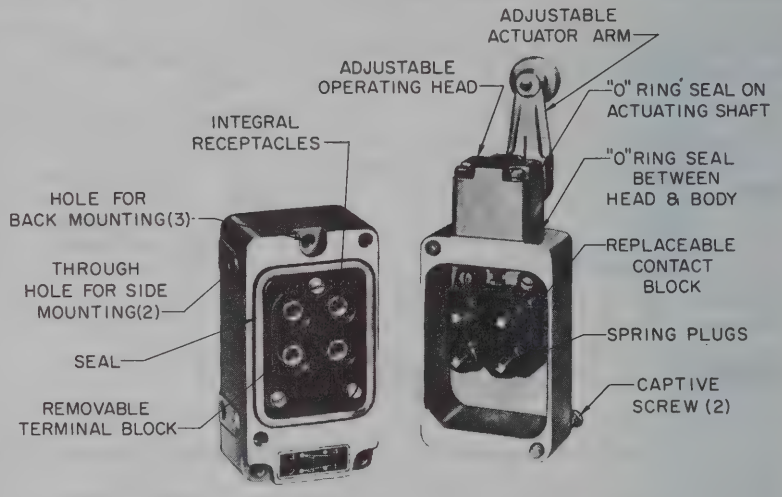


FEATURES

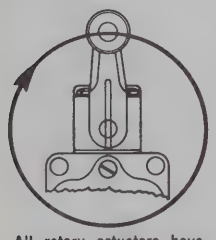
COMPACT "LS"



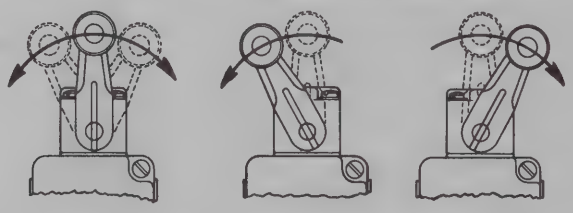
PLUG-IN "LS"



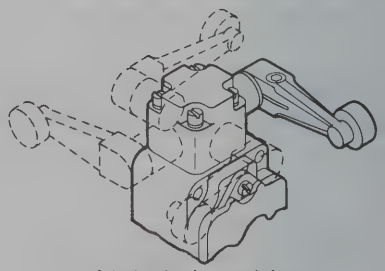
Field Adjustable



All rotary actuators have full 360° adjustability and roller can be faced in or out.

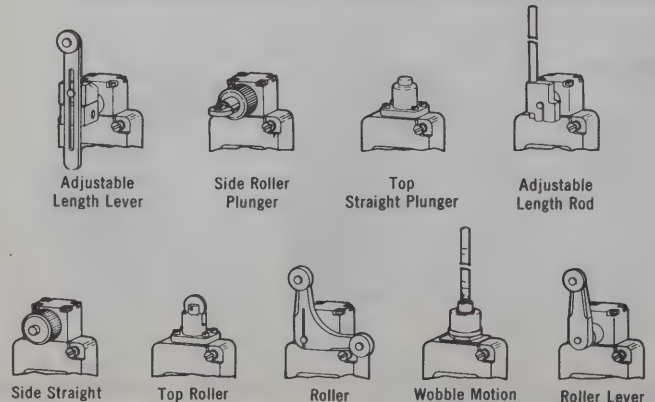


One or Two-way Actuation
Counter-clockwise only or clockwise only or in both directions.

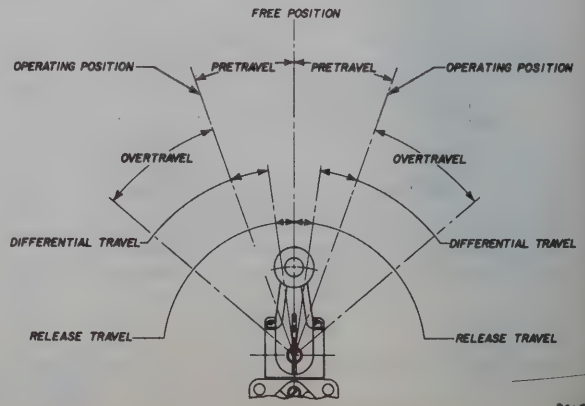


Actuator heads mount in four directions

Variety of Actuators

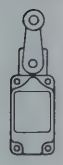


Operating Characteristics



MICRO SWITCH "LS" ORDERING INFORMATION

ROTARY MOTION LEVER ACTUATOR-MOMENTARY CONTACT

ACTUATOR	FEATURE	OPERATING CHARACTERISTICS				ORDER THIS SWITCH LISTING		REPLACEMENT PARTS			
		PRE-TRAVEL	OPER. FORCE	DIFF. TRAVEL	TOTAL TRAVEL	COMPACT	PLUG-IN	ACTUATOR ONLY	OPERATING HEAD	CONTACT BLOCK COMPACT	CONTACT BLOCK PLUG-IN
 3/4" DIA. HIGH STRENGTH MDN** ROLLER ON FORGED ALUMINUM ARM	Standard – 20° pretravel	20°	3 lbs.	12°	50°	**1LS1**	**201LS1***	**6PA70**	9PA15	**2MN1**	**2MN6**
	Standard - 5° pretravel	5°	3 lbs.	—	35°	**1LS19**	201LS19*	**6PA70**	9PA15	2MN8	**2MN13**
	Lighted indicator in nameplate – for 120 vac	20°	3 lbs.	12°	50°	**1LS501**	**201LS501***	**6PA70**	9PA15	**2MN1**	2MN14
	As above – for 240 vac	20°	3 lbs.	12°	50°	1LS501 -A1	201LS501 -A1*	**6PA70**	9PA15	**2MN1**	2MN14
	Flush panel mount	20°	3 lbs.	12°	50°	**7LS1**	None	**6PA70**	9PA17	**2MN1**	None
	Light force	20°	18 oz.	12°	50°	**1LS6**	201LS6*	**6PA70**	9PA50	**2MN1**	**2MN6**
	High temp. (+250°F)	20°	3 lbs.	12°	50°	**1LS24**	201LS24*	**6PA70**	9PA55	2MN24	**2MN6**
	Solvent resistant high temp. (+250°F)	20°	3 lbs.	12°	50°	1LS241	None	**6PA70**	None	2MN24	None
	Four-Circuit Double-Break (solder terminals)	23°	3 lbs.	16°	50°	**11LS1**	None	**6PA70**	9PA15	8AS42	None
 ADJUSTABLE (1"- 3-1/2") LENGTH STEEL LEVER	¾" Dia. MDN** roller reversible lever	20°	3 lbs.	12°	50°	**1LS3**	**201LS3***	**6PA44**	9PA16†	**2MN1**	**2MN6**
	As above – 5° pretravel	5°	3 lbs.	4°	35°	1LS58	None	**6PA44**	9PA16†	2MN8	None
	As above – 18 oz. force	5°	18 oz.	—	35°	1LS59	None	6PA44	None	2MN8	None
	1½" Dia. MDN** roller	20°	3 lbs.	12°	50°	1LS128	None	**6PA67**	9PA16†	**2MN1**	None
 ADJUSTABLE LENGTH ROD	5" aluminum rod	20°	5 oz.	12°	50°	**1LS10**	**201LS10***	**6PA43**	9PA40	**2MN1**	**2MN6**
	As above – 5° pretravel	5°	5 oz.	—	35°	**1LS47**	**201LS47***	**6PA43**	9PA40	2MN8	2MN13
 NO ACTUATOR (SEE NOTES 1 & 2 Page 3)	5° pretravel – 3 lbs. force	5°	3 lbs.	4°	35°	1LS9	201LS9*	Note 1	9PA16†	2MN8	2MN13
	20° pretravel – 4½ in. lbs.	20°	4½ in.-lbs.	12°	50°	**1LS2**	**201LS2***	Note 1	9PA16†	**2MN1**	**2MN6**
	As above – 5° pretravel	5°	4½ in.-lbs.	4°	35°	1LS27	None	Note 1	9PA16†	2MN8	None
	Low force – 20° pretravel	20°	30 in.-oz.	12°	50°	**1LS23**	**201LS23***	Note 2	None	**2MN1**	**2MN6**
	Low force – 5° pretravel	5°	15 in.-oz.	4°	35°	1LS56	201LS56*	Note 2	None	2MN8	2MN13

Bold face printing indicates stock items. For delivery information on other listings, contact a MICRO SWITCH Branch Office.
**MDN — Molybdenum Disulfide filled Nylon

1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625

ROTARY MOTION LEVER ACTUATOR-MAINTAINED CONTACT

	ACTUATOR	FEATURE	OPERATING CHARACTERISTICS: PRE-TRAVEL	OPER. FORCE	DIFF. TRAVEL	TOTAL TRAVEL	ORDER THIS SWITCH LISTING: COMPACT	PLUG-IN	REPLACEMENT PARTS: ACTUATOR ONLY	OPERATING HEAD	CONTACT BLOCK: COMPACT	PLUG-IN
	TWO MDN** ROLLERS ON FORKED ALUMINUM ARM	Rollers on opposite side of arm	55°	2 lbs.	20°	90°	**6LS1**	**206LS1***	**6PA72**	9PA46	**2MN1**	**2MN6**
		Rollers on same side of arm	55°	2 lbs.	20°	90°	6LS3	None	6PA74	9PA46	**2MN1**	None
	NO ACTUATOR	See Note 1	55°	3 in.-lbs.	20°	90°	**6LS2**	206LS2*	Note 1	9PA47†	**2MN1**	**2MN6**

ROTARY MOTION LEVER ACTUATOR-MOMENTARY CONTACT CENTER NEUTRAL POSITION (Two 2-Circuit Contact Blocks)

	MDN** ROLLER ON ALUMINUM ARM	Operate one circuit in one direction, other circuit in other direction	15°	3 lbs.	10°	50°	None	**301LS1***	**6PA70**	9PA15	None	(2) **2MN6**
	NO ACTUATOR	As above – see note 1	15°	4½ in.-lbs.	10°	50°	None	301LS2*	Note 1	9PA16†	None	(2) **2MN6**
	MDN** ROLLER ON ALUMINUM ARM	Operate both circuits in either direction(sequence operation possible)	15°	5 lbs.	10°	50°	None	**301LS8**	**6PA70**	9PA15	None	(2) **2MN6**
	NO ACTUATOR	As above – see note 1	15°	5 lbs.	10°	50°	None	301LS28*	Note 1	9PA16†	None	(2) **2MN6**

PUSH MOTION PLUNGER ACTUATOR-MOMENTARY CONTACT

	TOP STRAIGHT PLUNGER	Top plunger	.065 in.	6 lbs.	.020 in.	.315 in.	**2LS1**	**202LS1***	None	9PA32	**2MN1**	**2MN6**
		As above – light force	.065 in.	36 oz.	.009 in.	.384 in.	2LS111	202LS111*	None	None	2MN8	**2MN7**
		Top plunger – *Four-Circuit Double-Break* (Solder Terminals)	.065 in.	6 lbs.	.045 in.	.325 in.	12LS1	None	None	9PA32	8AS42	None
	TOP ROLLER PLUNGER	Top plunger adjustable roller	.065 in.	6 lbs.	.020 in.	.284 in.	**5LS1**	**205LS1***	None	9PA33	**2MN1**	**2MN6**
		Top plunger *Four-Circuit Double-Break* (Sold. Term.)	.075 in.	6 lbs.	.045 in.	.339 in.	15LS1	None	None	9PA33	8AS42	None
	SIDE STRAIGHT PLUNGER	Adjustable Side Plunger	.109 in.	9 lbs.	.04 in.	.359 in.	**4LS1**	**204LS1***	None	9PA44	**2MN1**	**2MN6**
	SIDE ROLLER PLUNGER	Side plunger adjustable roller	.109 in.	9 lbs.	.040 in.	.328 in.	**3LS1**	**203LS1***	None	9PA45	**2MN1**	**2MN6**

WOBBLE MOTION SPRING OR WIRE ACTUATOR-MOMENTARY CONTACT

	COIL-SPRING	4½ in.	1¼°	5 oz.	—	—	**8LS1**	**208LS1***	**9PA42**	**9PA42**	**2MN11**	**2MN9**
	SPRING-ROD	4½ in. – ½ spring ½ Alum. rod	1¼°	5 oz.	—	—	**8LS3**	**208LS3***	9PA49	9PA49	**2MN1**	**2MN6**
	STEEL WIRE	6½ in. – light force	1¼°	1 oz.	—	—	8LS125	**208LS125***	9PA54	9PA54	2MN11	2MN9

NOTES:

* All plug-in listings require a terminal block (18PA1 for "200LS" switches and 18PA3 for "300LS" switches) which is furnished separately. Unless damaged, it isn't necessary to replace the terminal block when replacing the switch unit.

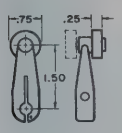
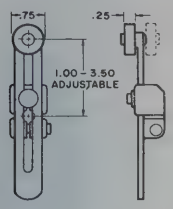
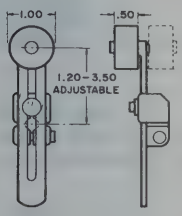
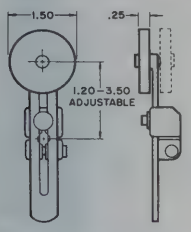
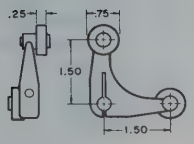
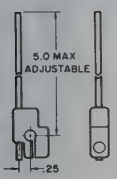
† Furnished without actuator.

Note 1 — Rotary actuators shown on page 4 may be used with these switches.

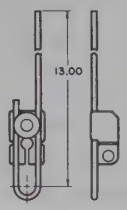
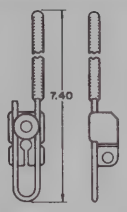
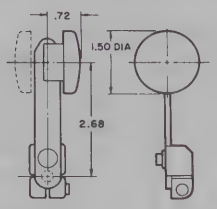
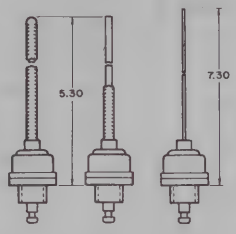
Note 2 — Because of light operating force, 6PA43, 6PA63 or 6PA70 actuators should be used with these switches.

MIS-7

ACTUATORS FOR "LS" LIMIT SWITCHES

DRAWING	DESCRIPTION	LISTING
	High Strength MDN** Roller on Forged Aluminum Arm Hardened Steel Roller	6PA70 6PA78
	Reversible Lever Adjustable Roller Arm High Strength MDN** Roller Steel Roller	 6PA44 6PA56
	Reversible Lever Adjustable Roller Arm High Strength MDN** Roller	 6PA68
	Reversible Lever Adjustable High Strength MDN** Roller 1½" Dia. Roller 2" Dia. Roller	 6PA67 6PA64
	Yoke Actuator Forked Lever High Strength MDN** Rollers — One Each Side Both Rollers — Same Side	 6PA72 6PA74
	5" Adjustable Aluminum Rod	6PA43

**MDN — Molybdenum Disulfide filled Nylon

DRAWING	DESCRIPTION	LISTING
	12" Adjustable Stainless Steel Rod	6PA63
	Same As 6PA63 Except 7.5" Spring-Rod	6PA69
	Hand Operated Lever	6PA57
	**FOR REPLACEMENT ONLY** A. Coil Spring for 8LS1 & 208LS1 B. Coil Spring with rod for 8LS3 & 208LS3 C. Music Wire Assembly for 8LS125 & 208LS125	 9PA42 9PA49 9PA54

Electrical Ratings

Contact Blocks — 2MN1, 2MN6, 2MN8, 2MN9, 2MN14 and 2MN24

10 amps, 120, 240 or 480 vac; ½ hp, 120 vac; 1 hp, 240 vac; 0.8 amp, 115 vdc; 0.4 amp, 230 vdc; 0.1 amp, 550 vdc. Pilot duty rating — 600 vac max.

Contact Blocks — 2MN3, 2MN7 and 2MN13

3 amps, 120 or 240 vac.

Temperature Range — To 160° F, except where noted.

Terminals — Screw, except where noted.

Contact Arrangements



Two-Circuit Double-Break



Four-Circuit Double-Break

For additional information on switches described in this bulletin, including pricing and quantity discounts, contact a nearby MICRO SWITCH Branch Office or Authorized Distributor. They are listed in the Yellow Pages.

SEALED HEAVY DUTY LIMIT SWITCHES



"ML" limit switches provide precision operation even when subjected to liquid splash. Seals between the cover plate and housing and between the actuating mechanism and the housing prevent liquids and other foreign matter from entering the switching chamber. Connecting conduit to the ½ inch-14 NPSM threaded opening at the bottom of the enclosure, completes the seal. The rugged aluminum housing protects the switching unit from physical damage, provides a means of mounting and permits conduit type wiring. The variety of actuator designs suits these switches to all types of machinery and industrial equipment. (For explosion-proof versions see page 13.)

Catalog Listings **1ML1, 101ML1, 1ML10, 101ML10, 51ML1,** and **151ML1** have momentary type rotary actuators which are field adjustable through 360°. They can be operated clockwise, counterclockwise or both. In addition, Catalog Listings **51ML1** and **151ML1** have sealed operating heads.

Catalog Listing **2ML1** and **102ML1** have heavy duty plunger actuators for severe limit of motion applications. **5ML1** and **105ML1** are for cam or slide operation.

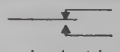
ELECTRICAL RATING

1ML1, 2ML1, 5ML1, 51ML1, 1ML10
20 amps. 120, 240, 480 or 600 vac; ½ amp. 115 vdc; ¼ amp. 230 vdc; ¾ hp 120 vac; 1½ hp 240 vac.

PILOT DUTY DATA

125 vac—6 amps. normal, 60 amps. inrush; 250 vac—3 amps. normal, 30 amps. inrush; 480 vac—1.5 amps. normal, 15 amps. inrush; 600 vac—1.2 amps. normal, 12 amps. inrush.

Contact Arrangement



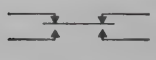
Single-pole double-throw

101ML1, 102ML1, 105ML1, 151ML1, 101ML10
10 amps. 120, 240, 480 or 600 vac.

PILOT DUTY DATA

600 vac max.

Contact Arrangement



Two-circuit double-break

LEVERS FOR "ML" SWITCHES

Roller lever actuators are easily assembled to Catalog Listing **1ML2** which is furnished without a lever arm. Levers with hardened steel rollers may be used as replacements on any **1ML1, 101ML1, 5ML1** or **151ML1** switches now in use. Levers with non-sparking rollers are for use on **1ML1-E1** explosion-proof switches shown on page 13.

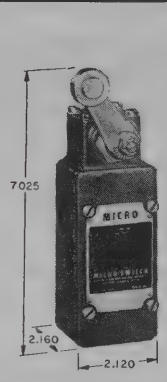
CHARACTERISTICS

1ML1	51ML1
O.F.—2 lbs. max.	3 lbs. max.
R.F.—¼ lb. min.	¼ lb. min.
P.T.—12° max.	12° max.
O.T.—60° min.	60° min.
D.T.—4° max.	4° max.
Basic Replacement	**1MK1**

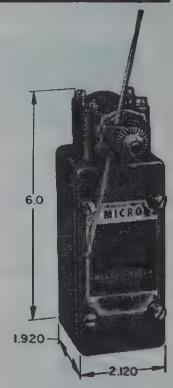
101ML1	151ML1
O.F.—2 lbs. max.	3 lbs. max.
R.F.—¼ lb. min.	¼ lb. min.
P.T.—12° max.	12° max.
O.T.—60° min.	60° min.
D.T.—5° max.	5° max.
Basic Replacement	**1MN1**

1ML10	101ML10
*O.F.—2½ oz. max.	*4 oz. max.
R.F.—½ oz. min.	½ oz. min.
P.T.—12° max.	15° max.
D.T.—4° max.	7° max.
O.T.—60° min.	60° min.
*Full Overtravel Force 5 oz. max.	
Basic Replacement	
1MK5	**1MN5**

2ML1 & 5ML1	102ML1 & 105ML1
O.F.—6 lbs. approx.	6 lbs. approx.
R.F.—4 lbs. approx.	4 lbs. approx.
P.T.—.025 in. max.	.031 in. max.
O.T.—.500 in. min.	.500 in. min.
D.T.—.005 in. max.	.015 in. max.
Basic Replacement	
1MK1	**1MN1**



1ML1, 51ML1, 101ML1, 151ML1



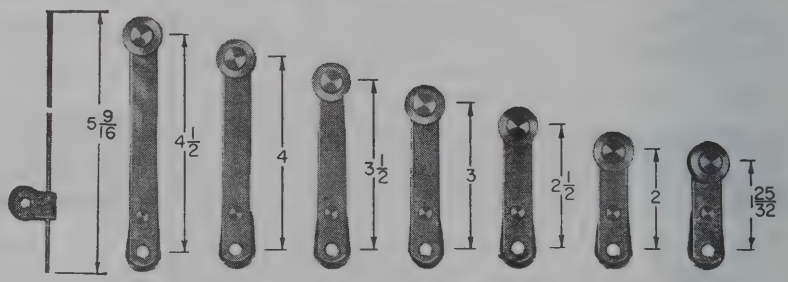
1ML10 and 101ML10



2ML1 and 102ML1



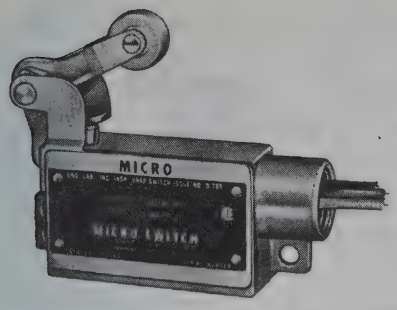
5ML1 and 105ML1



Length of Lever	Part Number (Steel Roller)	Part Number (Laminated Phenolic Roller)	Part Number (Non-Sparking Roller)
4½ inches	ML-10122	ML-10162	ML-10153
4 inches	ML-10123	ML-10163	ML-10154
3½ inches	ML-10124	ML-10164	ML-10155
3 inches	ML-10125	ML-10165	ML-10156
2½ inches	ML-10126	ML-10166	ML-10157
2 inches	ML-10127	ML-10167	ML-10158
1 25/32 inches	ML-10145	ML-10168	ML-10159
5 9/16 inches (⅛" dia. adjustable aluminum rod)		6PA19	

A serrated base plate MICRO SWITCH Part No. ML-10112 is used on all roller-lever actuators shown here. This plate may be ordered separately and riveted to any actuator which a user manufactures.

GENERAL PURPOSE LIMIT SWITCHES



All "LN" switches are available in either left hand (LH) or right hand (RH) mounting designs.

General Purpose limit switches combine the features of precision operation, rugged construction and excellent sealing into one compact unit. A sturdy zinc alloy housing protects the precision switching unit from physical damage and prevents entry of liquid splash and other foreign matter. Both left and right hand mounting designs are available.

The bearing surface for the hardened plunger is an oil-impregnated bronze insert cast integrally with the housing. The plunger mechanism is constructed to withstand excessive impact without damaging the enclosed precision switching unit.

1-foot leads are assembled to the switch. 3 and 5-foot leads are also available as standard units. When ordering, specify desired length.

"BZLN" limit switches have single-pole double-throw switching units. They may be wired either normally-open or normally-closed.

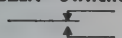
Catalog Listings **1LN1-1-RH & LH** and **2LN1-1-RH & LH** are similar in appearance to **BZLN-RH & LH** and **BZLN2-RH & LH** respectively. However, **"LN1"** switches have two-circuit double-break contact arrangements.

The high strength enclosure is completely sealed at the factory, so replacement of the basic switch is not possible. The plunger actuator operates through a sealed diaphragm and the leads are sealed into the conduit hub.

"BZLN" ELECTRICAL RATING
15 amps. 125, 250 or 480 vac;
½ amp. 125 vdc;
¼ amp. 250 vdc

"LN1" ELECTRICAL RATING
10 amps. 125 or 250 vac;
½ hp 125 vac

Contact Arrangement
"BZLN" Switches

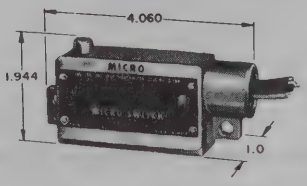


Single-pole double-throw

"1LN" & "2LN" Switches



Two-circuit double-break

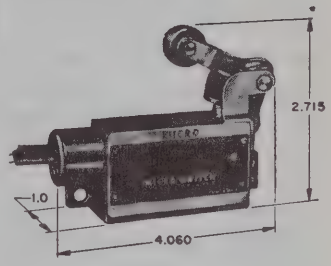


BZLN-LH and 1LN1-1-LH

CHARACTERISTICS

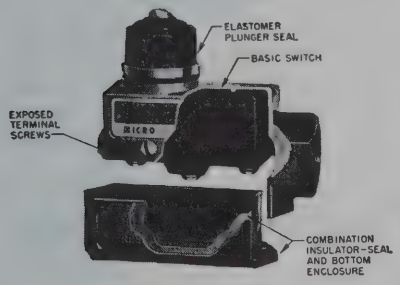
BZLN-LH & RH	BZLN2-RH & LH
O.F.—5 lbs. max.	3 lbs. max.
R.F.—1 lb. min.	¼ lb. min.
P.T.—.003 to .020 in.	.078 in. max.
O.T.—.203 in. min.	.469 in. min.
D.T.—.004 in. max.	.014 in. max.

1LN1-1-RH & LH	2LN1-1-RH & LH
O.F.—6 lbs. max.	4 lbs. max.
R.F.—1 lb. min.	¼ lb. min.
D.T.—.171 in. min.	12.5° min.
O.T.—.030 in max.	3° max.



BZLN2-RH and 2LN1-1-RH

"E6" & "V6" ENCLOSED SWITCHES

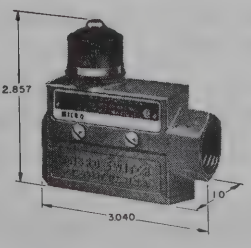


Series **"E6"** (side mounting) and **"V6"** (bottom mounting) enclosed basic switches have a single-pole double-throw contact arrangement. With the lower half of the housing removed, the terminals are exposed to make wiring quick and easy. The molded elastomer insulator-seal is cemented permanently into the bottom half of the enclosure, eliminating the bother of handling separate insulator and gasket. The hex-shaped hub facilitates connecting ½-14 threaded conduit. Except for the enlarged mounting plate on the bottom mounting designs, both housings are dimensionally the same. In locations subjected to splashing liquids, use switches with elastomer boots sealing the actuators.

All switches shown are available with either side or bottom mounting. Merely substitute **"E6"** for the **"V6"** in a bottom mount switch catalog listing to convert it to a side mount listing, and vice versa.

"N" and **"Q"** plungers are for operation by a force which is in line with the plunger motion of the switch.

"N" PLUNGER



BZE6-2RN
(Side Mount)

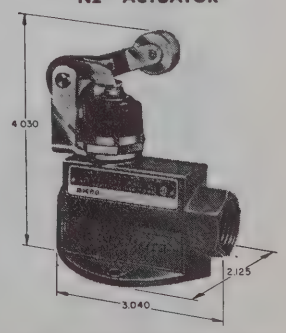
CHARACTERISTICS

BZE6-2RN	BZV6-2RN2
O.F.—9 to 24 oz.	10 to 20 oz.
R.F.—4 oz. min.	6 oz. min.
P.T.—.078 in. max.	.172 in. max.
O.T.—.219 in. min.	.219 in. min.
D.T.—.002 in. max.	.006 in. max.

Basic Replacement

BZ-2RQ77	BZ-2RN702

"N2" ACTUATOR



BZV6-2RN2 (Bottom Mount)

"E6" & "V6" ENCLOSED SWITCHES

"N2" (roller-arm) actuator is adjustable vertically through 225° at intervals of 1/5°, and horizontally at any point through 360°.

"Q2" (roller-arm) actuators are for cam or slide operation. The roller-arm is adjustable vertically through 225° at intervals of 1/5°, and horizontally to any of eight positions, through 360°.

The **"Q8"** is for use with cams whose approach is parallel to the axis of the switch, and the **"Q81"** for cams whose approach is perpendicular to the axis of the switch.

The **"N28"** provides electrical actuation in one direction only, pivoting away from the cam on the return stroke.

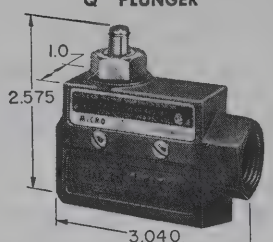
The **"Q62"** rod actuator is designed for low force operation. The 6-inch rod can be cut or formed to fit individual requirements.

The rod-actuator is adjustable horizontally to 8 positions spaced 45° apart; and vertically through 225°.

Underwriters' Laboratories listing:

15 amps., 125, 250 or 480 vac; ½ amp., 125 vdc; ¼ amp., 250 vdc.

"Q" PLUNGER



BZE6-2RQ (Side Mount)

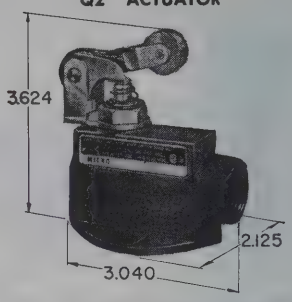
CHARACTERISTICS

	BZE6-2RQ	BZV6-2RQ2
O.F.	9 to 13 oz.	10 to 18 oz.
R.F.	4 oz. min.	6 oz. min.
P.T.	.015 in. max.	.141 in. max.
O.T.	.219 in. min.	.219 in. min.
D.T.	.002 in. max.	.006 in. max.

Basic Replacement

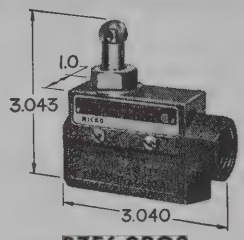
BZ-2RQ66 BZ-2RQ68

"Q2" ACTUATOR



BZV6-2RQ2 (Bottom Mount)

"Q8" PLUNGER



BZE6-2RQ8
(Side Mount)

CHARACTERISTICS

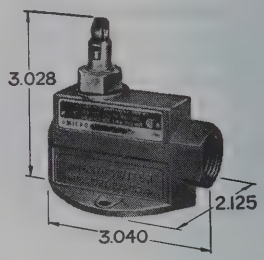
BZE6-2RQ8 & BZV6-2RQ81

O.F.—9 to 13 oz.
R.F.—4 oz. min
P.T.—.015 in. max
O.T.—.140 in. min.
D.T.—.002 in. max.

Basic Replacement

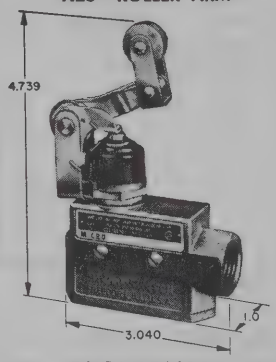
BZ-2RQ784 BZ-2RQ785

"Q81" PLUNGER



BZV6-2RQ81 (Bottom Mount)

"N28" ROLLER ARM



BZE6-2RN28
(Side Mount)

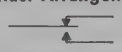
CHARACTERISTICS

	BZE6-2RN28	BZV6-2RQ62
O.F.	8 to 20 oz.	2 to 5 oz.
R.F.	6 oz. min.	2 oz. min.
P.T.	.234 in. max.	.718 in. max.
D.T.	.006 in. max.	.229 in. max.
O.T.	.219 in. min.	.838 in. min.

Basic Replacement

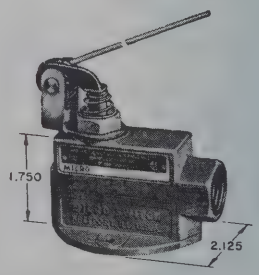
BZ-2RN702 BZ-2RQ68

Contact Arrangement



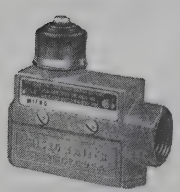
Single-pole double-throw

"Q62" ACTUATOR

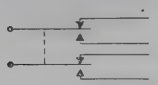


BZV6-2RQ62
(Bottom Mount)

DOUBLE-POLE DOUBLE-THROW ENCLOSED SWITCHES



Contact Arrangement



Double-pole double-throw

The **"E6"** and **"V6"** enclosed basic switches shown on page 8 and this page and the **"BAF1"** high capacity enclosed switches shown on page 11 are available in double-pole double-throw versions. These switches can "make" and "break" two separate circuits simultaneously.

Four **"E6"** and **"V6"** versions are available with the double-pole double-throw basic switch. They are **DTE6-2RN** and **DTV6-2RN, "N"** actuator types; **DTE6-2RN2** and **DTV6-2RN2, "N2"** actuator types.

Four **"BAF1"** versions are available. They are **DTF2-2RN-LH** and **DTF2-2RN-RH, "N"** actuator types; **DTF2-2RN2-LH** and **DTF2-2RN2-RH, "N2"** actuator types.

All enclosures are dimensionally the same as their **"E6"** and **"V6"** and **"BAF1"** counterparts. They are Underwriters' Laboratories listed for 10 amps. 125 or 250 vac.

MANUALLY OPERATED ENCLOSED SWITCHES



These switches have a 1½ inch diameter button type actuator which permits fast, easy control of power equipment. The lever arm is adjustable vertically through 180°, positively locking at ⅛°, and horizontally through 360°.

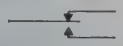
Contact arrangement is single-pole double-throw.

Catalog Listing **BZE-2RN4** is Underwriters' Laboratories listed for 15 amps. 125, 250 or 480 vac; ½ amp. 125 vdc; ¼ amp. 250 vdc.

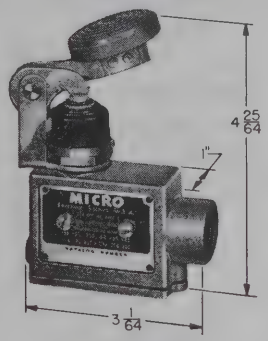
Catalog Listing **BAF1-2RN4** is Underwriters' Laboratories listed for 20 amps. 125, 250 or 480 vac; ½ amp. 125 vdc; ¼ amp. 250 vdc; 1 hp 125 vac; 2 hp 250 vac.

Catalog Listing **BZE-2RN4** can be converted to a bottom mounting version with furnished plate. Catalog Listing **BAF1-2NR4** is available in both right and left hand versions.

Contact Arrangement



Single-pole double-throw



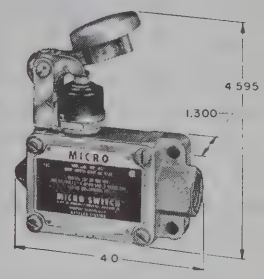
BZE-2RN4

CHARACTERISTICS

BZE-2RN4	BAF1-2RN4
O.F.—10 to 20 oz.	2 lbs. max.
R.F.—6 oz. min.	½ lb. min.
P.T.—.172 in. max.	———
O.T.—.219 in. min.	———
D.T.—.006 in. max.	———

Basic Replacement

BZ-2RN702	BA-2R708-P7



BAF1-2RN4-LH
(BAF1-2RN4-RH—Right hand design)

MAINTAINED-CONTACT ENCLOSED SWITCHES

Maintained-contact enclosed switches are for applications which require sustained contact after the actuating force has been released. A reset plunger enables the switch to be reset for succeeding operations. The sturdy aluminum housing provides physical protection for the enclosed switch. The conduit fitting has an internally tapped ½-14 threaded hub.

These switches are Underwriters' Laboratories listed for 15 amps. 125, 250 or 480 vac; ½ amp. 125 vdc; ¼ amp. 250 vdc.

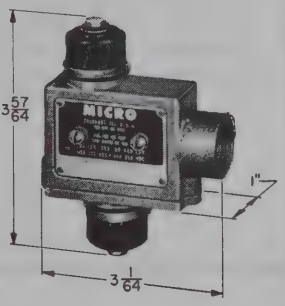
Contact Arrangement



Single-pole double-throw

Catalog Listings **BZE-RNX1** and **BZE-RN2X1** are designed for side mounting. Bottom mounted types are available.

BZE-RN2X1 features an adjustable roller-arm actuator, for cam or slide operation.



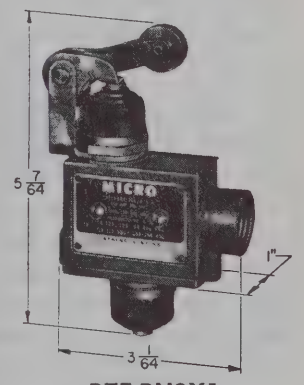
BZE-RNX1

CHARACTERISTICS
(top plunger only)

BZE-RNX1	BZE-RN2X1
O.F.—6 to 20 oz.	16 oz. max.
O.T.—.187 in. min.	.219 in. min.
P.T.—.078 in. max.	.172 in. max.
O.F.(reset)—6 oz. min.	12 to 30 oz.

Basic Replacement

BZ-RQX167	BZ-RNX702



BZE-RN2X1

HIGH-CAPACITY ENCLOSED SWITCH

Catalog Listing **BAF1-3RNX1** is for applications which require an enclosed, high-capacity switch furnishing maintained contact. To insure accurate repeatability, both actuating plungers are built into the housing. The basic switch operates when either plunger is depressed, and remains in this operated position until the other plunger is depressed. Both plungers are sealed with an elastomer (neoprene) boot. Underwriters' Laboratories list **BAF1-3RNX1** for 20 amps. 125, 250 or 480 vac; 1 hp 125 vac; 2 hp 250 vac; ½ amp. 125 vdc; ¼ amp. 250 vdc.

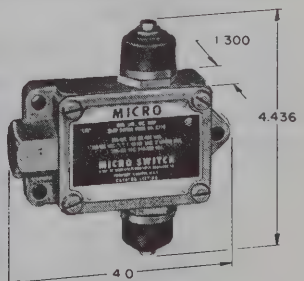
CHARACTERISTICS
(top plunger only)

BAF1-3RNX1

O.F.—1¾ lbs. max.
O.T.—.219 in. min.
O.F.(reset)—2½ lbs. max.

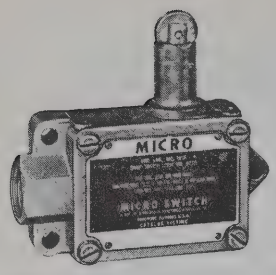
Basic Replacement

BA-3RX717



BAF1-3RNX1

HIGH-CAPACITY ENCLOSED SWITCHES



High-capacity **"BAF1"** enclosed switches are for applications requiring a small enclosed switch which will handle a large electrical load. They are capable of making and breaking steady currents of 20 amps. and switching inrush currents as high as 75 amps. The sturdy aluminum housing gives protection to the enclosed switching unit. The built-in overtravel mechanism provides a sturdy overtravel plunger and insures repeatability of the switching unit.

Switches with sealed actuators have an elastomer boot on the plunger preventing the entry of moisture, dust or other foreign matter through the actuating mechanism. Connecting conduit to the threaded opening completes the seal.

Both right hand (RH) and left hand (LH) designs are available. Three .265 inch diameter mounting holes provide for rugged mounting. An internally tapped ½-inch conduit fitting is common to all enclosed high capacity switches.

The switching unit is easily wired or replaced in the field without removing the enclosure from its mounting. The switching unit is accessible when the cover plate is removed.

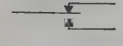
Type **"N"**, **"N2"** and **"N4"** actuators are sealed with an elastomer (neoprene) boot. **"N2"** and **"N4"** actuators are adjustable horizontally through 360°, and vertically through 225°.

The **"QN8"** and **"Q9"** roller plungers are for cam or slide actuation. **"QN8"** switches are completely sealed and adjustable horizontally through 360°. **"Q9"** plungers are adjustable horizontally through 360°.

Underwriters' Laboratories Listing:

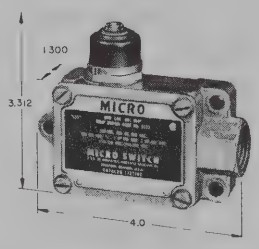
1 hp 115 vac; 2 hp 230 vac; 20 amps. 125, 250 or 460 vac; ½ amp. 125 vdc; ¼ amp. 250 vdc.

Contact Arrangement



Single-pole double-throw

"N" ACTUATOR



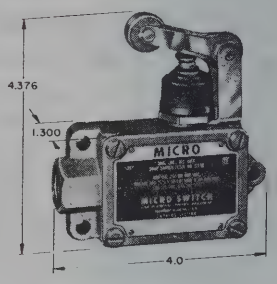
BAF1-2RN-LH

CHARACTERISTICS

BAF1-2RN-LH	BAF1-2RN2-RH
O.F.—2½ lb. max.	2 lb. max.
R.F.—½ lb. min.	½ lb. min.
P.T.—.094 in. max.	.219 in. max.
O.T.—.219 in. min.	.250 in. min.
D.T.—.0075 in. max.	.015 in. min.

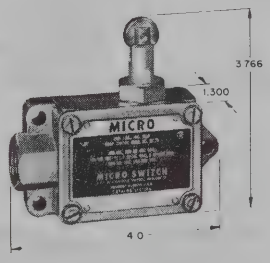
Basic Replacement
BA-2R708-P7

"N2" ACTUATOR



BAF1-2RN2-RH

"Q9" PLUNGER



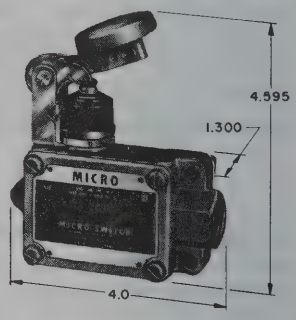
BAF1-2RQ9-RH

CHARACTERISTICS

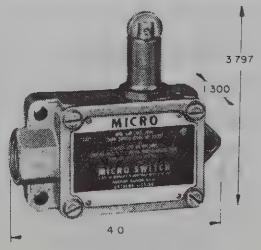
BAF1-2RQ9-RH	BAF1-2RN4-LH
O.F.—2½ lbs. max.	2 lbs. max.
R.F.—¾ lb. min.	½ lb. min.
P.T.—.094 in. max.	.219 in. max.
O.T.—.187 in. min.	.250 in. min.
D.T.—.002 to .010 in.	.015 in. max.

Basic Replacement
BA-2R708-P7

"N4" ACTUATOR



BAF1-2RN4-LH

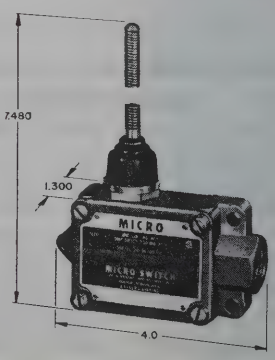


BAF1-2RQN8-RH

CHARACTERISTICS

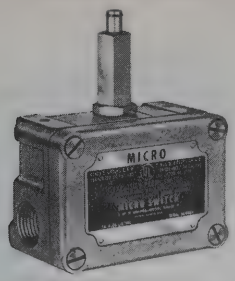
BAF1-2RQN8-RH	BAF1-2RN18-LH
P.T.— ———	10° max.
O.F.—8 lbs. max.	———
R.F.—2 lbs. min.	———
O.T.—.187 in. min.	———
D.T.—.0075 in. max.	———

Basic Replacement
BA-2R708-P7



BAF1-2RN18-LH

EXPLOSION-PROOF SWITCHES



MICRO SWITCH explosion-proof switches are designed for use as limits, safeties and interlocks in explosive atmospheres. Underwriters' Laboratories list the **"EX"** series switches as suitable for use in atmospheres of Class I, Group C (ethyl-ether vapors, ethylene, or cyclo-propane) and Group D (gasoline, hexane, naptha, butane, propane, benzol, acetone, lacquer solvent vapors and natural gas); Class II, Group E (metal dust), Group F (carbon black, coal or coke dust), Group G (flour, starch, or grain dust). All enclosures meet NEMA specifications. Mounting bracket information is the same as that covered on page 14 under **"OP"** switches. The switching cavity of **"EX"** switches is not sealed against liquids.

"EX" SERIES

Roller - lever actuators of **"EX"** switches are adjustable through 360°. Plunger actuators will withstand a steady load of 100 pounds without injury to the enclosed switching unit.

EX-AR, EX-Q and EX-CR Underwriters' Listing
15 amps. 125, 250 or 480 vac; ½ amp. 125 vdc; ¼ amp. 250 vdc.

EXA-AR Underwriters' Listing
20 amps. 125, 250 or 480 vac; 1 hp 125 vac; 2 hp 250 vac; ½ amp 125 vdc; ¼ amp. 250 vdc.

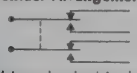
EXD-AR and EXD-Q Underwriters' Listing
10 amps. 125, 250 vac; 0.3 amp. 125 vdc; .15 amp. 250 vdc.

EX-AR, EX-Q, EX-CR and EXA-AR Contact Arrangement

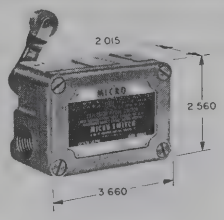


Single-pole double-throw

EXD-AR and EXD-Q Contact Arrangement



Double-pole double-throw

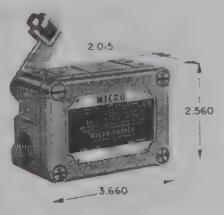


EX-AR, EXA-AR
EXD-AR

CHARACTERISTICS

EX-AR, EX-CR	EX-Q
O.F.—½ to 1¼ lb.	3 lbs. max.
R.F.—¼ lb. min.	¾ lb. min.
P.T.—.219 in. max.	.078 in. max.
O.T.—90° max.	.188 in. min.
D.T.—.007 in. max.	.004 in. max.

Basic Replacement
BZ-2R-P1



EX-CR

CHARACTERISTICS

EXA-AR	EXD-Q
O.F.—12-32 oz.	3 lbs. max.
R.F.—8 oz. min.	½ lb. min.
P.T.—.219 in. max.	.109 in. max.
O.T.—25° max.	.141 in. min.
D.T.—.012 in. max.	.055 in. max.

Basic Replacement

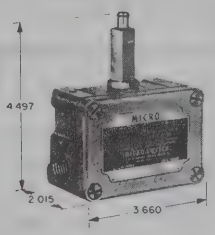
BA-2R-P1	DT-2R-B6

CHARACTERISTICS

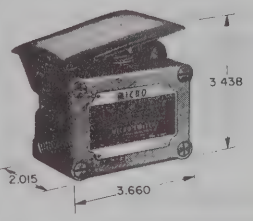
EXD-AR	EX-AR50
O.F.—8-24 oz.	2½ lb. approx.
R.F.—4-12 oz.	———
P.T.—.187 in. max.	.156 in. approx.
O.T.—25° max.	.125 in. min.
D.T.—.250 in. min.	.003 in. approx.

Basic Replacement

DT-2R4-B6	BZ-2R-P1



EX-Q
EXD-Q



EX-AR50

"EX1" SERIES

Series **"EX1"** switches have a conduit opening at either end of the housing to permit through wiring. Underwriters' Laboratories listing is the same as Series **"EX"** switches. Two 10-32 NF tapped holes on the top, back and bottom permit direct and easy mounting. Roller lever is adjustable through 360°.

Catalog Listing **1EX1** has a type **"Z"** basic switch. Contact arrangement is single-pole double-throw. Electrical rating: 15 amps. 125, 250, 480 vac. Conduit openings are ½ inch 14 NPT.

Catalog Listing **4EX1** has a double-pole double-throw 6-wire basic switch. Electrical rating 10 amps. 125, 250 vac. Conduit openings are ¾ inch NPT.

CHARACTERISTICS

1EX1	4EX1
O.F.—8-20 oz.	8-24 oz.
R.F.—4 oz. min.	4-12 oz.
P.T.—.219 in. max.	.250 in. max.
D.T.—.007 in. max.	———
O.T.—90° max.	90° max.

Basic Replacement

BZ-2R-P49	DT-2R4-B6

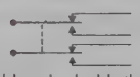
Contact Arrangements

1EX1

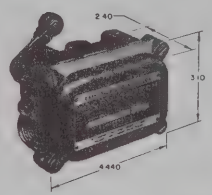


Single-pole double-throw

4EX1



Double-pole double-throw



1EX1
4EX1

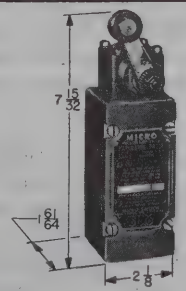
The **"ML-E1"** series of explosion-proof switches have all the adjustability features of the **"ML"** series described on page 7. They are listed for use in the same atmospheres as **"EX"** switches. However, the operating head of the **51ML1-E1** is completely sealed against dust and abrasives and should be used in such atmospheres.

"ML-E1" SERIES

These switches are listed by Underwriters' Laboratories for 20 amps. 120, 240 or 480 vac; ½ amp. 115 vdc; ¼ amp. 230 vdc; ¾ hp 120 vac; 1½ hp 240 vac. All have single-pole double-throw contact arrangements. The roller-arm actuators of Catalog Listings **1ML1-E1** and **51-ML1-E1** are adjustable through 360°.

Refer to Page 7 for a list of replacement roller-arm actuators.

MIS-14



1ML1-E1 &
51ML1-E1

CHARACTERISTICS
1ML1-E1 & 51ML1-E1

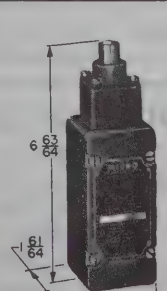
O.F.	3 lbs. max.
R.F.	¼ lb. min.
P.T.	12° max.
O.T.	60° min.
D.T.	4° max.

Basic Replacement
1MK1

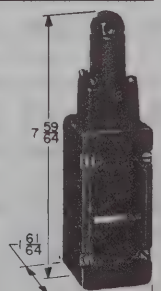
CHARACTERISTICS
2ML1-E1 & 5ML1-E1

O.F.	6 lbs. approx.
R.F.	4 lbs. approx.
P.T.	.025 in. max.
O.T.	.500 in. min.
D.T.	.005 in. max.

Basic Replacement
1MK1

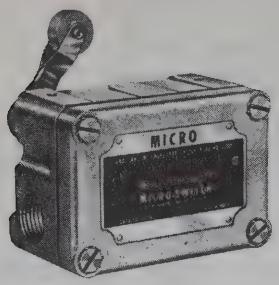


2ML1-E1



5ML1-E1

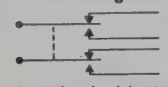
"OP" ENCLOSED SWITCHES



Type **"OP"** switches utilize the same type of rugged enclosure as the type **"EX"** switches, except they are liquid-tight instead of explosion-proof. A mounting bracket **(EX-10038)** is furnished with each "OP" switch assembly, permitting end, back, bottom or top mounting of the roller-lever switches, and back, bottom or end mounting of plunger actuated switches. Plunger type top-mounting brackets **(EX-10039)** are available, but must be ordered separately. A roller-arm actuator, adjustable through 360°, is common to Catalog Listings **OP-AR, OPA-AR** and **OPD-AR.** A cross roller-lever design is available as Catalog Listing **OP-CR.** Catalog Listing **OP-AR50** is for manual operation.

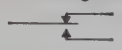
OP-AR, OP-CR, OP-Q, OP-AR50
Contact Arrangement
Single-pole double-throw
Underwriters' Laboratories Listing:
15 amps. 125, 250 or 460 vac; ½ amp. 125 vdc; ¼ amp. 250 vdc.

OPD-AR, OPD-Q
Contact Arrangement

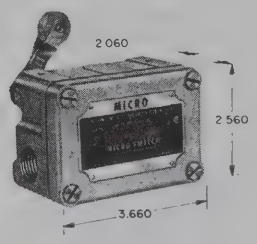


double-pole double-throw
Underwriters' Laboratories Listing:
10 amps. 125 or 250 vac; .3 amp. 125 vdc; .15 amp. 250 vdc.

OPA-AR, OPA-Q
Contact Arrangement



Single-pole double-throw
Underwriters' Laboratories Listing:
20 amps. 125, 250 or 460 vac; 1 hp 115 vac; 2 hp 230 vac; ½ amp. 125 vdc; ¼ amp. 250 vdc.



OP-AR, OPD-AR
OPA-AR

CHARACTERISTICS

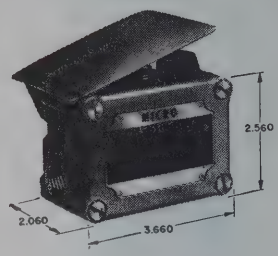
OP-AR	OPA-AR
O.F.—½ to 1¼ lb.	12 to 32 oz.
R.F.—¼ lb. min.	8 oz. min.
P.T.—.219 in. max.	8° max.
O.T.—not over 90°	25° max.
D.T.—.007 in. max.	.012 in. max.

Basic Replacement
BZ-2R-P4 BA-2R-P4

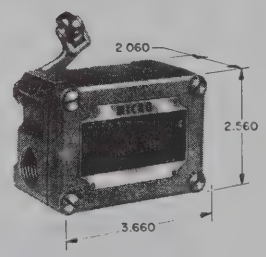
CHARACTERISTICS

OP-AR50	OPD-AR
O.F.—2½ lb. min.	8 to 24 oz.
R.F.— ———	4 to 12 oz.
P.T.—.156 in max.	.187 in. max.
O.T.—.125 in. min.	25° max.
D.T.—.003 in. max.	.109 in. max.

Basic Replacement
BZ-2R-P4 DT-2R4-A7



OP-AR50



OP-CR

CHARACTERISTICS

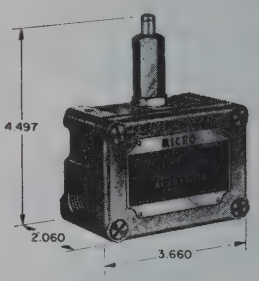
OP-CR	OPD-Q
O.F.—8 to 20 oz.	3 lb. max.
R.F.—4 oz. min.	½ lb. min.
P.T.—.219 in. max.	.109 in. max.
O.T.—90° max.	.141 in. min.
D.T.—.007 in. max.	.055 in. max.

Basic Replacement
BZ-2R-P4 DT-2R-A7

CHARACTERISTICS

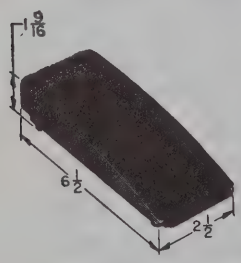
OP-Q	OPA-Q
O.F.—3 lb. max.	2 lb. max.
R.F.—¾ lb. min.	¾ lb. min.
P.T.—.078 in. max.	.050 in. max.
O.T.—.187 in. min.	.125 in. min.
D.T.—.004 in. max.	.009 in. max.

Basic Replacement
BZ-2R-P4 BA-2R-P4



OP-Q, OPD-Q
OPA-Q

FOOT SWITCHES

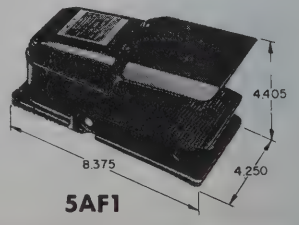


1AF1, 1AF4, 1AF7, 1AF12

"1AF" switch assemblies may be actuated by the foot, knee, hand, elbow or arm. They should be afforded protection from liquid splash. The enclosed basic switches are replaceable. The total pedal travel is ¼ inch and operating force is 5½ lbs. **1AF1** has a normally-open basic switch **(WA-2R),** six foot cord and series plug. A small neon light goes on when the switch is in the unactuated position. **1AF1** is listed for ¾ hp 115 vac. **1AF4** has a single-pole double-throw basic switch **(BA-2R-P1),** no neon light cord or plug. **1AF7** has a single-pole normally-open basic switch **(WA-2R),** neon light and four foot cord without plug. **1AF4** and **1AF7** are listed for ¾ hp 115 vac; 1½ hp 230 vac; 10 amps. 125 or 250 vac when controlling tungsten filament lamp loads. **1AF12** has a double-pole double-throw basic switch **(DT-2R-A7)** and is furnished without the neon light, cord or plug. Listed for 10 amps. 125 and 250 vac.

SEALED, HEAVY DUTY FOOT SWITCH

Catalog Listing **5AF1** has an oiltight cast iron enclosure with a toe guard to prevent falling objects from injuring the operator or accidentally tripping the switch. The operating point of the treadle can be varied by a simple, one-screw adjustment. Contact arrangement of the replaceable basic switching unit **(BA-2ST)** is single-pole double-throw double-break. **5AF1** is rated at 20 amps., 120, 240 or 480 vac; ¾ hp 115 vac; 1½ hp 230 vac; 1 amp. 125 vdc; ½ amp. 250 vdc. The conduit opening has a ½-inch - 14 NPSM thread.



5AF1

BASIC SWITCHES



BZ-2R

MICRO SWITCH basic switches are phenolic enclosed switching units which combine long life with accurate repeatability. These single-pole double-throw switches may be wired either normally-open or normally-closed, and they are available in either solder type or screw type terminal designs. (See page 18 for terminal designs available). A variety of actuator designs are available, each intended for a specific type of operation. Two .140 inch diameter holes located on one inch centers are provided for mounting the switches in a fixed position.

Except where otherwise noted, all basic switches are listed by Underwriters' Laboratories at 15 amps. 125, 250 or 480 vac; ½ amp. 125 vdc; ¼ amp. 250 vdc. (See page 18 for contact arrangement).

Pin plungers (above) are for applications where only small operating motion is available.

"L" actuators are for applications which require a switch with low operating force, and may be used with slow moving cams or slides.

"L2" (roller-leaf) actuators are for operation by low energy means and are suitable for use with rapid moving cams.

"S" plungers are for in-line-motion applications where space is at a premium and some overtravel is required.

"Q1" plungers are for panel mounting which provides some adjustment of the switch operating point. 7/32 inch overtravel is provided.

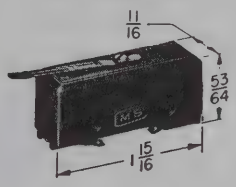
"D" plungers offer a large target for in-line-motion applications and provide some overtravel. **"W899"** lever permits adjustability of the operating position between .670 and .880 inch, without removing switch from mounting.

"W80" lever actuators are for use with slow moving cams or slides, where very low operating force is needed. The lever is of soft, cold-rolled steel, rigid enough to provide adequate strength, yet it may be bent to any shape by the user.

The **"W84" lever** provides lower operating force than the "W80" lever.

"W82" (roller - lever) and **"W822" (short roller-lever)** actuators are designed for operation by fast moving cams which require switches with low operating force.

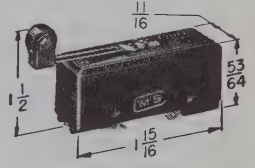
"L" ACTUATOR



BZ-2RL

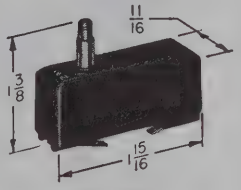
CHARACTERISTICS	BZ-2R	BZ-2RL & BZ-2RL2
O.F.	9 to 13 oz.	5 oz. max.
R.F.	4 oz. min.	½ oz. min.
P T.	.016 in. max.	.156 in. max.
O.T.	.005 in. min.	not over 1/16 in.
D.T.	.0004 to .002 in.	.050 in. max.

"L2" ACTUATOR



BZ-2RL2

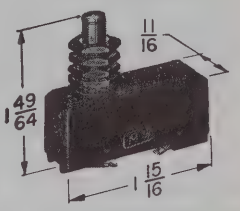
"S" PLUNGER



BZ-2RS

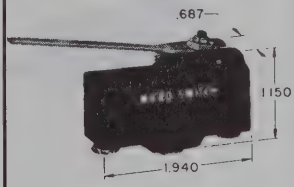
CHARACTERISTICS	BZ-2RS	BZ-2RQ1
O.F.	9 to 13 oz.	9 to 13 oz.
R.F.	4 oz. min.	4 oz. min.
P.T.	.016 in. max.	.016 in. max.
O.T.	.062 in. min.	.219 in. min.
D.T.	.0004 to .002 in.	.0004 to .002 in.

"Q1" PLUNGER



BZ-2RQ1

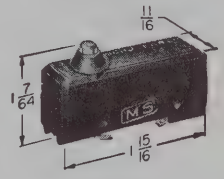
"W899" LEVER



BZ-2RW899-A2

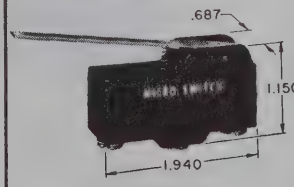
CHARACTERISTICS	BZ-2RW899-A2	BZ-2RD
O.F.	2½ oz. max.	9 to 13 oz.
R.F.	½ oz. min.	4 oz. min.
P.T.	——	.016 in. max.
O.T.	.460 in. max.	.016 in. min.
D.T.	.007 to .050 in.	.0004 to .002 in.

"D" PLUNGER



BZ-2RD

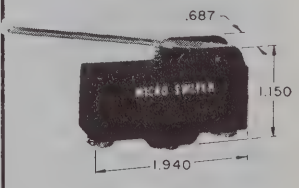
"W80" LEVER



BZ-2RW80-A2

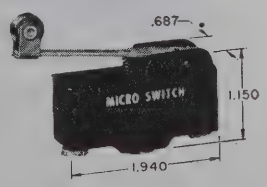
CHARACTERISTICS	BZ-2RW80	BZ-2RW84
O.F.	2½ oz. max.	1 oz. max.
R.F.	½ oz. min.	⅛ oz. min.
P.T.	——	.328 in. max.
O.T.	.188 in. min.	.219 in. min.
D.T.	.007 to .050 in.	.007 to .050 in.

"W84" LEVER



BZ-2RW84-A2

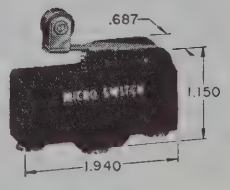
"W82" LEVER



BZ-2RW82-A2

CHARACTERISTICS	BZ-2RW82	BZ-2RW822
O.F.	3½ oz. max.	6 oz. max.
R.F.	¾ oz. min.	1½ oz. min.
P.T.	.250 to .063 in.	.125 to .047 in.
O.T.	.156 in. min.	.094 in. min.
D.T.	.004 to .040 in.	.003 to .020 in.

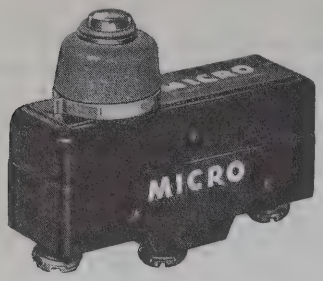
"W822" LEVER



BZ-2RW822-A2

481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351

BASIC SWITCHES

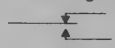


BZ-2RDS-A2

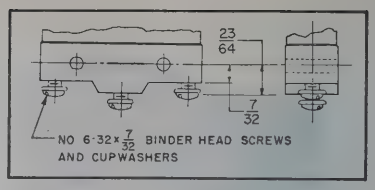
Basic switches are available in three different terminal designs: 1. solder type, 2. bottom-facing (A2) screws and cupwashers, 3. side-facing (P4) screws and cupwashers. This catalog deals for the most part with solder type terminals. Screw terminal switches are ordered by adding "A2" or "P4" to the solder terminal catalog listing. Example: Catalog Listing BZ-2RDS-A2 has bottom-facing screw terminals and cupwashers.

Catalog listings **BZ-2RDS-A2** (left) and **BZ-2RS55** have sealed plungers.

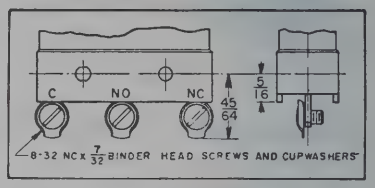
Contact Arrangement



Single-pole double-throw



"A2" TERMINALS



"P4" TERMINALS

BZ-RW922-A2 has the actuating roller located directly over the pin plunger to maintain stability of operating characteristics through millions of operations. Switch is rated for 10 amps., 125, 250 and 460 vac.

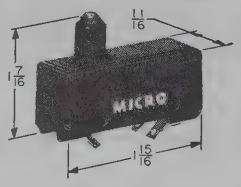
BZ-2RW825 and **BZ-2RW-826** have hinged, one-way roller levers which actuate on the forward motion of a cam or slide, and skip the actuation on the return stroke.

BZ-2R55 and **BZ-2RW855** are the sealed versions of the pin plunger and "W80" lever switches, respectively.

BZ-2RQ18 and **BZ-2RQ181** are designed for panel mounting. The "Q18" is designed for operation by a force parallel to the axis of the switch, and the "Q181" for operation by a force perpendicular to the axis of the switch.

BZ-2RW863 features a six-inch lever which permits mounting the switch at an increased distance from the actuating force, and decreases the operating force. The lever can be cut or bent to any desired length or shape.

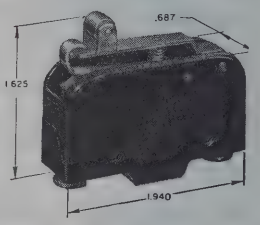
MT-4R, a magnetic-blowout switch, provides a means of precision, snap-action switching of d-c loads, up to 10 amps. 115 vac, resistive, in either a "polarized" or "non-polarized" connection.



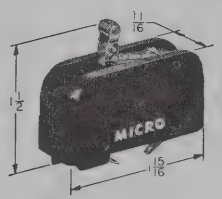
BZ-2RS55

CHARACTERISTICS

	BZ-2RDS-A2 & BZ-2RS55	BZ-RW922-A2
O.F.	9 to 15 oz.	12 oz. max.
R.F.	4 oz. min.	4 oz. max.
O.T.	.062 in. min.	.100 in. min.
D.T.	.0004 to .0025 in.	.0005 to .0010 in.



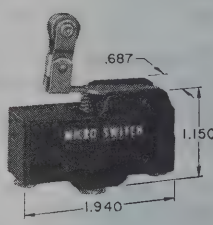
BZ-RW922-A2



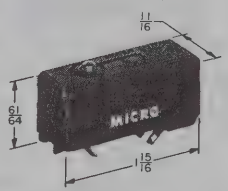
BZ-2RW825

CHARACTERISTICS

	BZ-2RW825	BZ-2RW826
O.F.	8 oz. max.	6 oz. max.
R.F.	1½ oz. min.	1½ oz. min.
O.T.	Do not O.T. more than .109 in.	.094 in. min.
D.T.	.015 in. max.	.003 to .020 in.



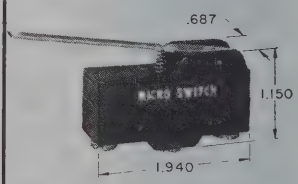
BZ-2RW826-A2



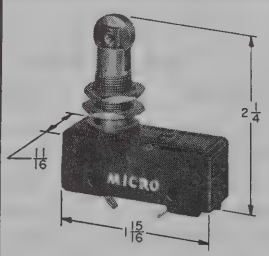
BZ-2R55

CHARACTERISTICS

	BZ-2R55	BZ-2RW855
O.F.	9 to 15 oz.	1 to 2½ oz.
R.F.	4 oz. min.	½ oz. min.
P.T.	.075 in. max.	———
O.T.	.005 in. min.	.219 in. min.
D.T.	.0004 to .0025 in.	.007 to .050 in.



BZ-2RW855-A2

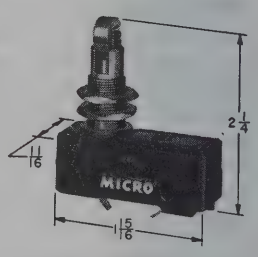


BZ-2RQ18

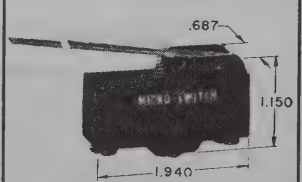
CHARACTERISTICS

BZ-2RQ18 & BZ-2RQ181

O.F.	9 to 13 oz.
R.F.	4 oz. min.
O.T.	.140 in. min.
D.T.	.0004 to .002 in.



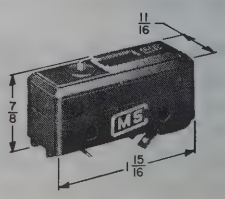
BZ-2RQ181



BZ-2RW863-A2

CHARACTERISTICS

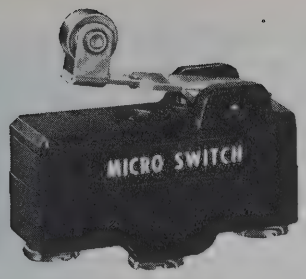
	BZ-2RW863	MT-4R
O.F.	1 oz. max.	12 to 18 oz.
R.F.		5 oz. min.
P.T.		.035 in. max.
O.T.	.578 in. min.	.005 in. min.
D.T.	.018 to .145 in.	.007 in. max.



MT-4R

MIS-17

HIGH-CAPACITY BASIC SWITCHES



Type **"A"** basic switches combine high electrical rating with high inrush capacity, making them particularly useful for handling solenoids, motors and tungsten lamps. Eight different actuator designs provide a type **"A"** switch for every type of operation. Underwriters' Laboratories list these high capacity switches at 1 hp 125 vac; 2 hp 250 vac; 20 amps. 125, 250 or 480 vac; ½ amp. 125 vdc; ¼ amp. 250 vdc. Type **"A"** switches have an inrush capacity of 75 amps. and 10 amps. when controlling 125 volt tungsten filament lamp loads on a-c circuits. Mounting facilities are the same as those for basic switches described on page 17.

SEE PAGE 18 FOR TERMINAL DESIGNS AVAILABLE

Catalog Listing **BA-2R** provides limited plunger overtravel in applications requiring a compact switch with closely held operating characteristics.

BA-2RB has a built-in plunger overtravel mechanism. The radius top plunger permits operation by cams having less than a 20° rise.

BA-2RL has a flexible leaf actuator which requires only slight operating force, such as that produced by slow moving cams or slides.

The **BA-2RL2** has a roller leaf actuator suitable for operation by low force cams or slides.

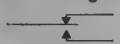
Catalog listing **BA-2RV** has a rigid lever actuator with a low operating force.

BA-2RV2 features a roller-lever actuator suitable for cam operation when the operating force is low and the operating movement liberal.

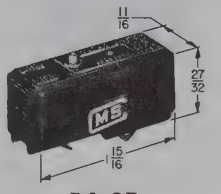
BA-2RV22 has a short roller-lever suitable for operation by such devices as rotating cams.

Catalog Listing **BA-2RQ1** is designed for panel mounting, permitting adjustment with respect to the actuating device.

Contact Arrangement



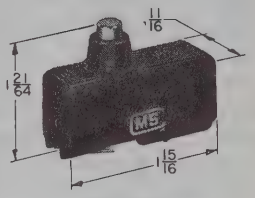
Single-pole double-throw



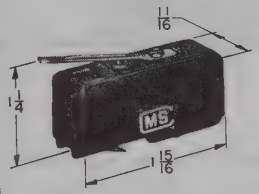
BA-2R

CHARACTERISTICS

BA-2R	BA-2RB
O.F.—14 to 22 oz.	14 to 22 oz.
R.F.—10 oz. min.	10 oz. min.
P.T.—.050 in. max.	.050 in. max.
O.T.—.010 in. min.	.093 in. min.
D.T.—.002 to .0075 in.	.002 to .0075 in.



BA-2RB

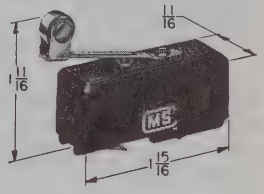


BA-2RL

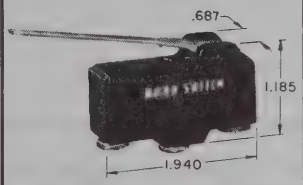
CHARACTERISTICS

BA-2RL and BA-2RL2

O.F.	9 oz. ma.
R.F.	1 oz. min.
D.T.	.065 in. max.
O.T.	.065 in. max.



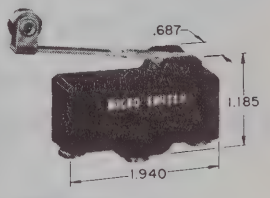
BA-2RL2



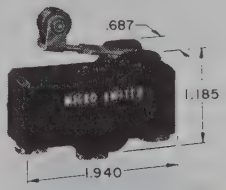
BA-2RV-A2

CHARACTERISTICS

BA-2RV	BA-2RV2
O.F.—2½ oz. max.	3½ oz. max.
R.F.—½ oz. min.	½ oz. min.
P.T.—.625 in. max.	.468 in. max.
O.T.—.078 in. min.	.062 In. min.
D.T.—.109 in. max.	.085 in. max.



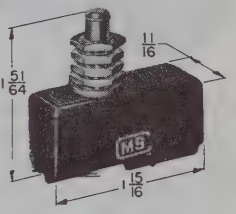
BA-2RV2-A2



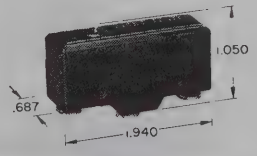
BA-2RV22-A2

CHARACTERISTICS

BA-2RV22	BA-2RQ1
O.F.—6 oz. max.	14 to 22 oz.
R.F.—1½ oz. min.	10 oz. min.
P.T.—.250 in. max.	.050 in. max.
O.T.—.031 in. min.	.219 in. min.
D.T.—.047 in. max.	.002 to .0075 in.



BA-2RQ1



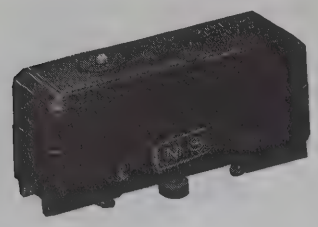
Underwriters' Laboratories Listing

25 amps. 125, 250 or 480 vac; 1 hp, 125 vac; 2 hp, 250 vac. Pilot Duty Rating, 750 VA, 125 or 250 vac.

25 AMPERE CAPACITY SWITCH

The **BE-2R-A4** features a 25 ampere steady state current rating and a 75 ampere inrush rating for solenoids, tungsten lamps and motors. This increased electrical capacity is accomplished without sacrificing accurate repeatability or precision performance. It has the same operating characteristics and circuitry as the **BA-2R** above. The **BE-2R-A4** has screw type terminals.

MAINTAINED-CONTACT ENCLOSED SWITCHES



Maintained-contact basic switches are for applications which require the contact to be maintained after the operating force has been relieved. A reset button is used to manually reset the switch for the next actuation. The actuator is on top of the switch and the reset button on the bottom. When either the actuator or the reset button is depressed, the spring snaps and remains in the operated position until the other is depressed. These switches are listed for 15 amps. 125, 250 or 480 vac; ¼ hp 125 vac; ½ hp 250 vac; ½ amp. 125 vdc; ¼ amp. 250 vdc.

The maintained contact switches shown here have the same mounting facilities as the basic switches described on page 17.

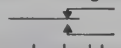
Pin plungers are for applications which require very exacting operating characteristics.

"S" plungers have built-in limited overtravel mechanisms.

"Q1" plungers are for panel mounting and are particularly useful in applications where the actuating motion cannot be accurately controlled.

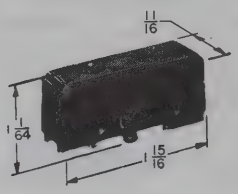
"L" actuators need only slight operating force, such as that provided by slow moving cams.

Contact Arrangement



Single-pole double-throw

PIN PLUNGER

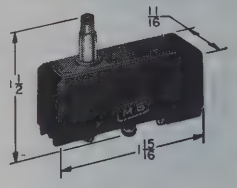


BZ-RX

CHARACTERISTICS

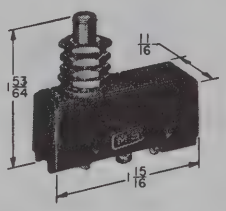
	BZ-RX	BZ-RSX
O.F.	7 to 9 oz.	7 to 9½ oz.
P.T.	.012 in. max.	.012 in. max.
O.T.	.005 in. min.	.025 in. min.
O.F.(reset)	2 to 10 oz.	2 to 10 oz.

"S" PLUNGER



BZ-RSX

"Q1" PLUNGER

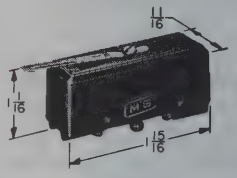


BZ-RQ1X

CHARACTERISTICS

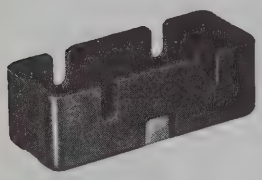
	BZ-RQ1X	BZ-RLX
O.F.	6 to 9½ oz.	3 oz. max.
P.T.	.012 in. max.	———
O.T.	.219 in. min.	Do not O.T. more than 1/16 in.
O.F.(reset)	2 to 10 oz.	2 to 10 oz.

"L" ACTUATOR



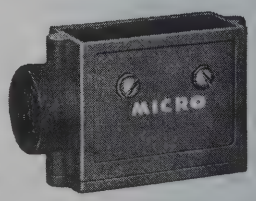
BZ-RLX

TERMINAL ENCLOSURES



"5PA" series of plastic terminal enclosures prevent personnel from coming in contact with exposed switch terminals, and protect the terminals themselves against shorting or grounding.

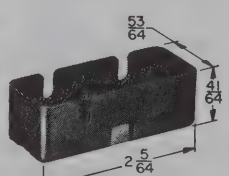
"3PA" series of terminal enclosures, in addition to the above, protect the phenolic switches from physical abuse. These open-top, aluminum housings also provide a means of connecting conduit.



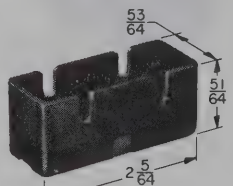
Catalog Listing **5PA1** will accept any standard MICRO SWITCH basic switch which has solder type terminals, while Catalog Listing **5PA2** is designed for use with switches having screw type terminals.

Catalog Listing **5PA3** will accept any MICRO SWITCH basic switch which has been assembled in an auxiliary actuator.

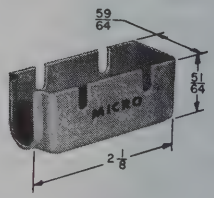
Both the side mounting **3PA1** and bottom mounting **3PA2** will accept all MICRO SWITCH basic switches.



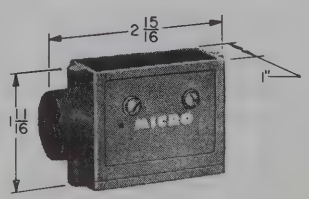
5PA1 (for solder type terminal)



5PA2 (for screw type terminal)

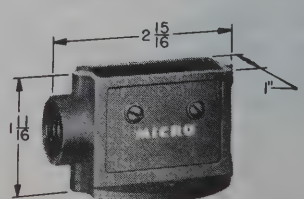


5PA3



3PA1

Terminal enclosures are sold as separate items and should be ordered separately.



3PA2

DOUBLE-POLE DOUBLE-THROW BASIC SWITCHES

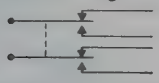


Type **"DT"** switches are double-pole double-throw switches which simultaneously "make" and "break" two separate circuits. In size, plunger location and mounting facilities, the **"DT"** series of switches are approximately the same size as other basic switches. Underwriters' Laboratories list these switches for 10 amps. at 125 or 250 vac.

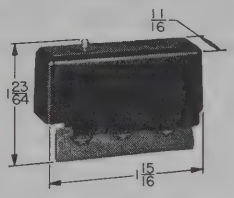
Catalog Listing **DT-2R-A7** has a pin plunger actuator. **DT-2RV3-A7** has a straight lever actuator. Catalog Listings **DT-2RV23-A7** and **DT-2RV212-A7** have a long roller-lever and short roller-lever, respectively.

A fiberglass insulator is used on all **"DT"** type switches to isolate the screw terminals from accidental shorting when wiring.

Contact Arrangement



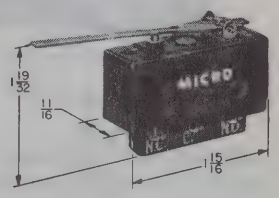
Double-pole double-throw



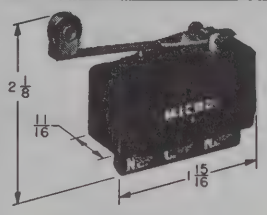
DT-2R-A7

CHARACTERISTICS

DT-2R-A7	DT-2RV3-A7
O.F.—12 to 20 oz.	4 to 7 oz.
R.F.—2 oz. min.	½ oz. min.
P.T.—.070 in. max.	.219 in. max.
O.T.—.005 in. min.	.015 in. min.
D.T.—.035 to .055 in.	.094 to .172 in.



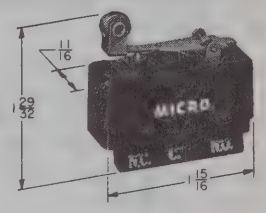
DT-2RV3-A7



DT-2RV23-A7

CHARACTERISTICS

DT-2RV23-A7	DT-2RV212-A7
O.F.—5½ to 9½ oz.	9 to 15 oz.
R.F.—¾ oz. min.	1½ oz. min.
P.T.—.156 in. max.	.093 in. max.
O.T.—.010 in. min.	.005 in. min.
D.T.—.070 to .130 in.	.046 to .075 in.



DT-2RV212-A7

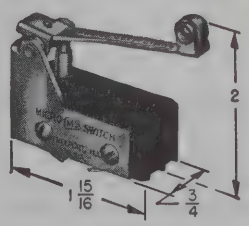
AUXILIARY ACTUATORS

Actuator types **"12MA"**, **"MC"** and **"AD"** are for use with pin plunger-actuated basic switches. Type **"JR"** actuator is for use with **"S"** plunger switches. Actuators and switches are sold as individual items and must be ordered separately. Two screws, (serving as assembly and mounting screws) nuts and lockwashers are furnished with each auxiliary actuator. Type **"Z"** pin plunger switches are on pages 17 and 18, type **"A"** switches on page 19 and the **"DT"** switch is shown above.

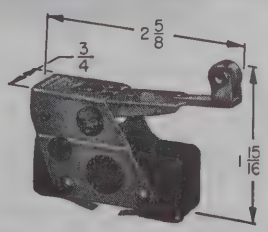
Catalog Listings **JR** and **AD-5721R** are designed for cam operation.

MC2711 and **MC7711** are for actuation by a straight line motion. **"MA"** actuators are for manual operation. **"MC"**, **"AD"** and **"JR"** actuators have two .140 inch diameter holes located on the same centers as the mounting holes of the switches on which they are used.

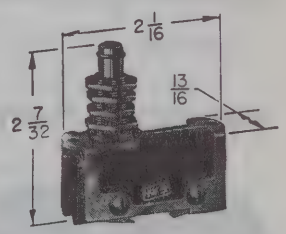
"12MA" actuators can be used with pin plunger basic switches (pages 17-21) and **"TB"** switches (page 26). They are available with either ½-inch or 1-inch buttons, in a choice of black, green or red. The adjustable mounting holes allow the switch to be positioned for best button travel.



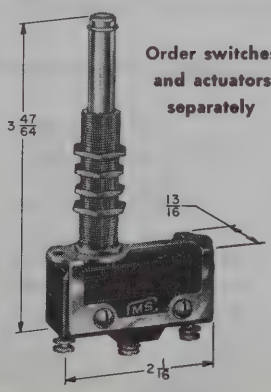
JR
(for type "Z" switches with "S" plunger only)



AD5721R—Type "Z" switches
ADA3721R—Type "A" switches
ADD3721R—DT-2R-A7 switch

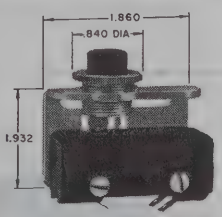


MC2711—Type "Z" switches
MCA2711—Type "A" switches
MCD2711—DT-2R-A7 switch

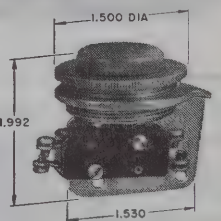


Order switches and actuators separately

MC7711—Type "Z" switches
MCA7711—Type "A" switches
MCD7711—DT-2R-A7 switch



12MA1

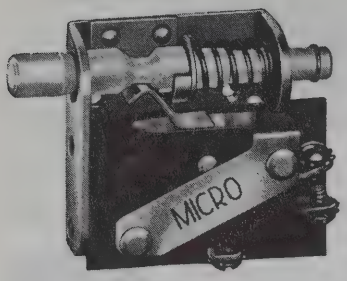


12MA5

	Button Color	Catalog Listings
½" diam. Button	black	12MA1
	red	12MA2
	green	12MA3
1" diam. Button	black	12MA5
	red	12MA6
	green	12MA7

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DOOR INTERLOCK SWITCHES



22AC1

Door interlock switch assemblies are for use as safety devices on hazardous electronic equipment, automatically cutting off power when service door is opened. This enables personnel to test or repair equipment in complete safety. Catalog Listings **22AC1, 23AC1** and **24AC1** have actuating rods of high-strength thermoplastic which insures longer trouble-free life. For temperatures above +158° F, specify **2AC1, 3AC1** or **4AC1,** respectively, which have steel actuating rods.

Catalog Listings **22AC1** and **23AC1** have single-pole double throw **"V3"** basic switches and differ only in the size and shape of their mounting brackets.

Catalog Listing **24AC1** has two **"V3"** switches and is a double-pole double-throw assembly for controlling two circuits simultaneously.

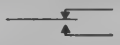
Underwriters' Laboratories Listing for "V3" Switches

"V3" switches are UL listed for 15 amps. 125 or 250 vac; ½ amp. 125 vdc; ¼ amp. 250 vdc.

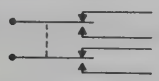
Catalog Listing **1AC2** has a single-pole double-throw basic switch. It is UL rated for 15 amps. 125, 250 or 460 vac; ½ amp. 125 vdc; ¼ amp. 250 vdc.

Catalog Listing **17AC1-T** has a subminiature single-pole double-throw basic switch. The UL rating is 5 amps. 125 or 250 vac.

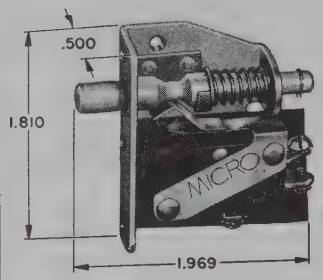
Contact Arrangements



Single-pole double-throw



Double-pole double-throw

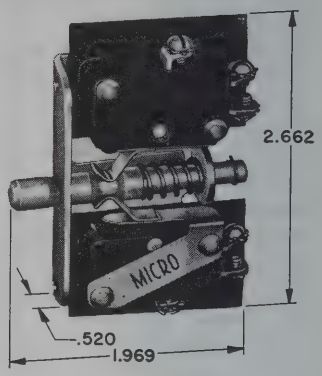


23AC1

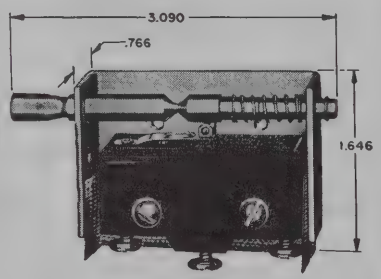
CHARACTERISTICS

22AC1, 23AC1, 24AC1

T.T.—.250 in. (approx.) push
.187 in. (approx.) pull



24AC1



1AC2

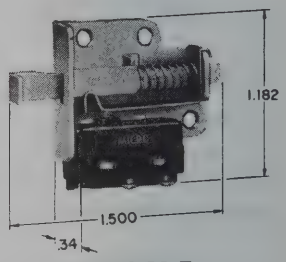
CHARACTERISTICS

1AC2

O.F.—3½ lb. max.
T.T.—.312 in. (approx.) each direction

17AC1-T

T.T.—.156 in. (approx) each direction
W.T.—.32 oz. (approx.)



17AC1-T

PENDANT SWITCHES



"AH" Series switches are available in both momentary and maintained contact versions. The switching element is enclosed in a durable phenolic case. The case is opened for wiring by removing two recessed screws. All switches are listed for 10 amps. 125 or 250 vac; "L"; ¾ hp 115 vac; 1½ hp 230 vac. ("L" denotes suitability for controlling tungsten filament lamp loads on a-c circuits.)

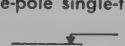
Catalog Listing **1AH2** is single-pole normally-open, while **1AH3** and **1AH4** are normally-closed and double-throw, respectively. All three have momentary contact.

Catalog Listing **2AH4** is double-throw. The contact is maintained, and the circuit is broken only when the reset button is actuated.

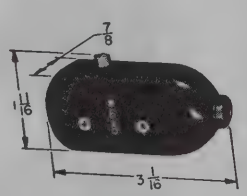
Contact Arrangements



Single-pole single-throw



Single-pole double-throw



1AH2
1AH3
1AH4

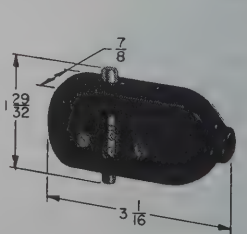
CHARACTERISTICS

1AH2 & 1AH3

O.F.—14 to 22 oz.
P.T.—.050 in. max.

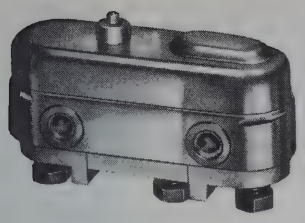
Basic Replacement

YA-2CB713-A2	WA-2CB713-A2
1AH4	**2AH4**
O.F.—14 to 22 oz.	6 to 14 oz.
P.T.—.050 in. max.	.025 in. max.
Reset O.F.	6 to 14 oz.
Basic Replacement	**Not Replaceable**
BA-2CB713-A2	



2AH4

HIGH TEMPERATURE SWITCHES

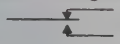


MICRO SWITCH high temperature switches perform with precision exactness in a temperature range of −321° to +1000° F. Originally designed for use in jet aircraft applications, on or near the afterburner, these switches are finding many uses in commercial and industrial applications that require high temperature components. To insure dependable performance, only laboratory tested heat resistant materials are used in the manufacturing of these switches. The switching element is mounted on a ceramic terminal block and protected with a corrosion resistant monel enclosure. The actuator, terminal screws and nuts are of stainless steel.

They can be mounted through panels up to .25 inch in thickness.

Operating life of a high temperature switch will vary with the temperature in which it is used and the current which it carries. Tests at 700° F. show life in excess of 25,000 operations at 5 amps. (resistive) 28 vdc. At 1000° F., **"HT"** switches have surpassed 9,000 operations while carrying a resistive load of 2 amps. on 28 vdc.

Contact Arrangement

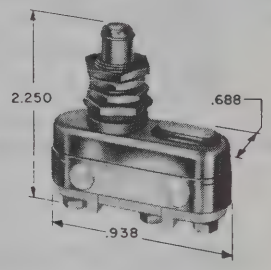


Single-pole double-throw

CHARACTERISTICS

1HT1

O.F.—10-20 oz.
P.T.—.065 in. max.
D.T.—.010 in. min.
O.T.—.188 in. max.

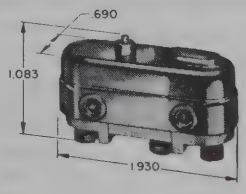


1HT1

CHARACTERISTICS

2HT1

O.F.—10-20 oz.
P.T.—.050 in. max.
O.T.—.010 in. min.
D.T.—.010 in. min.

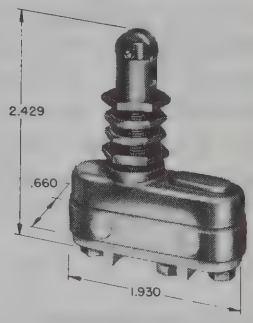


2HT1

CHARACTERISTICS

3HT1

O.F.—10-20 oz.
P.T.—.096 in. max.
O.T.—.125 in. min.
D.T.—.010 in. max.



3HT1

INDUSTRIAL PUSHBUTTON SWITCHES



Type **"PH"** pushbutton hand switches are designed for use on punch presses and similar types of hand operated power equipment. Rugged and oil-proof, these switches have a two-circuit double-break contact arrangement. Catalog Listing **2PH1** has a black plastic button, **2PH2**—red, **2PH3**—green and **2PH4**—yellow.

Sealing of this switch is achieved by a heavy neoprene gasket between the base of the switch and the mounting surface. A seal boot between the button and plunger mechanism seals the switching element from the top. When properly installed in a cavity or outlet box, a completely sealed unit is formed.

The **2PH1** is designed to fit into conventional type **"FS"** and **"FD"** electrical boxes, mounted with four No. 6-32 binder head screws. Mounting dimensions of the electrical box should be checked to make certain that they correspond to the mounting dimensions of the switch.

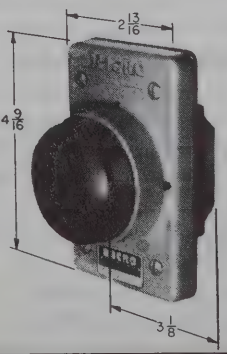
PILOT DUTY RATING

Volts ac;	Amperes (Normal)	Amperes (Inrush)
125	6	60
250	3	30
480	1.5	15
600	1.2	12

Contact Arrangement



Two-circuit double-break



2PH1
2PH2
2PH3
2PH4

STANDARD SUBMINIATURE SWITCHES

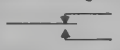


1SM1

"SM" Series subminiature switches combine the features of small size and light weight with high electrical capacity, precision operation and long life. Assembled into auxiliary actuators, these switches meet the need for precision switches in applications where space limitation is a critical factor in switch selection. There are two .088-inch mounting holes located on .375-inch centers. One of the holes is elongated to .098 inch for more ease in locating the switch on mounting screws.

They are listed by Underwriters' Laboratories at: 5 amps. 125 or 250 vac. 30 vdc: inductive, 3 amps. at sea level and 2.5 amps. at 50,000 feet; resistive, 5 amps. at sea level and 50,000 feet; maximum inrush of 24 amps.

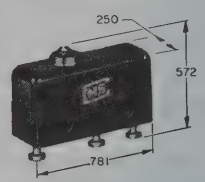
Contact Arrangement



Single-pole double-throw

CHARACTERISTICS
1SM1-T

O.F.—3 to 5 oz.
R.F.—1 oz. min.
P.T.—.030 in. max.
O.T.—.005 in. min.
Movement Differential—.004 in. max.

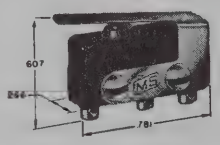


1SM1-T

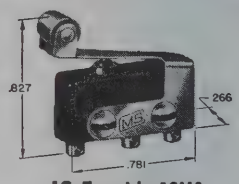
AUXILIARY ACTUATORS FOR "SM"

Catalog Listing **JS-2** is for use with slow-moving or low-angle cams or slides. **JS-5** has an oil impregnated bronze roller for rapid cam or slide operation. **JS-7** has a hump at the tip of the actuator for use with cams or slides moving at a moderate speed.

Auxiliary actuators are furnished unassembled and must be ordered separately.



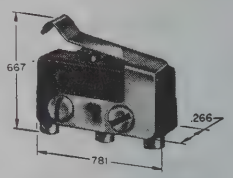
JS-2 with 1SM1



JS-5 with 1SM1

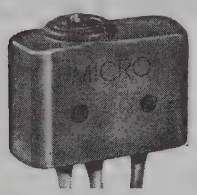
CHARACTERISTICS

1SM1 with JS-2 & JS-5	1SM1 with JS-7
O.F.—10 oz. max.	10 oz. max.
R.F.—2 oz. min.	2 oz. min.
P.T.—.078 in. approx.	.093 in. max.
O.T.—.016 in. min.	.010 in. min.
D.T.—.031 in. max.	.015 in. max.



JS-7 with 1SM1

SEALED SUBMINIATURE SWITCHES

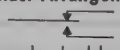


"SE" Series subminiature switches are the environment-free versions of the **"SM"** Basic Switch. The switching unit is sealed with an elastomer plunger seal which is bonded to the plunger and the metal housing, and embedded in an epoxy casting resin within the housing. The exterior of the housing is corrosion-resistant-ant treated aluminum. These switches are designed and built to give trouble free operation in a temperature range of −65° F. to +212° F.

Catalog Listing **1SE1** is single-pole double-throw. Single-throw versions are available normally closed **(1SE2)** and normally open **(1SE3)**.

Mounting facilities are same as **"SM"** series. **"SE"** series switches are listed at: 5 amps. 125 or 250 vac; 30 vdc: inductive, 3 amps. at sea level, 2.5 amps. at 50,000 feet; resistive, 4 amps; maximum inrush 24 amps.

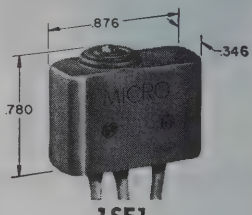
Contact Arrangement



Single-pole double-throw

CHARACTERISTICS

1SE1	1SE1 with JE-1 or JE-5
O.F.—5-17 oz.	O.F.—12 oz. max.
R.F.—4 oz. min.	R.F.—2 oz. min.
P.T.—.050 in. max.	O.T.—.015 in. min.
O.T.—.003 in. min.	D.T.—.025 in. max.
D.T.—.004 in. max.	



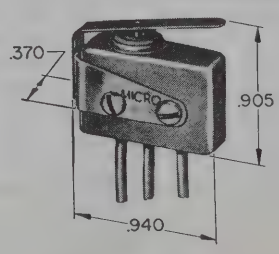
1SE1

AUXILIARY ACTUATORS FOR "SE"

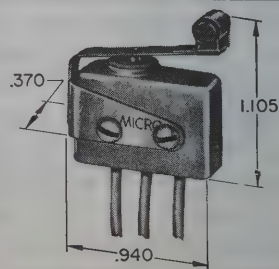
Auxiliary actuators are furnished unassembled and must be ordered separately. Mounting screws, which also serve as assembly screws, nuts and lockwashers are included with each actuator.

JE-1 is for use with slow moving and low angle cams or slides.

JE-5 has an oil-impregnated bronze roller for rapid cam or slide operation.



JE-1 with 1SE1



JE-5 with 1SE1

MIS-23

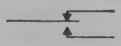
"1SX" SUBMINIATURE SWITCHES



Catalog Listing **1SX1-T** is the smallest single-pole double-throw snap-action switch available. Where switch reliability, space-saving and weight-saving are essential, this switch sets new standards of compactness. This completely new concept results from a long period of engineering development and laboratory testing, not just a "shrinkage" of an existing design. Catalog Listing **1SX1-T** features a case cover and plunger made of high strength plastic, contacts of fine silver and a beryllium copper spring.

Catalog Listing **1SX1-T** is listed by Underwriters' Laboratories at 5 amps. 125 or 250 vac. 28 vdc: 7 amps. resistive; 4 amps. inductive (sea level); 2.5 amps. inductive (50,000 feet); 4 amps. motor load; 2.5 amps. lamp load: 24 amps. maximum inrush.

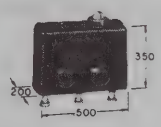
Contact Arrangement



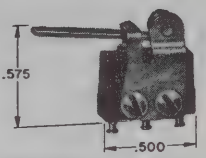
Single-pole double-throw

CHARACTERISTICS

O.F.—5 oz. max.
R.F.—1 oz. min.
P.T.—.020 in. max.
O.T.—.004 in. min.
D.T.—.005 in. max.
Weight—1/28 oz.



1SX1-T



JX-20 (shown)
JX-25 (with Roller)

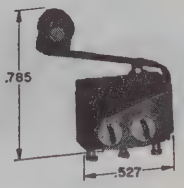
Auxiliary Actuators for 1SX1-T

CHARACTERISTICS WITH 1SX1-T

	JX-20 and JX-25	JX-41 and JX-51	JX-45 and JX-40
O.F.	1 oz. approx.	6 oz. max.	7 oz. max.
R.F.	4 grams min.	2 oz. min.	2 oz. min.
P.T.	———	.110 in. max.	.225 in. max.
D.T.	.030 in. approx.	.025 in. max.	.025 in. max.
O.T.	.030 in. approx.	.015 in. min.	.015 in. min.



JX-41 (shown)
JX-51 (with Roller)



JX-45 (shown)
JX-40 (without Roller)

"V3" SWITCHES



These ultra-small precision switches have the highest electrical capacity for their size of any switch available. Flat bosses around the mounting holes on both sides of the switch case facilitate rigid multiple mounting on common mounting screws or rods for multiple cam control of several electrical circuits. Catalog Listing **V3-1** conforms to Military Specification MIL-S-6743. This switch is also available equipped with .188 x .250 x .020 in. quick connect terminals **(V3-1-D8)**. **V3-101** is for applications requiring a low operating force.

ELECTRICAL RATING 30 vdc:	V3-1	V3-101
*Inductive at sea level	10 amps.	5 amps.
Inductive at 50,000 ft.	6 amps.	5 amps.
Resistive	10 amps.	5 amps.
Underwriters' Laboratories Listing		
125 vdc	.5 amp.	.5 amp.
250 vdc	.25 amp.	.25 amp.
125, 250 vac	15 amps.	10 amps.
125, 250 vac	½ hp	⅓ hp

*Inductive circuits in accordance with **AN3179.**

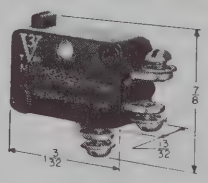
CHARACTERISTICS

V3-1	V3-101
O.F.—6 to 14 oz.	8 oz. max.
R.F.—4 oz. min.	2 oz. min.
P.T.—3/64 in. max.	.047 in. max.
D.T.—.006 to .016 in.	.006 to .016 in.
O.T.—1/32 in. min.	.031 in. min.

Contact Arrangement



Single-pole double-throw



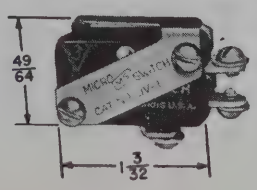
V3-1

V3-101

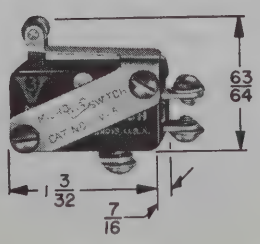
Auxiliary Actuators for "V3"

CHARACTERISTICS

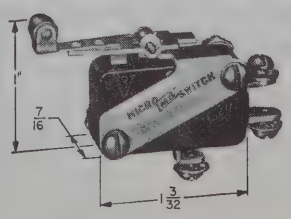
JV-1 & JV-5 with V3-1	JV-20 with V3-1
O.F.—15 oz. max.	5 oz. max.
R.F.—4 oz. min.	1 oz. min.
P.T.—1/16 in. max.	3/16 in. max.
O.T.—1/32 in. min.	1/16 in. min.
D.T.—.006 to .016 in.	5/64 in. max.



JV-1 (with V3-1)

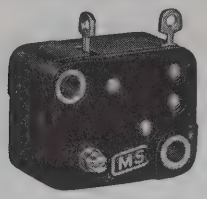


JV-5 (with V3-1)



JV-20 (with V3-1)

LOW TORQUE "V4" SWITCHES

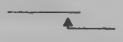


V4-12

MICRO SWITCH **"V4"** series of low torque, snap-action switches have rotary type actuation. Used in coin operated vending machines, light weight counting applications and thread detectors, these switches have a 4-gram-inch operating torque. The **"V4"** series of switches are delicate, precision devices and must be handled accordingly. These switches are built as ruggedly as possible, consistent with the sensitivity and delicate adjustment required. Actuator levers are not furnished with **"V4"** switches.

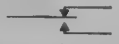
They are available in normally-open **(V4-12)** and double-throw **(V4-14)** circuit designs. These switches are listed by Underwriters' Laboratories at 5 amps. 125 or 250 vac. Inrush current values should not exceed this rating.

V4-12



Single-pole single-throw normally open

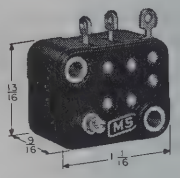
V4-14



Single-pole double-throw

CHARACTERISTICS
V4-12 & V4-14

Operating Torque—4 gram in. max.
Release Torque—.5 gram in. min.
P.T.—20° max.
O.T.—20° max.
Contact Separation—.008 in. min.
Total Travel—38° min.



V4-14

MULTI-CIRCUIT BASIC SWITCHES



1TB1-1

2-CIRCUIT

The **"1TB1"** series consists of small two-circuit basic switches.

A knife edge provided on the center members of the snap-action spring pivots in "V" shaped grooves in the actuator. This action insures definite snap-action, accurate repeatability and reduces the possibility of "dead break".

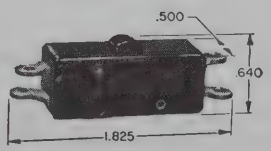
A single-pole double-throw contact arrangement may be obtained by tying together the normally-open and normally-closed terminal on one end of the switch, and using this connection as the common terminal.

Undewriters' Laboratories list the **1TB1-1** for 10 amps. 125 or 250 vac; ½ hp, 125 vac. Catalog Listings **1TB1-2** and **1TB1-3** are rated for 10 amps. 115 or 230 vac; 10 amps. 30 vdc.

Contact Arrangement



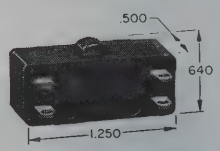
Two-circuit double-break



1TB1-2

CHARACTERISTICS
1TB1—1, 2, 3

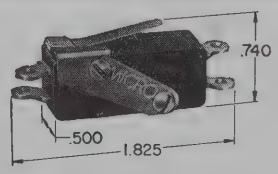
O.F.—7 to 13 oz. approx.
R.F.—4 oz. min.
D.T.—.015 to .025 in.
O.T.—.010 in. min.



1TB1-3

AUXILIARY ACTUATORS

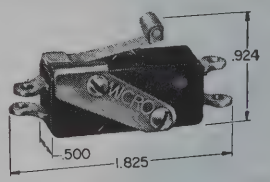
Catalog Listing **JT-1** is for use with slow-moving and low-angle cams or slides. **JT-5** has an oil-impregnated bronze roller for rapid cam or slide operation.



JT-1
(Assembled to 1TB1-2 switch)

CHARACTERISTICS
1TB1-1 with JT-1 & JT-5

O.F.—16 oz. max.
R.F.—2 oz. min.
P.T.—.140 in. max.
O.T.—.025 in. min.
D.T.—.062 in. max.



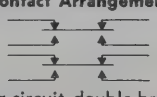
JT-5
(Assembled to 1TB1-2 switch)

4-CIRCUIT

Catalog Listing **41TB5-3** will simultaneously control four isolated circuits. Two snap-action springs are operated with each actuation of the plunger, providing quick make and break of the contacts. Both normally-open and normally-closed contacts must be of the same polarity.

The switch is rated at:
10 amps. 115-230 vac; 10 amps. 30 vdc.

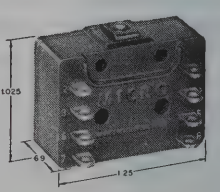
Contact Arrangement



Four-circuit double-break

CHARACTERISTICS

O.F.—20-36 oz.
R.F.—8 oz. min.
P.T.—.070 in. max.
O.T.—.010 in. min.
D.T.—.025 to .045 in.



41TB5-3

MICRO SWITCH Proximity Switches

This index is a quick reference to the components necessary for any proximity switch system. Complete specifications of the systems are included in the data sheets and catalog noted for each.

ALL METALS SENSITIVE TYPE

Detects All Electroconductive Metals:

Steel	Aluminum	Brass	Iron
Zinc	Nickel	Mercury	Platinum
Copper	Gold	Titanium	Magnesium

IMMEDIATE OPERATION SYSTEMS
(Data Sheet 213)

For System With	Order Following Components			
	Sensor*	Amplifier†	Relay	Socket
½" Sensitivity				
Integral Relay	205FS1	20FL1 or 60FL1	....	....
Mercury Wetted Relay	205FS1	40FL1	3FD2	1FH1
Heavy Duty Relay	205FS1	40FL1	4FD1	....
¾" Sensitivity				
Integral Relay	6FS1	20FL1 or 60FL1		
Mercury Wetted Relay	6FS1	40FL1	3FD2	1FH1
Heavy Duty Relay	6FS1	40FL1	4FD1	....
1¾" Sensitivity				
Integral Relay	16FS1	20FL1 or 60FL1	....	....
Mercury Wetted Relay	16FS1	40FL1	3FD2	1FH1
Heavy Duty Relay	16FS1	40FL1	4FD1	....

NOTE: 60FL1 is identical to 20FL1 except 60FL1 has pilot lamp, fine adjustment and larger chassis.

TWO SENSOR INPUT SYSTEMS
(Data Sheet 239)

For System With	Order Following Components	
	Sensor (2)*	Amplifier †
"AND" Logic		
½" Sensitivity	205FS1	67FL1
¾" Sensitivity	6FS1	67FL1
1¾" Sensitivity	16FS1	67FL1
"OR" Logic		
½" Sensitivity	205FS1	68FL1
¾" Sensitivity	6FS1	68FL1
1¾" Sensitivity	16FS1	68FL1

TIME DELAY SYSTEMS
(Data Sheet 220)

For System With	Order Following Components		
	Sensor *	Amplifier †	
		.10-6 sec. Delay	.45-30 sec. Delay
"On" Delay			
½" Sensitivity	205FS1	61FT6	61FT30
¾" Sensitivity	6FS1	61FT6	61FT30
1¾" Sensitivity	16FS1	61FT6	61FT30
"Off" Delay			
½" Sensitivity	205FS1	62FT6	.....
¾" Sensitivity	6FS1	62FT6	.....
1¾" Sensitivity	16FS1	62FT6	.....
"On/Off" Delay			
½" Sensitivity	205FS1	63FT6	63FT30
¾" Sensitivity	6FS1	63FT6	63FT30
1¾" Sensitivity	16FS1	63FT6	63FT30

*Normally furnished with 6 ft. leads. Also available with 25 ft. and 50 ft. leads.
†120 v. AC, 60 cps.

HIGH SPEED COUNTER SYSTEMS
(Data Sheet 223)

For System With	Order Following Components	
	Sensor*	Amplifier †
½" Sensitivity (7/16 for 2 Sensors)	205FS1	165FL1 ♦ (For Cans) or 165FL2 ♦ (General Purpose)
¾" Sensitivity (1 1/16 for 2 Sensors)	6FS1	
1¾" Sensitivity (1 15/16" for 2 Sensors)	16FS1	

♦ Includes NEMA 1 cabinet

DOUBLE THICKNESS DETECTORS
(Data Sheets 210, 227)

Two-Sensor System: Detects .0045" to .015" tin plate, .0045" to .020" aluminum. **Single Sensor System:** Detects .005" to .015" tin plate or aluminum.

For	Order Following Components	
	Sensor	Amplifier with Integral Relay
Two-Sensor System	101FS1(Two)	103FL1 in NEMA 12-JIC
Single Sensor System	201FS1	166FL1 cabinet.

FERROMAGNETIC METALS SENSITIVE TYPE

Detects Ferromagnetic Metals:
Iron, Nickel, Cobalt and their alloys.

IMMEDIATE OPERATION SYSTEMS
(Catalog 85)

For System With	Order Following Components			
	Sensor*	Amplifier†	Relay	Socket
½" Sensitivity				
Integral Relay	4FB1	20FC1	....	....
Mercury Wetted Relay	4FB1	40FC1	3FD1	1FH1
1" Sensitivity				
Encl. Mechanical Relay	7FB42	42FC1	2FD1	1FH1
Mercury Wetted Relay	7FB42	42FC1	3FD2	1FH1
Heavy Duty Relay	7FB42	42FC1	4FD1	....
1½" Sensitivity				
Encl. Mechanical Relay	11FB42	42FC1	2FD1	1FH1
Mercury Wetted Relay	11FB42	42FC1	3FD2	1FH1
Heavy Duty Relay	11FB42	42FC1	4FD1	....

TWO SENSOR INPUT SYSTEMS
(Catalog 85)

For System With	Order Following Components	
	Sensor(2)*	Amplifier
"AND" Logic		
1"Sensitivity	7FB42	50FC1
1½" Sensitivity	11FB42	50FC1

Order any combination of two sensors.

TIME DELAY SYSTEMS
(Catalog 85)

For System With	Order Following Components			
	Sensor*	Amplifier †		
		.1-4 sec. Delay	.3-15 Sec. Delay	.45-30 sec. Delay
"On" Delay				
½" Sensitivity	4FB1	21FK4	21FK15	21FK30
1" Sensitivity	7FB42	.....	.....	51FK30
1½" Sensitivity	11FB42	.....	.....	51FK30
"Off Delay				
½" Sensitivity	4FB1	22FK4	22FK15	22FK30
1" Sensitivity	7FB42	.....	.....	52FK30
1½" Sensitivity	11FB42	.....	.....	52FK30

(Continued on next page)

MICRO SWITCH Proximity Switches

Ferromagnetic Metals Sensitive Systems (Cont'd)

MECHANICAL PROXIMITY SWITCH
(Data Sheet 212)

No amplifier is required for this system.

For System With	Order Following Components		
	Switch	Relay (Optional)	Socket
½" Sensitivity	4FR1	5FD1 (DPDT)	1FH1
¾" Sensitivity	6FR1	5FD1 (DPDT)	1FH1

STOPPED MOTION DETECTOR and TIMED PULSE OUTPUT SYSTEM
(Data Sheet 231)

For System With	Order Following Components	
	Sensor	Amplifier
1" Sensitivity	7FB42	64FC10
1½" Sensitivity	11FB42	64FC10

ACCESSORIES

RELAYS

Plug-in type except 4FD1 which is permanent mounted.
All ratings listed are non-inductive.

Cat. List	Type	Action	Contact Rating	Response Rate Operation/Min.
2FD1	Enclosed Mech.	DPDT	5 amps. 120v. AC	600 to 800
3FD1	Mercury Wetted	SPDT	250 VA max.	Up to 1200
3FD2	Mercury Wetted	SPDT	250 VA max.	Up to 1200
4FD1	Heavy Duty	DPDT	25 amps-1 hp 115/230 v. AC	. . .

NOTE: Relay data is included in the System data sheets referenced and in Catalog 85.

CABINETS FOR AMPLIFIERS
(Data Sheet 221)

For Cabinet Type	Order Following Component
NEMA 1	50FH1
NEMA 12 (JIC)	
Approx. 4" deep	60FH1
Approx. 6" deep	61FH1 †

NOTE: Order auxiliary mounting plate FL-10014 when mounting 20 Series and 40 Series amplifiers into cabinet.

† For 20 Series and 42FC Type amplifiers only.

Fundamentals of Operation

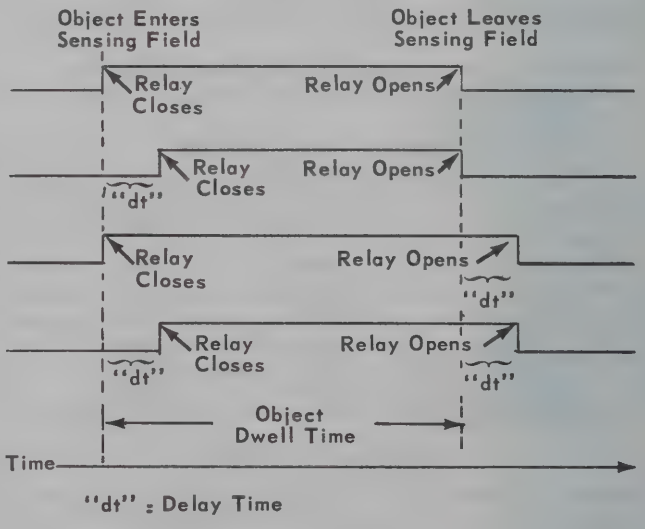
PROXIMITY SWITCHES are switching devices which are void of mechanical actuators; they respond merely to the proximity of metal. Basically, a proximity switch consists of a sensor, an amplifier and a relay. The sensor functions as the actuator and determines the system sensitivity. The amplifier is the control element which determines the operating character of the system. The relay generally switches the load.

Immediate Response: System operates instantaneously when metal enters detection range and releases immediately when metal leaves detection range.

ON Delay Response: Relay response is delayed when metal enters detection range, but release is immediate when metal leaves detection range.

OFF Delay Response: Operates immediately when metal enters detection range, but release is delayed after metal leaves detection range.

ON/OFF Delay Response: Independently delays both operation and release as described for the On Delay and Off Delay systems, above.



"dt" = Delay Time

Single Sensor Input: System uses only one sensor.

Two Sensor "AND" Input: Two sensors used with one amplifier. Metal objects must be within range of both sensors to operate the system. Removing metal from range of one sensor releases the system.

Two Sensor "OR" Input: Two sensors wired to one amplifier. A metal object within range of either sensor operates the system. System releases only when both sensors are void of an operating probe.

High Speed Counting

Can Counter: Counts up to 1,800 #211 and larger back-to-back round cans per minute.

General Purpose Counter: Counts up to 1,800 metal objects, other than round cans, per minute.

Double Thickness Detectors: Detect, without touching, moving double thicknesses of metal. Do not react to single thicknesses.

Stopped Motion Detector: Monitors consistent motion of metal object(s). Responds to slow-down or stoppage. Adjustable.

Timed Pulse Output: Produces an adjustable, predetermined output pulse when prompted by metal object.

MICRO SWITCH
A DIVISION OF HONEYWELL

MIS-27

PROXIMITY SWITCHES

TWO CATEGORIES OF PROXIMITY SWITCHES ARE AVAILABLE:

1. FERROMAGNETIC METALS SENSITIVE which "sees" through non-ferrous metals.
2. ALL METALS SENSITIVE which responds to ALL electro-conductive metals.

EACH OFFERS A VARIETY OF SENSITIVITIES, OPERATIONS AND ELECTRICAL CHARACTERISTICS.

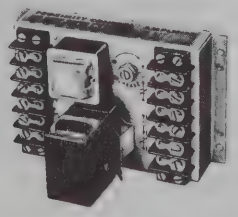
Ferromagnetic Metals Sensitive
Operation — Immediate, On delay, Off delay
Input — Single sensor, two sensor "OR" logic, two sensor "AND" logic
Sensitivity — ½-inch, 1 inch, 1½-inch

All Metals Sensitive
Operation — Immediate, On delay, Off delay, On/Off delay
Input — Single sensor, two sensor "OR" logic, two sensor "AND" logic
Sensitivity — ½-inch, ¾-inch, 2-inch

COMPLETE INFORMATION on the entire line of MICRO SWITCH Proximity Switches is contained in our Catalog 85 and its supplements. Contact a MICRO SWITCH Branch Office for your copy.

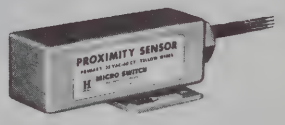
TYPICAL COMPONENTS

Ferromagnetic Switches



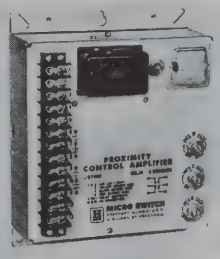
Immediate Operation Amplifier





Sensors

All-Metals Switches

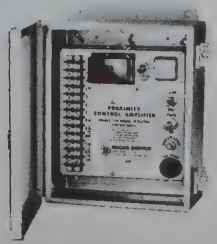


Time Delay Amplifier



Sensors

Other Devices



Double Thickness Detector



High Speed Counter

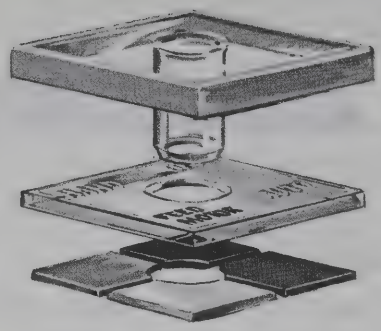


Dry Reed Contact Switch

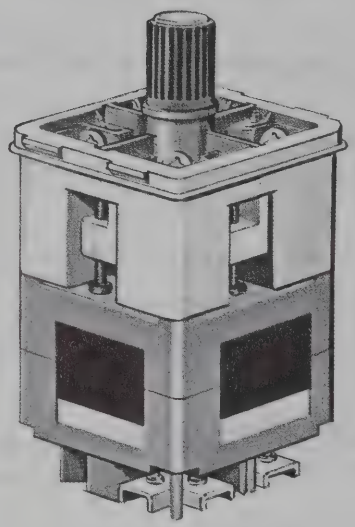
MIS-28 481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351

Protective Cover

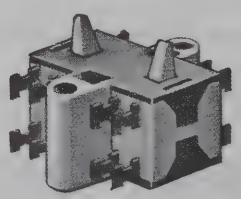
A wide selection of legend display and color coding. Up to 7 lines of lighted black or white legends. Choice of 6 colors.



110 vac or 220 vac or transformerless display units available.



Heavy Duty or Electronic Duty contact blocks. May be tandem mounted.



CMC

Coordinated Manual Controls for modern panels

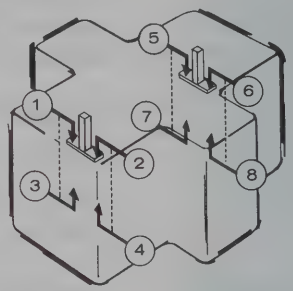
In addition to Indicator and Pushbutton units which have standard circuit capabilities, CMC offers Selector and Selector-Push units which widen the opportunity of combining up to *four* functions and *four* indicating lights in *one* space-saving oiltight unit. The unique combinations of one, two, three or four contact blocks, integral turn cams and push cams, and one, two, three or four contact block plungers provide the panel designer with both lighted status information and multifunction control in one 2-5/16 inch square oiltight unit.

CONTACT BLOCKS

CMC offers three basic types of double-break contact blocks:

1) **Heavy Duty**—butting contacts as shown.
2) **Electronic Duty**—sliding silver contacts.
3) **Electronic Duty**—sliding gold contacts.

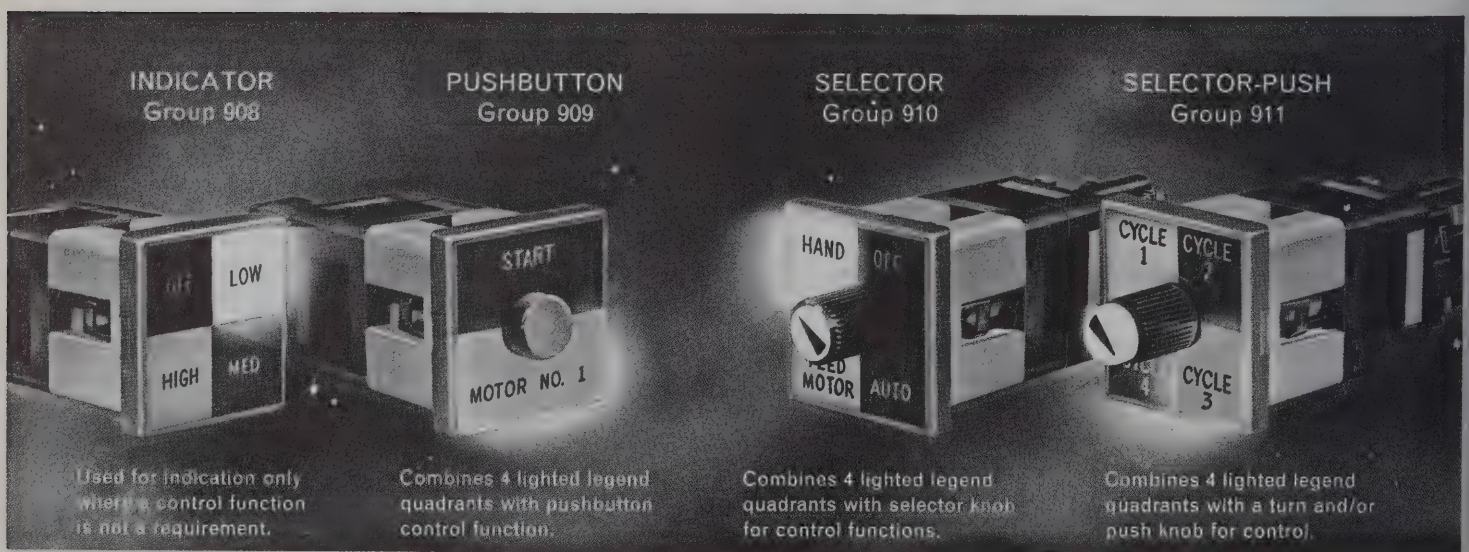
Although any combination up to four contact blocks can be tandem mounted, four heavy duty blocks will provide (8) N.C. and (8) N.O. circuits. Four electronic duty blocks will provide (16) N.C. and (16) N.O. circuits.



SCHEMATIC
HEAVY DUTY
CONTACT BLOCK

	1 Plunger	2 Plunger
Circuits	(1) N.O.—(1) N.C.	(2) N.O.—(2) N.C.
Catalog List.	900 CRA1	900 CCA1

To assist you, MICRO SWITCH maintains Branch Offices and Distributors in principal cities throughout the United States. Consult the yellow pages in your telephone directory for free technical assistance.



The C M C system of manual control and lighted display is comprised of an indicator unit and three operator-indicator units. Each C M C unit is designed to cover different functional requirements, and each has the following general characteristics:

(1) Distinctive and compatible panel appearance with legends placed on the display field to save space on the panel;

(2) Variety of lighted color coded display that is easily labeled;

(3) Unlimited industrial pilot and electronic control capabilities with these oil tight units.

Actuation—The three types of operator models are pushbutton, selector, and selector-push. The colored lighted display furnishes system or control status feedback, or conventional industrial control signals.

Color—Color snap-inserts in the back of the legend plate transmit the lighted signals. Four color snap-inserts may be selected from combinations of red, white, blue, green, yellow or amber.

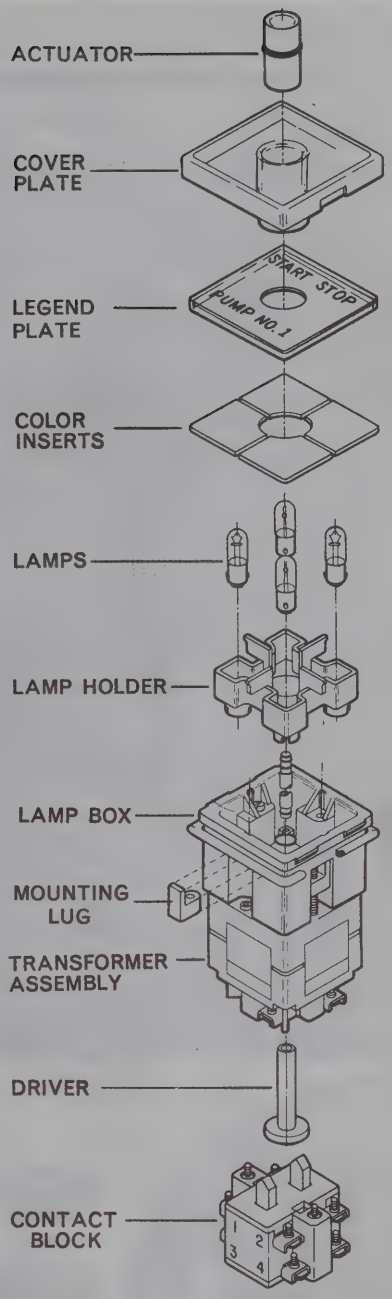
Illumination—The four lamps have separate transformers for flexibility of indication. Selection is emphasized by a lighted arrow in the knob. Transformerless units are also available.

Lamp Holder—Carries the four long-life signal lamps. No tools required for removal or insertion.

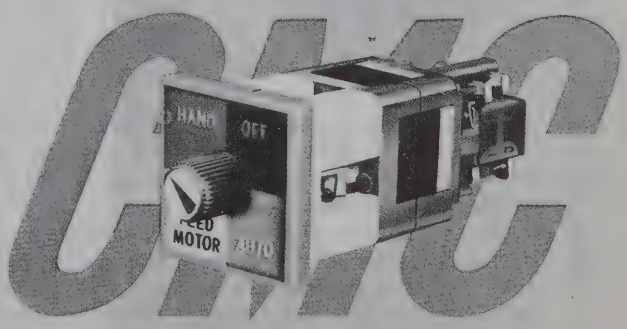
Legend—When it is desirable, up to seven lines of legend may be shown on the display. Numerous standard legends are offered in 13/64″ letter height. Blank and custom legends are also offered.

Mounting Lugs—C M C units are securely mounted with four mounting lugs engineered to enable front of panel mounting or removal.

Circuitry—Identically sized heavy duty and electronic duty contact blocks may be tandem mounted in any combination up to 4 blocks as shown on page 14. Numerous cams are available in the selector and selector-push units, providing many sequences in circuitry. 8 terminal units may be obtained for circuitry requirements of more than one voltage.



TYPICAL OPERATOR ASSEMBLY



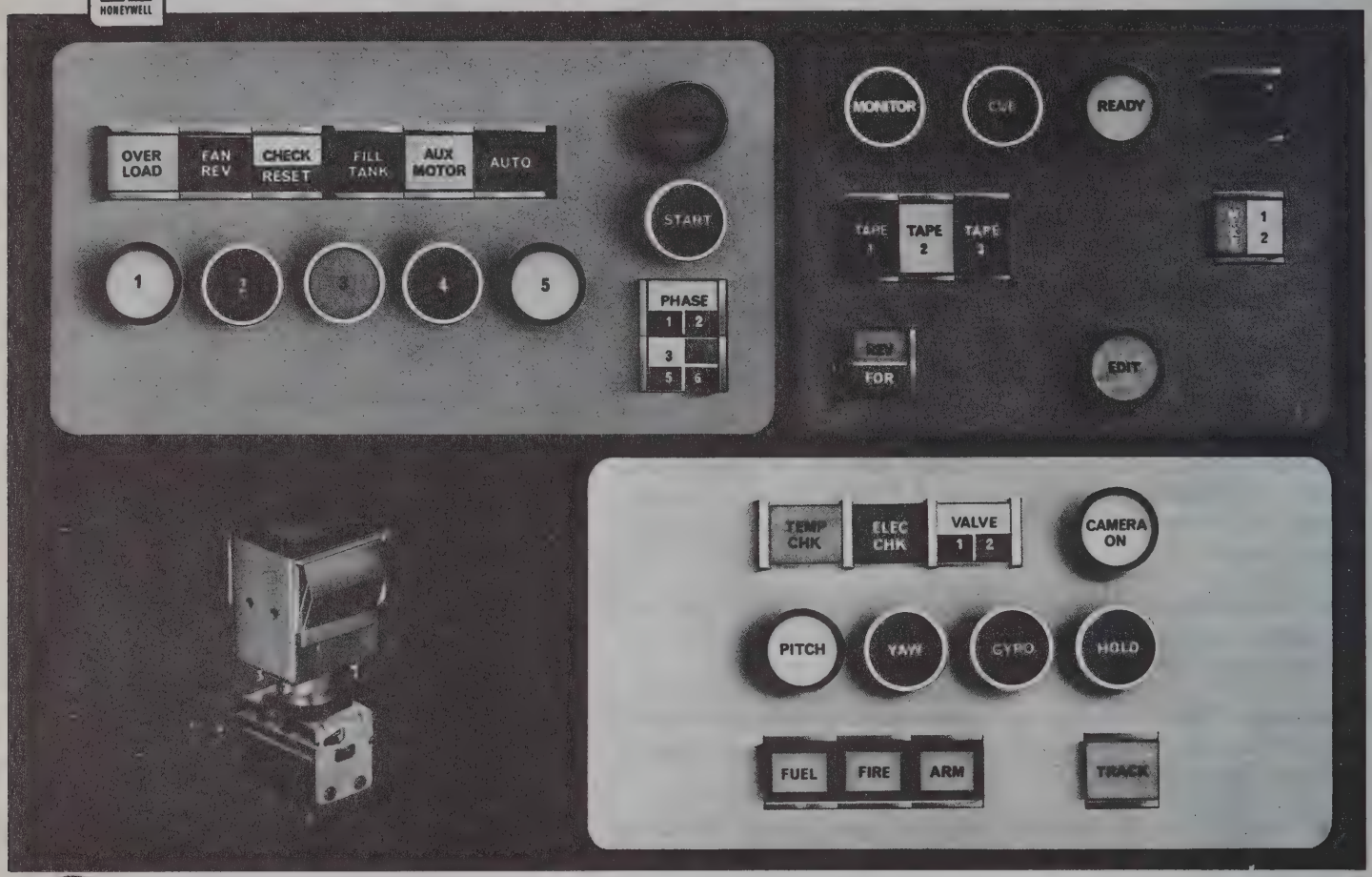
Coordinated Manual Controls

Patents Pending

MIS-30

1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625

MICRO SWITCH Precision Switches





Modular, snap-on pushbutton units for Custom Control and Display

Series 2 Lighted Pushbuttons introduce custom answers to a wide variety of design problems. A broad selection of components and modular, snap-on assemblies provide unlimited possibilities.

Choice of round or rectangular displays for shape coding; four separate lamps in each unit allowing four-color display; variety of screen and hardware colors; 7, 15 or 20 amp. switch units, in sub-miniature or hermetically sealed assemblies; circuitry and electrical ratings you require; momentary or maintained switching action, with or without remote control. For more information, call our Branch Office or a MICRO SWITCH Distributor (see Yellow Pages), or write for Catalog 67.

MICRO SWITCH

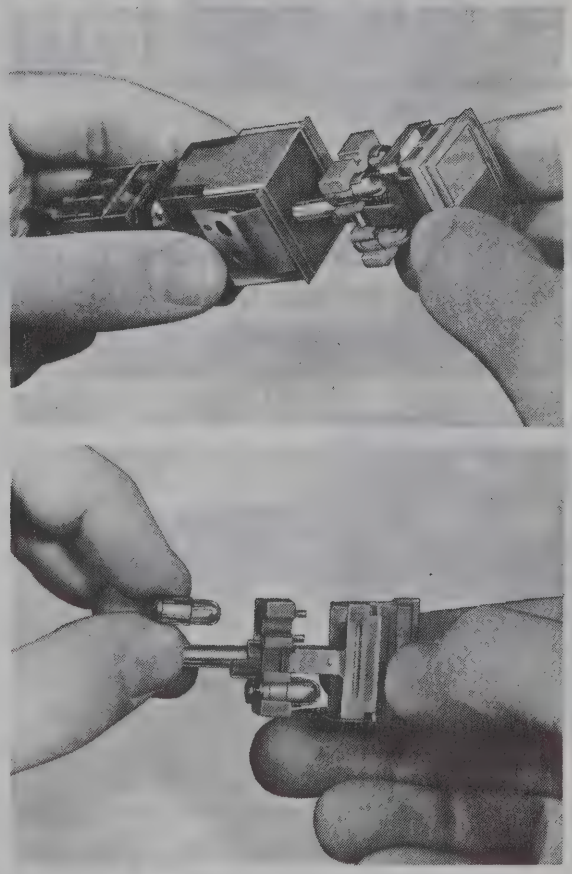
A DIVISION OF HONEYWELL

MIS-31

MICRO SWITCH Precision Switches

"2C200" LIGHTED PUSHBUTTON SWITCHES

- **Can be Relamped Without Tools**
- **Ability to Suppress RFI**
- **Panel Seal Accessory**
- **Matching Indicators**

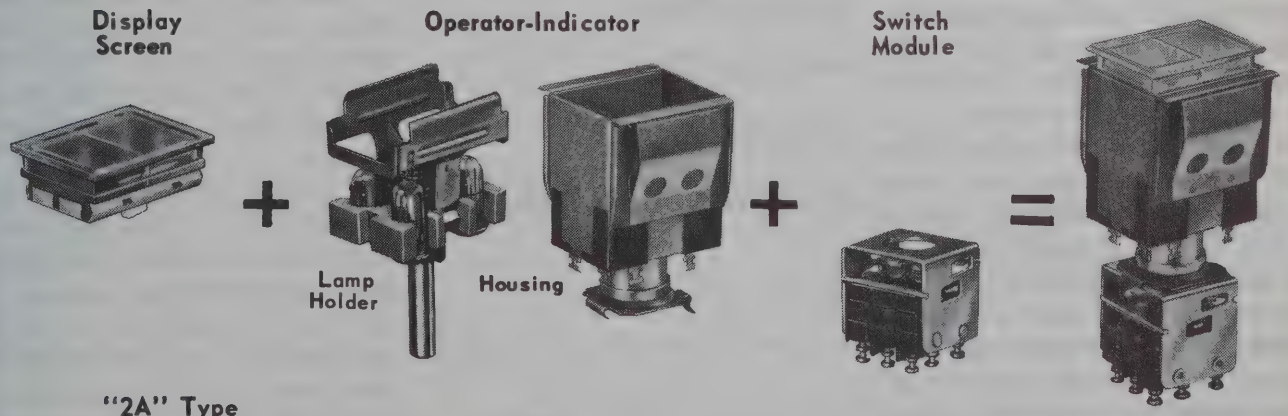


These new lighted pushbutton switches and matching indicators are dimensionally interchangeable with the popular Series 2 design which introduced the modular concept of combined pushbutton control and lighted display. The "2C200" can be relamped from front of panel without tools. A new panel seal and radio frequency interference suppression screens are offered as optional accessories. All three-piece display screens now have "slide-on" caps to facilitate labeling.

In addition to providing many new features, the "2C200" has retained all the time-proved assets of the Series 2 devices, such as: (1) Choice of flange or barrier style mounting schemes; (2) quick, easy attachment to panels; (3) separate terminals for up to four lamps; (4) provision for holding coils and pull-in coils; (5) wide choice of circuitry, switch terminal types, and power-handling capabilities.

RELAMP IN SECONDS. Lamp holder is removed by gripping pushbutton screen (top photo) to enable fast, easy replacement of lamps without tools (bottom photo).

EACH MODULE HAS A SEPARATE CATALOG LISTING



"2A" Type
Display screens are supplied in one-piece and three-piece (cap, legend insert, and base) designs. Any of the 65 different rectangular screens shown in Catalog 67 can be used.

"2C200" Type
This module consists of the housing and a holder for the four T-1¾ flange base lamps (not furnished) and optional color filters. Matching indicators ("2F200") are also available.

"2D" Type
All switch modules shown in Catalog 67 are compatible with the "2C200". They attach easily to spring clips on the housing.

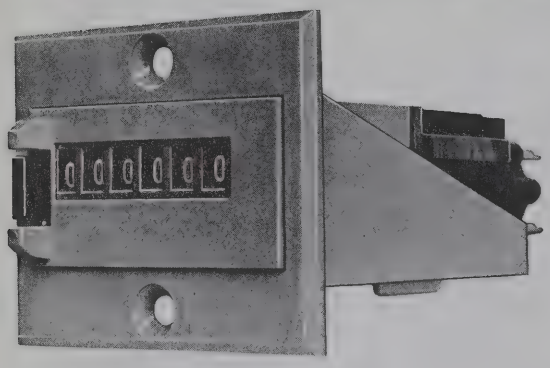
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ROWAN

high speed electromagnetic counters

CA 1 *totalizing*

CB 4 *predetermining*





Physically, the CA 1 counter consists of an electromagnet which operates a set of geared digit wheels by means of an armature and ratchet mechanism. When the coil of the electromagnet is energized, the armature and ratchet advance the units digit wheel by one-half step. When the coil is de-energized, the return spring advances the wheel a second half step, thus completing the registration of one count.

The count is transferred or "carried" to the next higher digit wheel by means of a conventional systems of lock teeth and transfer pinions. The resetting mechanism is of the instantaneous type, and is actuated by either a manual push button on the face of the counter, or by an optional electrical reset coil which can be attached to the back of the counter

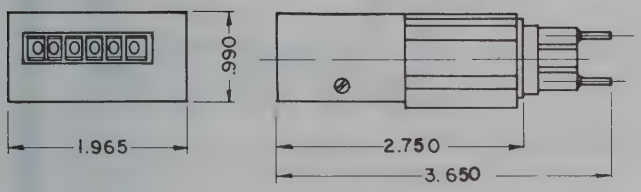
- *compact size*
- *versatility*
- *ease of service*
- *low power drain*
- *accuracy*
- *long life*
- *reliability*
- *high speed counting*

The CB 4 predetermining counter is the same unit as the CA 1, with the addition of a set of predetermining wheels that operate a single-pole, double-throw switch by means of a trip mechanism. Either the manual or electrical reset is actuated so that the preset cover can be raised which disengages the predetermining wheels. After setting wheels to any number desired, closing the preset cover re-engages the wheels.

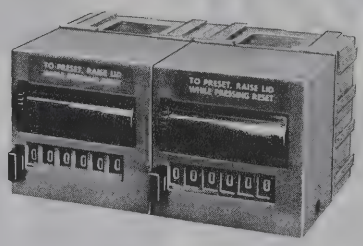
The counter operates on the adding principle and counts from zero up to the preset number, at which point the predetermining wheels read zero, and the switch trips. The CB 4 will continue to count pulses after the switch has been tripped. The switch is automatically restored to its untripped position when the counter is reset either manually or electrically.

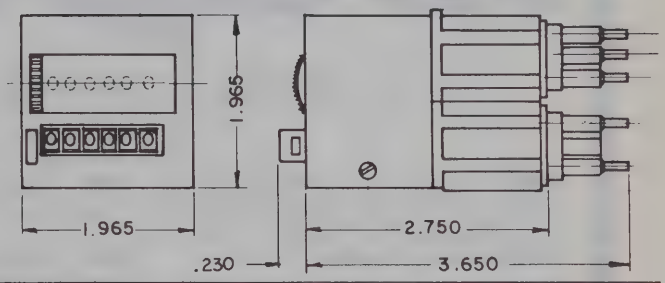
CA 1 *totalizing . . .*





CB 4 *predetermining . . .*





1. DC OR AC OPERATION

Units supplied for AC (CAR1 & CBR 4) have a built-in rectifier. Separate rectifiers are available.

2. NUMBER OF DIGITS

Regardless of number of digits specified (up to 6), both CA 1 and CB 4 outside counter dimensions remain the same.

3. RESET

Units may be ordered without reset, with manual push-button (and guard) reset, with electrical reset, and with electrical and manual reset.

4. MOUNTING

The CA 1 and CB 4 may be ordered with socket mounting, or socket and frame mounting. The CA 1 only may be ordered with a surface, panel mounting frame, a recessed panel mounting frame, or with a back/base mounting plate.

5. SPEED

The CA 1 for DC use has four ratings — 10, 25, 40 and 50 impulses per second; for AC use — 16 imp/sec. The CB 4 for DC use has ratings of 10 and 25 impulses per second; for AC use — 10 and 16.

6. ACCESSORIES

Accessories for both CA 1 and CB 4 are magnifying lenses, labelling frames, colored cases, colored digits, dummy units and sockets for building block design. The CA 1 only may be ordered as a "dozens" counter.

7. VOLTAGES

Both the CA 1 and CB 4 counters have eight standard DC voltages — 6, 12, 24, 48, 60, 110, 150 and 220, and seven standard AC voltages — 12, 24, 48, 60, 110, 150 and 220.

8. RESET DC

Both CA 1 and CB 4 have resets available in all eight standard voltages regardless of operating voltage of the counter.

9. RESET AC

Both CA 1 and CB 4 have resets available in all seven standard AC voltages. All resets for AC operation require external rectifiers. The built-in rectifiers for the counters may not be used for resets.

10. TRANSISTOR DRIVE AND PULSE SHAPER

An optional feature for both CA 1 and CB 4. This device provides a current amplifier to allow operation from low power switching devices, and also provides a controlled pulse to the counter regardless of input pulse length or waveform, to overcome such causes of counting error as contact bounce, relay chatter, etc.

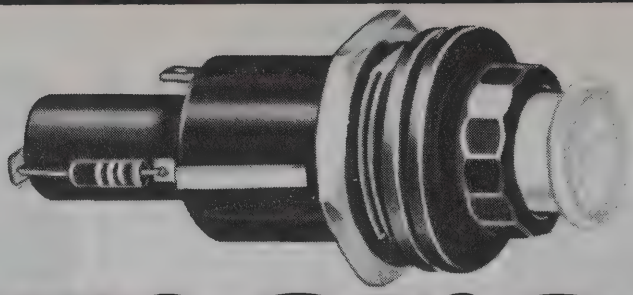
11. COMBINATION UNITS

Virtually any combination of CA 1 and CB 4 series counters may be supplied in vertical or horizontal blocks. Examples are: a predetermining counter with a totalizing counter, or a shift counter resettable by operator with a totalizing counter resettable only by supervisor.

THE ROWAN CONTROLLER COMPANY

ROWAN

1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625



new Supercon Switch

FUSED, ILLUMINATED, PUSHBUTTON

Patent Pending

- COMBINES FUNCTIONS OF A PUSH ON-PUSH OFF SWITCH, FUSEHOLDER AND PILOT LAMP IN A SELF-CONTAINED ASSEMBLY
- RATED AT 125 VOLTS A-C, 10 AMPERES
- GOLD-PLATED CURRENT-CARRYING PARTS; RUGGEDLY CONSTRUCTED FOR POSITIVE ACTUATIONS
- SAVES INSTALLATION TIME, REDUCES INVENTORY
- NEON OR INCANDESCENT LAMPS WITH RED OR WHITE TRANSLUCENT LENS
- USES STANDARD 3AG FUSES RENEWABLE FROM FRONT OF PANEL
- CONSERVES PANEL SPACE, SIMPLIFIES DESIGN
- ATTRACTIVE, FUNCTIONAL DESIGN ENHANCES PANEL APPEARANCE
- SINGLE-HOLE, SINGLE-NUT MOUNTING

SUPERCON Switches are compact, extremely versatile devices combining the three frequently allied functions of switches, fuseholders and pilot lamps. They are specially well-suited wherever panel space is limited but can be used anywhere to save installation time and cost. Inventories can be reduced because only one type of unit need be stocked instead of three. Their attractive and efficient design makes them excellent components for virtually any electrical or electronic panel application.

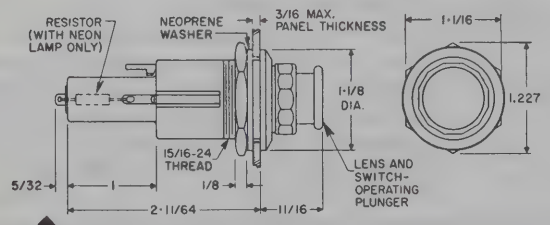
SUPERCON Switches are available in four types all rated 125 volts a-c, 10 amperes. They are supplied with either red or white translucent plastic pushbutton lens and with either 105-125 volt a-c, 0.8 milliampere neon lamps or 6 volt a-c, 0.20 ampere incandescent lamps. All plastic parts except the pushbutton lens are black and all current-carrying metal parts are gold-plated for long life under extreme environmental conditions.

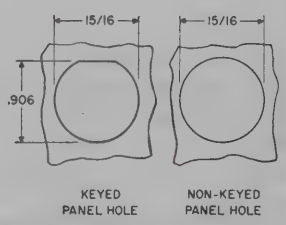
Switching sequence is push on and push off. Any standard quick or slow lag 3AG fuse up to 10 amperes can be used. SUPERCON Switches are supplied with pilot lamps but not with fuses.

All types can be mounted on 1⅜" centers in panels up to 3/16" thick. They can be securely single-nut mounted in any 15/16" diameter hole. The body has positive anti-twist flats for mounting in "D" type holes if desired.

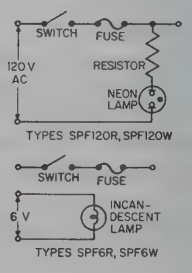
TYPE	LENS COLOR	MAXIMUM VOLTS A-C	MAXIMUM CURRENT (AMPS)	LAMP		
				TYPE	VOLTS A-C	MILLIAMPERES
SPF120W	WHITE	125	10	NEON	105-125	0.8
SPF120R	RED	125	10	NEON	105-125	0.8
SPF6W	WHITE	125	10	INCANDESCENT	6	200
SPF6R	RED	125	10	INCANDESCENT	6	200

OUTLINE





WIRING DIAGRAMS

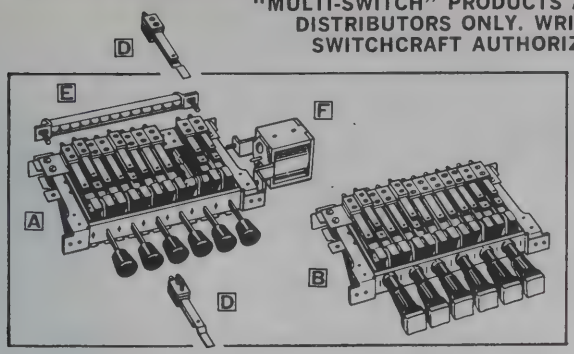


THE SUPERIOR ELECTRIC COMPANY

© U.C.P., Inc.

SWITCHCRAFT INC. "Multi-Switches" Patent Applied For

"MULTI-SWITCH" PRODUCTS ARE SOLD THROUGH FACTORY-TRAINED DISTRIBUTORS ONLY. WRITE FOR THE NAME OF YOUR LOCAL SWITCHCRAFT AUTHORIZED "MULTI-SWITCH" SPECIALIST.



New basic design simplicity provides a multiple station push button switch that's rugged, compact, versatile and extremely flexible in functions. **All switching components**—frame, stack switches, lamps and accessories **are changeable** to give you hundreds of circuit and function combinations. You can order a "Multi-Switch" with the function you now desire; and later change circuits and/or functions in the field by simple positioning adjustments of "stop plate", "latch bar spring" and/or interchanging switch stacks. **For a complete multiple station assembly, you must order the proper frame and the necessary stack switch for each button on the frame.** Optional accessories include lock-out bar and solenoid release. **Frames can be set up for: 1. Interlock; 2. Non-Lock; 3. All-Lock; 4. Interlock and Non-Lock combinations; 5. All-Lock and Non-Lock combinations.** Interlock action restores to normal any previously actuated buttons when actuating a button. Non-Lock is momentary action of each button. All-Lock is accumulative locking of all buttons with restoration of all buttons to normal when release button is depressed. **Specify switching function when ordering** the frames listed below.

SERIES 7000 NON-ILLUMINATED FRAMES

A Switch frames mount on panels up to ⅜" thick, with 3 5/16" depth behind panel. End brackets of frames have four No. 8/32 tapped holes for mounting. A round brown push-on button is furnished for each station; one extra red button included for use when switch requires a release. Center to center distance between buttons is ¾". Standard plunger is 1⅛" long, can be supplied up to 4¾" long on special order. Switch frames with buttons on ¾" centers are available in **Series 8000.** This Series has all other features of Series 7000. **Series 7000** "Multi-Switch" frames available from 1 to 37 stations. **Series 8000,** from 1 to 31 stations. Add **10%** to the below prices when ordering Series 8000. Only the most commonly used frames are listed here:

Part No.	No. of Stations	U.S.A. List Price	Part No.	No. of Stations	U.S.A. List Price
7100	1	$ 7.50	7700	7	$18.00
7200	2	8.50	7800	8	20.00
7300	3	9.75	7900	9	22.00
7400	4	12.00	71000	10	24.00
7500	5	14.00	71100	11	26.00
7600	6	16.00	71200	12	28.00

SERIES 21000 ILLUMINATED FRAMES

B Smiliar in swtiching functions and characteristics to non-illuminated "Multi-Switches," but features modern square buttons with front and side illumination, lamp diffusers that provide uniform lighting; knurled retaining collar for quick and easy front panel lamp replacement. A 6-volt or 28-volt lamp can be used. Buttons with white jewels and white diffusers are furnished for switching and release stations. Standard frames listed below provide **"L"** type lighting—pushbuttons light in "IN" position; prefix part number with **"M"** to have pushbuttons light in "OUT" position; or **"N"** to light in "IN" and "OUT" positions. To avoid "specials", order lighting stacks listed on this page to provide "M" and "N" lighting. Series 21000, buttons on ⅝" centers, available up to 37 stations; Series 22000, buttons on ¾" centers, available up to 31 stations. Add 10% to below prices when ordering Series 22000. Only the most commonly used frames are listed below. All frames are supplied less lamps and stack switches.

Part No.	No. of Stations	U.S.A. List Price	Part No.	No. of Stations	U.S.A. List Price
21100	1	$11.50	21700	7	$40.00
21200	2	14.50	21800	8	45.00
21300	3	19.50	21900	9	50.00
21400	4	24.50	211000	10	55.00
21500	5	29.50	211100	11	60.00
21600	6	34.50	211200	12	65.00

SOLENOID RELEASE—"J" SERIES

F A simple solenoid assembly that can be added on the end of standard frames by two screws to provide automatic remote release of depressed stations. For use in 115 volt, A.C., 60 cycle circuits. Other voltages available on special order. **J-3** designed for use with up to 12 stations. Complete with mounting bracket and screws.

Part No.	Function Used on	U.S.A. List Price	Part No.	Function Used on	U.S.A. List Price
J-1	Interlock	$8.50	J-3	All-Lock	$9.50

ESCUTCHEON PLATES

Attractive escutcheon plates for "Multi-Switches", non-illuminated Series 7000. Black satin finish over a 1/32" thick aluminum plate; back side has pressure sensitive adhesive. Listed below are standard lengths; can be made available from 1 to 37 stations.

For Series 7000 Part No.	Stations	U.S.A. List Price
ES-04	4	$0.90
ES-06	6	1.10
ES-08	8	1.30
ES-12	12	1.75
ES-18	18	2.50

STACK SWITCHES

D Interchangeable stack switches for "Multi-Switch" frames. Two types listed below: **Series 70,** silver contacts for power circuits; **Series 70P,** welded cross bar palladium contacts for low level circuits. Both rated at 3 amps, 300 Watts, max., A.C. non-inductive load. If more than one circuit will be required specify two (or more) stacks in order to balance the load on the plunger. Two mounting screws and one pressure plate furnished with each switch. In addition to Series 70 and 70P Stack Switches, **four other Series are available,** as standard, from stock.

SERIES 70—SILVER CONTACTS

Part No.	Contacts	U.S.A. List Price	Part No.	Contacts	U.S.A. List Price
71	1 "A"	$0.50	74	2 "A"	$0.80
72	1 "B"	.50	75	2 "B"	.80
73	1 "C"	.60	76	2 "C"	.95
73D	1 "D"	.70	76D	2 "D"	1.15

SERIES 70P—PALLADIUM CONTACTS

71P	1 "A"	$0.60	74P	2 "A"	$0.95
72P	1 "B"	.60	75P	2 "B"	.95
73P	1 "C"	.80	76P	2 "C"	1.15
73PD	1 "D"	.90	76PD	2 "D"	1.40

LIGHTING STACKS

Prepackaged lighting stacks convert standard stock Series 21000 frames from **"L"** type lighting to **"M"** or **"N"** lighting in the field. **"NB"** type stack completes lighting circuit. Use with all three types of lighting "L", "M", "N". Mounts to frame. Order one stack for each station.

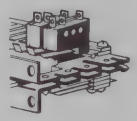
Part No.	Type of Lighting	U.S.A. List Price
LL	"L"—light on in "IN" position	$0.35
MM	"M"—light on in "OUT" position	.35
NN	"N"—light on in "IN"-"OUT" positions	.35
NB	Completes lighting circuit	.35

COMBINATION SWITCH STACKS

Consists of a lighting stack with a switching stack to provide additional switching circuitry on Series 21000 frames. Replaces lighting stacks. Available in all three lighting arrangements with five silver contacts, **Series 70;** or with welded cross bar palladium contacts, **Series 70P.** Both rated at 3 amps, 300 watts, max., A.C., non-inductive load. Supplied with mounting screws and pressure plate.

SERIES 70				SERIES 70P			
Part No.	Circuits	Lighting	U.S.A. List Price	Part No.	Circuits	Lighting	U.S.A. List Price
LL71	1-A	L	$0.85	LL71P	1-A	L	$0.95
MM71	1-A	M	.85	MM71P	1-A	M	.95
NN71	1-A	N	.85	NN71P	1-A	N	.95
NB71	1-A	—	.85	NB71P	1-A	—	.95
LL73	1-C	L	.95	LL73P	1-A	L	1.15
MM73	1-C	M	.95	MM73P	1-C	M	1.15
NN73	1-C	N	.95	NN73P	1-C	N	1.15
NB73	1-C	—	.95	NB73P	1-C	—	1.15

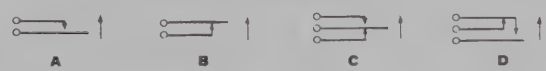
SNAP SWITCH MODULES



Provides power switching for "Multi-Switches." Module consists of snap-action switch, actuator, mounting bracket and screws. No. **73SA** mouts on Series 7000, 8000, 21000, 22000 frames and Series 5000 "Push-Push" Switch. No. **73SB** mounts on Series 15000 "Push-Push" Switch. Both rated as 15 amps, ½ HP, 125/250 V.A.C., each provides a 1-C circuit. Supplied with mtg. hardware and instruction sheet.

Switchcraft Part No. 73SA.....U.S.A. List Price **$2.50**
Switchcraft Part No. 73SB.....U.S.A. List Price **$2.50**

BASIC CONTACT FORMS



LOCK-OUT BAR "K" SERIES

E Prevents the operation of more than one button at a time. Mounts on back of standard Multi-Switch frame with two screws (furnished). Available from 2 to 37 stations for a single frame. Lock-Out Bars listed below for ⅝" center plungers only; for ¾" centers, order special.

Part No.	Stations	U.S.A. List Price	Part No.	Stations	U.S.A. List Price
K-02	2	$3.00	K-08	8	$3.75
K-03	3	3.15	K-09	9	4.00
K-04	4	3.25	K-10	10	4.25
K-05	5	3.40	K-11	11	4.50
K-06	6	3.50	K-12	12	4.75
K-07	7	3.65			

LAMPS FOR "MULTI-SWITCHES"

Lamps are not furnished with **Series 21000** switches. For initial order or replacement, specify the following part numbers.

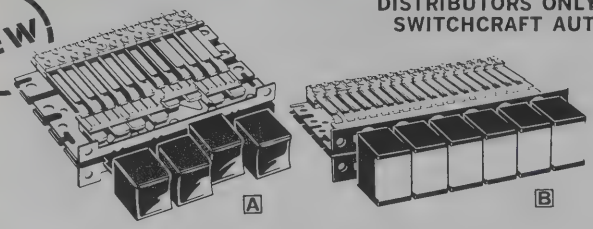
Part No.	Volts	Lamp Base	Industry No.	U.S.A. List Price
P-1593-1	28	Flange	327	$1.50
P-1593-2	6	Flange	328	1.20

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SWITCHCRAFT INC. littel "Multi-Switches" Patent Applied For

"MULTI-SWITCH" PRODUCTS ARE SOLD THROUGH FACTORY-TRAINED DISTRIBUTORS ONLY. WRITE FOR THE NAME OF YOUR LOCAL SWITCHCRAFT AUTHORIZED "MULTI-SWITCH" SPECIALIST.

NEW



Compact, versatile, low cost multiple station pushbutton switch, 6 PDT switching in .6 sq. in. Narrow rectangular silhouette permits stacking in parallel rows on ¾" centers. Only 2 5/16" depth behind panel. Four standard functions available: **Interlock**-actuating a button automatically restores to normal the button previously actuated. **Lock-Out,** which prevents operation of more than one button at a time is built-in on all interlock frames; **Non-Lock**—each button has momentary action; **All-Lock**—all buttons, except release, lock when depressed. All buttons restored to normal by actuating release button; **Push to Lock-Push to Release**—button locks when depressed and is released when again depressed. Buttons on ⅝" centers. Frames available from **1 to 18 stations.**

SERIES 35000 NON-ILLUMINATED FRAMES

A Switch frames mount on panels up to ⅛" thick. End brackets have four No. 6-32 tapped mounting holes. A square black pushbutton is furnished for each station and an extra red button is supplied for use when switch requires a release. The following part numbers cover basic frame only, to complete assembly order switch stacks for each station, solenoid release and snap-switch modules if required. Only the most commonly used frames are listed here:

Interlock Function	Non-Lock Function	All-Lock Function	Push-to-Lock Push-to-Release Function	No. of Stations	U.S.A. List Price
35021	35022	35023	35027	2	$ 8.50
35041	35042	35043	35047	4	12.00
35061	35062	35063	35067	6	16.00
35081	35082	35083	35087	8	20.00
35101	35102	35103	35107	10	24.00
35121	35122	35123	35127	12	28.00

SERIES 37000 SINGLE LAMP ILLUMINATED FRAMES

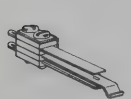
B Identical in switching functions and characteristics as non-illuminated Series 35000, but feature large rectangular shaped pushbuttons which serve as a color or legend coded panel indicator light which actuates up to 6 PDT switching. Switch frames mount in parallel rows from **1" centers** and up. Depth behind panel 2 5/16". Pushbuttons with large transparent clear display screen and white legend insert which can be hot stamped or engraved are furnished for switching and release stations. A single **6V** or **28V lamp** can be used at each station. Lighting, such as **"L"**—pushbuttons light in "IN" position; **"M"**—pushbuttons light in "OUT" position; and **"N"**—pushbuttons light in "IN" and "OUT" positions, can be effected by direct wiring to the lamp terminals or through the use of Series H Lighting Stacks. The following part numbers cover basic frames only, to complete assembly order switch stacks, lighting stacks and lamps for each station. Only the most commonly used frames are listed here:

Interlock Function	Non-Lock Function	All-Lock Function	Push-to-Lock Push-to-Release Function	No. of Stations	U.S.A. List Price
37021	37022	37023	37027	2	$11.90
37041	37042	37043	37047	4	19.30
37061	37062	37063	37067	6	26.70
37081	37082	37083	37087	8	34.60
37101	37102	37103	37107	10	42.00
37121	37122	37123	37127	12	49.40

SERIES 38000 TWIN LAMP ILLUMINATED FRAMES

B Similar in design to Series 37000, except provides **twin lamps** at each station for redundancy or two color, split-face lighting. Utilizes same switch stacks and lighting stacks as Series 37000. Accepts T-1 long-life 6V lamp, Ind. No. 718. For complete information on Series 38000 request Catalog S-323 from your local Switchcraft Authorized "Multi-Switch" Specialist. Switchcraft has a unique network of local, factory-trained distributors to give expert assistance in writing specifications and supplying "Multi-Switches" from stock at factory prices. Write for the name of your local Switchcraft Authorized "Multi-Switch" Specialist.

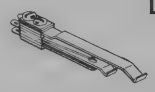
SWITCH STACKS



Interchangeable switch stacks for littel "Multi-Switches". **Series 35000, 37000, 38000. Series 80P,** cross-bar welded palladium contacts. Use where switching contacts of a released station will return to normal before contacts of a newly operated station are actuated. **Series 800P,** same as 80P, except designed to be used on push-to-lock, push-to-release function. Both Series rated 3 amps, 300 watts max., A.C. non-inductive load. Switch stacks fasten direct to removable switch mounting brackets. Supplied with two mtg. screws and one pressure plate.

Series 80P Part No.	Series 800P Part No.	Circuits	U.S.A. List Price
81P	801P	1-A	$ .60
82P	802P	1-B	.60
83P	803P	1-C	.80
83PD	803PD	1-D	.90

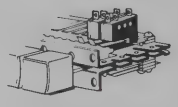
LIGHTING SWITCH STACKS



For convenient rear-of-frame lamp circuit wiring on **Series 37000, 38000** frames, these stacks (consisting of standard switch stacks, Series 80P or 800P, with an extra long leaf spring on top), are provided. Use No. **H-83P** for all functions except push-to-lock, push-to-release; No. **H-803P** for push-to-lock, push-to-release. Each provide 1-C circuitry. Furnished with two screws and pressure plate.

Switchcraft Part No. H-83P.....U.S.A. List Price **$1.15**
Switchcraft Part No. H-803P.....U.S.A. List Price **$1.15**

"PIGGY BACK" SNAP-SWITCH MODULES



Increases the switching load capacity of littel "Multi-Switches" from 3 amps to 15 amps. Modules consist of snap-action switch, actuator and mounting bracket. Two styles available: Miniature types—**No. 83SA** for all switching functions except push-to-lock, push-to-release; **No. 803SA** for push-to-lock, push-to-release function. Both rated at 15 amps, 1½ HP, 125/250 V.A.C.; 1-C circuit. Subminiature types rated at 10 amps, ¼ HP, 125 V.A.C.: Nos. **83SC, 83SD**—similar to No. 83SA in function; Nos. **803SC, 803SD**—similar to No. 803SA in function. All styles supplied with mtg. hardware. Solder terminals.

Part No.	SPDT Circuits	U.S.A. List Price	Part No.	SPDT Circuits	U.S.A. List Price
83SA	1	$2.50	83SD	2	$8.00
803SA	1	2.50	803SC	1	4.50
83SC	1	4.50	803SD	2	8.00

SERIES NJ SOLENOID RELEASE

A simple solenoid assembly which can be added to the end of a **Series 35000, 37000, 38000** littel "Multi-Switch." No. NJ-1 designed for use with up to 18 interlock stations; No. NJ-3 will handle up to 12 all-lock stations. Complete with mounting bracket, screws and instruction sheet.

Part No.	Function Used On	Voltage	Max. Duty Cycle	U.S.A. List Price
NJ-1	Interlock	115 V.A.C.	25%	$ 9.00
NJ-2	All-lock	115 V.A.C.	10%	10.00

LAMPS

Lamps are not furnished with **Series 37000, 38000.** Series 37000 will accept lamps P-1593-2 (6V), P-1593-1 (28V), and long life P-1890 6V lamp when used with T-1 lamp adapter. Series 38000 accepts only the P-1890 lamp.

Part No.	Volts	Lamp	Ind. No.	U.S.A. List Price
P-1593-2	6V	Flange	328	$1.20
P-1890	6V	Flange	718	3.50
P-1593-1	28V	Flange	327	1.50

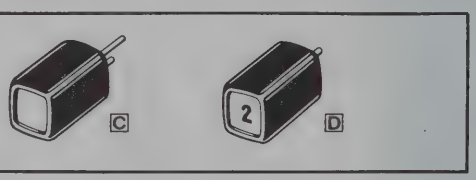
LAMP ADAPTER



Converts **Series 21000** and **Series 37000** lamp sockets that accommodate P-1593-2, -1 lamps to accept the P-1890 subminiature lamps. Order a T-1 adapter for each station of a Series 21000 or 37000 if long-life P-1890 lamp is specified.

Switchcraft Part No. T-1.....U.S.A. List Price **$0.60**

NEW



"GLO-BUTTON"

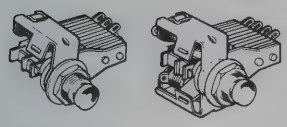
Series X "Glo-Button", looks and functions like an illuminated button but requires no lamp or electrical power. Mounts on all pushbutton switches with std. **.050" x .187" plungers,** such as Switchcraft **Series 7000, 8000, 35000,** and other switches having maintained plunger action with a max. of 1/16" fallback. The "Glo-Button" has a translucent front screen on which a legend is marked in an opaque color. The opaque color provides the background for the legend while the legend itself remains clear, **Fig. C.** An internal fluorescent illuminator is carried on a pusher which has two legs extending out from the rear. When a switch station is actuated the rear legs of the pusher bring the orange-red fluorescent illuminator flush with the screen. The legend then lights up due to reflected ambient light and projects a clearly visible legend, see **Fig. D.** Two types are available: **Part No. X21248** with black screen; **Part No. X51248** with white screen. Both have black button housing. Standard legends: **"A" thru "R", "0" thru "18", and "ON", "OFF".** To order, specify Part Number and add suffix letter or numeral to Part Number which describes desired legend. Example: To order "Glo-Button" with black screen and numeral "7", part number would read: X21248-7.

Switchcraft Part No. X21248, or **X51248**
U.S.A. List Price.....**$1.25**

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SWITCHCRAFT INC. PushButton Switches

NEW ILLUMINATED "NF-LITE" SWITCHES



A B

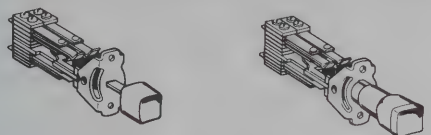
Series 4100 and 4200 "NF-LITE" illuminated switches indicate switching and circuit functions at a glance. Flat frame construction provides multiple pole momentary action switching. Lighting circuit is independent of switching circuit. Ideal for control panel or press-to-test applications. Contacts are fine silver rated at 3 amps, 300 watts max., A.C., non-inductive load.
Series 4100, Fig. A, uses single miniature lamp, 6V or 28V. Light from lamp is filtered through color chip to clear plastic push-button. Various colored chips can be inserted at any time. **Series 4200, Fig. B,** same as Series 4100, except utilizes two lamps for greater illumination or color coding of two circuit conditions. Both series require 11/16" min., 1 5/16" max. depth behind panel depending on size of stack; mounts in 3/8" hole in panels up to 1/4" thick. **Series 4100** furnished with **one kit of 4 color chips** (red, amber, green, and yellow), **Series 4200** furnished with **two kits. Lamps** must be **purchased separately.** See lamp listing below.

SERIES 4100

Part Number	Action	Schematic Circuit	U.S.A. List Price
4101	S.P.S.T.n.o.	1-A	$ 1.95
4103	S.P.D.T.	1-C	2.10
4104	D.P.S.T.n.o.	2-A	2.20
4106	D.P.D.T.	2-C	2.45
4109	3 P.D.T.	3-C	3.00

SERIES 4200

4201	S.P.S.T.n.o.	1-A	$2.85
4203	S.P.D.T.	1-C	3.00
4204	D.P.S.T.n.o.	2-A	3.10
4206	D.P.D.T.	2-C	3.35
4209	3 P.D.T.	3-C	3.90



C D

"PUSH-PUSH SWITCHES"

Push-to-lock, push-to-release or momentary action pushbuton switches. Welded cross-bar palladium contacts rated at 3 amps, 300 watts, max., non-inductive load. Mount with two 3-48 screws (not supplied) on 5/8" centers. Depth behind panel, 2 1/8". **Series 5000, Fig. C,** non-illuminated, supplied with square brown button. **Series 15000, Fig. D,** illuminated; available in three lighting arrangements, **"L"** button lights in "IN" position; **"M"** button lights in "OUT" position; **"N"** button lights in "IN" and "OUT" positions. Series 15000 part numbers listed below provide "L" type lighting. For "M" type prefix part no. with "M"; for "N" type prefix part no. with "N". Series 15000 supplied less lamp. 6V or 28V lamps can be used.

*Add suffix letter "L" to part number to indicate locking type.

NON-ILLUMINATED SERIES 5000

Part Number Non-locking*	Action	Schematic Circuit	U.S.A. List Price
5003	S.P.D.T.	1-C	$ 6.00
5004	D.P.S.T.n.o.	2-A	6.50
5006	D.P.D.T.	2-C	6.75
5008	4 P.S.T.n.o.	4-A	7.60
5009	3 P.D.T.	3-C	7.75
5012	4 P.D.T.	4-C	9.00

ILLUMINATED SERIES 15000

15003	S.P.D.T.	1-C	$ 8.50
15004	D.P.S.T.n.o.	2-A	9.00
15006	D.P.D.T.	2-C	9.25
15008	4 P.S.T.n.o.	4-A	10.00
15009	3 P.D.T.	3-C	10.25
15012	4 P.D.T.	4-C	11.50

LAMPS FOR ILLUMINATED SWITCHES

The **"NF-Lite", "Littel-Lite"** and **"Push-Push"** Switches are not supplied with lamps. When ordering these switches, be sure to specify:

Part No.	Used with Switch	Voltage	Lamp Base	Ind. No.	U.S.A. Price List
P-1217	NF-Lite Littel-Lite	6	Screw	1768	$1.20
P-1218	NF-Lite Littel-Lite	28	Screw	335	2.00
P-1593-1	Push-Push	28	Flange	327	1.50
P-1593-2	Push-Push	6	Flange	328	1.20

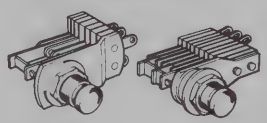
NEW ILLUMINATED "LITTEL-LITE" SWITCHES



Series 210 "Littel-Lite" Switches are unusually small, momentary contact, illuminated push-button types. Requires minimum panel space; ideal for limited space applications and press-to-test circuits. One-piece, clear plastic button and shaft is illuminated by a single miniature lamp, 6V or 28V. Lamps are **not** furnished, see lamp listing below. Includes kit of 4 color chips (red, amber, green, and yellow), can be inserted in switch at any time. Nickel silver spring contacts are recommended for low lever circuits where contact resistance is not important. Also available, fine silver contacts (Part No. suffix **"S"**) rated at 3 amps, 300 watts, max., A.C. non-inductive load. Lighting circuit is independent of switching circuit. Mounts in single 3/8" hole in panels up to 1/4" thick; depth behind panel 1 3/16".

Part Number	Action	Schematic Circuit	U.S.A. List Price
211	S.P.S.T.n.o.	1-A	$1.65
212	S.P.S.T.n.c.	1-B	1.65
213	S.P.D.T.	1-C	1.90
211S	S.P.S.T.n.o.	1-A	1.85
212S	S.P.S.T.n.c.	1-B	1.85
213S	S.P.D.T.	1-C	2.10

NON-LOCKING FLAT FRAME SWITCHES

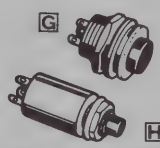


E F

FF Switches. Fig. E, Series 1000. Flat frame construction provides multiple pole switching with minimum depth behind panel. Fine silver contacts rated at 3 amps, 300 Watts Max., A.C., non-inductive load. One piece black button and shaft. 3/8" diameter threaded shank; mounts in panels up to 1/4" thick.
NF Switches. Fig. F, Series 4000, same as FF Switches, except smaller spring design, ideal for mounting in ultra-compact equipment. Only 1/2" W.; 1 5/8" L.; mounts in 3/8" hole in panels up to 5/32" thick.

Part Numbers Series 1000	Part Numbers Series 4000	Action	Schematic Circuit	U.S.A. List Price
1001	4001	S.P.S.T.n.o.	1-A	$1.05
1002	4002	S.P.S.T.n.c.	1-B	1.05
1003	4003	S.P.D.T.	1-C	1.20
1004	4004	D.P.S.T.n.o.	2-A	1.30
1005	4005	D.P.S.T.n.c.	2-B	1.30
1006	4006	D.P.D.T.	2-C	1.55
1009	4009	3 P.D.T.	3-C	2.10

"BUTTON SWITCHES"



G H

Series 903, 923. Unusually small, momentary action push button switches. Enclosed in metal housing; black or red plastic button. **Series 903, Fig. G.** back panel mounting; 13/64" hole, mounts in panels up to 19/64" thick. **Series 923, Fig. H.** front panel mounting; 1/4" hole, mounts in panels up to 5/32" thick. Both rated at 250 mils, AC, non-inductive load, 30 watts max.

Part Nos. Red Button	Part Nos. Black Button	Action	Schematic Circuit	U.S.A. List Price
903	913	S.P.D.T. "Break-Make"	1-C	$1.50
903D	913D	S.P.D.T. "Make-Break"	1-D	1.50
923	933	S.P.D.T. "Break-Make"	1-C	1.75
923D	933D	S.P.D.T. "Make-Break"	1-D	1.75

"LITTEL-SWITCHES"

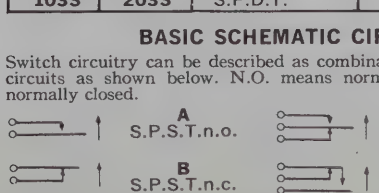


Series 100, 200, tiny momentary contact push button switches. Rugged, dependable action. All contacts insulated from panel bushing with interlocking phenolic washers. Series 100 and 200, springs are of nickel silver, recommended only for low level circuits where contact resistance is unimportant. **Series 100S and 200S** have fine silver contacts rated at 3 amps or 300 watts max., A.C., non-inductive load. One-piece plastic button and shaft in red or black. Mounts in 3/8" hole in panels up to 1/4".

Part Nos. Red Button	Part Nos. Black Button	Action	Schematic Circuit	U.S.A. List Price
101	201	S.P.S.T. n.o.	1-A	$0.90
101S	201S	S.P.S.T. n.o.	1-A	1.05
102	202	S.P.S.T. n.c.	1-B	.90
102S	202S	S.P.S.T. n.c.	1-B	1.05
103	203	S.P.D.T.	1-C	1.00
103S	203S	S.P.D.T.	1-C	1.20

BASIC SCHEMATIC CIRCUITS

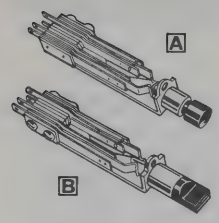
Switch circuitry can be described as combinations of basic schematic circuits as shown below. N.O. means normally open; N.C. means normally closed.



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SWITCHCRAFT INC.

Pushbutton Switches



"T-SWITCHES"

Rugged, long frame switches for quality communication equipment. Welded cross bar palladium contacts rated at 3 amps, 300 watts max., A.C., non-inductive load. Requires minimum of panel space, only 9/16"x13/16"; 2 7/8" depth behind panel. **Series 11000, Fig. A,** push button T-Switch. Available in momentary action and push-to-lock, pull-to-release action. **Series 11200, Fig. B,** two position turn button T-Switch. Available in non-locking and locking action. Black button with white arrow to indicate switching position.

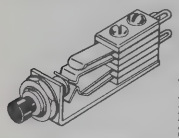
*Add Suffix "L" to Part Numbers to Indicate Locking Type.

A PUSH BUTTON—SERIES 11000

Part No. Non-Locking*	Action	Schematic Circuit	U.S.A. List Price
11001	S.P.S.T. n.o.	1-A	$3.50
11002	S.P.S.T. n.c.	1-B	3.50
11003	S.P.D.T.	1-C	4.00
11003D	S.P.D.T.	1-D	4.00
11004	D.P.S.T. n.o.	2-A	4.50
11005	D.P.S.T. n.c.	2-B	4.50
11006	D.P.D.T.	2-C	5.00
11006D	D.P.D.T.	2-D	5.00
11008	4 P.S.T. n.o.	4-A	5.60
11009	3 P.D.T.	3-C	6.00
11012	4 P.D.T.	4-C	6.80

B TURN BUTTON—SERIES 11200

11201	S.P.S.T. n.o.	1-A	$3.50
11202	S.P.S.T. n.c.	1-B	3.50
11203	S.P.D.T.	1-C	4.00
11203D	S.P.D.T.	1-D	4.00
11204	D.P.S.T. n.o.	2-A	4.50
11205	D.P.S.T. n.c.	2-B	4.50
11206	D.P.D.T.	2-C	5.00
11206D	D.P.D.T.	2-D	5.00
11208	4 P.S.T. n.o.	4-A	5.60
11209	3 P.D.T.	3-C	6.00
11212	4 P.D.T.	4-C	6.80



MINIATURE "TF" BUTTON SWITCHES

"Tiny Frame" switches. Small, sturdily constructed, provides simple, direct acting push button switching for use where space is at a premium. Available in **Series 970L** push-to-lock, pull-to-release; or **Series 970,** momentary action. Nickel silver springs, integral contacts, recommended for low level circuits where contact resistance is unimportant. Requires only 1 19/32" depth behind panel; mounts in single 1/4" hole in panels up to 3/32" thick.

SERIES 970—NON-LOCKING

Part No.	Action	Schematic Circuit	U.S.A. List Price
974	D.P.S.T. n.o.	2-A	$1.30
975	D.P.S.T. n.c.	2-B	1.30
976	D.P.D.T.	2-C	1.30

SERIES 970L—LOCKING

974L	D.P.S.T. n.o.	2-A	$1.55
975L	D.P.S.T. n.c.	2-B	1.55
976L	D.P.D.T.	2-C	1.55



"CORD SWITCHES"

An attractive bright nickel plated housing supports **Series 903** and **913** button switches. Ideal for cord mounted or pendant switch on remote control applications. Sleeve 11/16" diameter, 2 3/16" long.

Part Nos. Red Button	Part Nos. Black Button	Action	Schematic Circuit	U.S.A. List Price
E-903	E-913	S.P.D.T. "Break-Make"	1-C	$2.50
E-903D	E-913D	S.P.D.T. "Make-Break"	1-D	2.50

"TINY SWITCHES"



Series 950, red button, and **Series 960,** black button, sub-miniature push-button switches for limited space applications. Integral contacts suitable for low level circuits where contact resistance is not important. Mounts in 1/4" hole in panels up to 1/32" thick; depth behind panel 3/8".

Part Number Red Button	Part Number Black Button	Action	Schematic Circuit	U.S.A. List Price
951	961	S.P.S.T.n.o.	1-A	$0.90
952	962	S.P.S.T.n.c.	1-B	.90
953	963	S.P.D.T.	1-C	1.00

BASIC SCHEMATIC CIRCUITS

Switch circuitry can be described as combinations of basic schematic circuits as shown below. N.O. means normally open; N.C. means normally closed.



A
S.P.S.T.n.o.



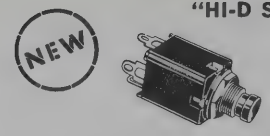
B
S.P.S.T.n.c.



C
S.P.D.T.
(Break before make)



D
S.P.D.T.
(Make before break)



"HI-D SWITCHES"

Series H-100, H-200—compact momentary action switches. Molded box body protects contact springs. Low electrical leakage, low capacity. Integral fine-silver plated contacts for use in circuits where contact resistance is not critical. One piece plastic button and shaft in Red—**Series H-100,** and Black—**Series H-200.** Mounts on **5/8" centers** in either of two planes; in a single 3/8" hole in panels up to 5/32" thick. Depth behind panel 1 3/32".

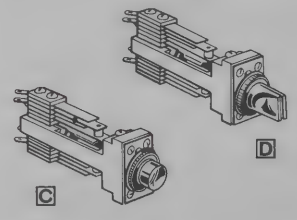
Part Nos. Red Button	Part Nos. Black Button	Action	Schematic Circuit	U.S.A. List Price
H-101	H-201	S.P.S.T.n.o.	1-A	$0.90
H-102	H-202	S.P.S.T.n.c.	1-B	.90
H-103	H-203	S.P.D.T.	1-C	1.00
H-103D	H-203D	S.P.D.T.	1-D	1.00



SERIES DA SWITCH

Series DA. Completely enclosed, momentary action push-button switch. Anodized aluminum body protects switch contacts from dirt, dust and from being bent. **A-B contact** arrangement provides a 1-A, 1-B or 1-C circuit when externally wired. Integral hard gold plated contacts rated at 500 MA., 50 watts max., A. C., non-inductive load. Terminals accept AMP Series 53 taper pins. Mount in 3/8" hole on 17/32" centers. Depth behind panel 15/16".

Part No.	Button Color	Part No.	Button Color	U.S.A. List Price
DA-01-3	Red	DA-04-3	Blue	$2.25
DA-02-3	Black	DA-05-3	White	2.25
DA-03-3	Green	DA-08-3	Yellow	2.25



"T-LITE" SWITCHES

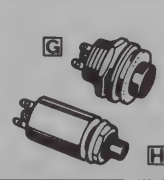
Series 32000, 32000TL. High-quality illuminated switches, ideal for instrumentation, communication equipment and telephone apparatus. Lightweight, extremely rugged aluminum **"T-Beam"** frame construction. Frame includes a non-turn device. "Frosted" plastic pushbuttons give quick visual indication of switching function or circuit condition. **Series 32000, Fig. C,** momentary action, pushbutton can be engraved. **Series 32000TL, Fig. D,** momentary push with turn-to-lock feature. Button has black indicator line to indicate switching position. Utilize T-2 telephone slide base lamp. Relamp from front of panel. Lamps not supplied with switch. Long leaf nickel silver springs with cross-bar palladium contacts rated at 3 amps, 300 watts, max., A.C. non-inductive load. Mount in single 5/8" hole on 13/16" centers in panels 1/8" thick. Depth behind panel 3 7/16".

SERIES 32000 PUSHBUTTON

Part No.	Action	Schematic Circuit	U.S.A. List Price
32004	D.P.S.T.n.o.	2-A	$10.00
32006	D.P.D.T.	2-C	10.75
32008	4P.S.T.n.o.	4-A	11.50
32012	4P.D.T.	4-C	13.00

SERIES 32000TL TURN BUTTON

32004TL	D.P.S.T.n.o.	2-A	10.50
32006TL	D.P.D.T.	2-C	11.25
32008TL	4P.S.T.n.o.	4-A	12.00
32012TL	4P.D.T.	4-C	13.50



"BUTTON SWITCHES"

Series 903, 923. Unusually small, momentary action push button switches. Enclosed in metal housing; black or red plastic button. **Series 903, Fig. G.** back panel mounting; 15/32" hole, mounts in panels up to 19/64" thick. **Series 923, Fig. H.** front panel mounting; 1/4" hole, mounts in panels up to 5/32" thick. Both rated at 250 mils, AC, non-inductive load, 30 watts max.

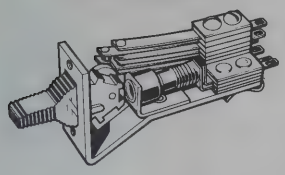
Part Nos. Red Button	Part Nos. Black Button	Action	Schematic Circuit	U.S.A. List Price
903	913	S.P.D.T. "Break-Make"	1-C	$1.50
903D	913D	S.P.D.T. "Make-Break"	1-D	1.50
923	933	S.P.D.T. "Break-Make"	1-C	1.75
923D	933D	S.P.D.T. "Make-Break"	1-D	1.75

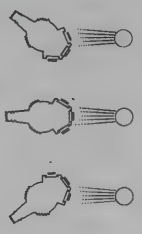
© U.C.P., Inc.

SWITCHCRAFT INC. Lever Switches

3-COLOR ILLUMINATED LEVER SWITCHES

THE "LEVER-LITE" SERIES 25000





"Lever-Lite", Series 25000. Illuminated switches indicate positions at a glance. Individual color chips can be inserted in each switch position. Available in 2 or 3 positions, locking and non-locking types. Reduces panel space; minimizes costly wiring. Supplied with 6V miniature screw base lamp and six color chips, Red, Green, Amber, Yellow, Blue and White; 28V lamp also available. See lamp listing below. Nickel-silver springs, silver contacts rated 3 amps, 300 watts max., A.C., non-inductive load. Requires only 2¼" depth behind panel, can be mounted on ⅝" centers in panels up to ³⁄₃₂" thick.

Size: 2¼" L. x ³⁹⁄₆₄" W. x 1⁷⁄₃₂" H. *Add suffix letter "L" to Part No. to indicate locking type.

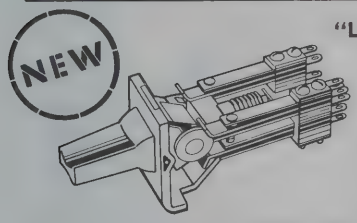
TWO POSITION TYPES

Part No. Non-Locking*	Action	Schematic Circuit Pos. 1	Pos. 2	U.S.A. List Price
25201	S.P.S.T. n.o.	1-A		$4.00
25203	S.P.D.T.	1-C		4.25
25206	D.P.D.T.	2-C		5.00
25209	3 P.D.T.	3-C		5.75

THREE POSITION TYPES

25304	S.P.S.T. n.o. Ea. Sec.	1-A	1-A	$4.50
25306	S.P.D.T. Ea. Sec.	1-C	1-C	5.00
25308	D.P.S.T. n.o. Ea. Sec.	2-A	2-A	5.50
25312	D.P.D.T. Ea. Sec.	2-C	2-C	6.00

"LEVER-LITE" SWITCHES SERIES 27000



"Lever-Lite," Series 27000 illuminated lever switch, three color lighting identical to Series 25000, but utilizes a larger, contoured lever and larger, factory installed color filters. Available in 2 or 3 position, locking and non-locking types. Mounts on ¾" centers, in panels up to ³⁄₃₂" thick. Depth behind panel 2⁹⁄₁₆". Nickel silver springs with fine silver contacts rated at 3 amps, 300 watts, max., A.C., non-inductive load. On standard 2 position type AMBER lights in the "NEUTRAL" position; GREEN lights in the "DOWN" position. On 3 position types, RED lights in the "UP" position, AMBER in "NEUTRAL" position and GREEN in the "DOWN" position. Supplied with a 6 V lamp. † n. o. center position off. *Add suffix "L" to part number to indicate locking type.

TWO POSITION TYPES

Part No. Non-locking*	Action	Schematic Circuit Pos. 1	Pos. 2	U.S.A. List Price
27206	D.P.D.T.	2-C		$6.50
27212	4 P.D.T.	4-C		8.00

THREE POSITION TYPES

27306	S.P.D.T. ea. sec.	1-C	1-C	6.50
27307	S.P.D.T. n.o. ea. sec.	1-C†	1-C†	6.65
27312	D.P.D.T. ea. sec.	2-C	2-C	8.00

LAMPS FOR "LEVER-LITE" SWITCHES

Lamps are mounted in a "snap-out" frame assembly. A 6V lamp is furnished with each of the above listed switches. Specify the following part numbers when ordering replacement lamps:

Part No.	Voltage	Base	Ind. No.	U.S.A. List Price
P-1217	6V	Screw	1768	$1.20
P-1218	28V	Screw	Hudson 369	2.00

ESCUTCHEON PLATES FOR "LEVER-LITE" SWITCHES

For easy and convenient mounting of Series 25000 and 27000 Switches. Satin black finish. Eliminates punching rectangular hole in mounting panel. **Part No. 531 for Series 25000,** complete with two No. 3-48 black machine screws. **Part No. 532 for Series 27000,** complete with two No. 2-56 machine screws.

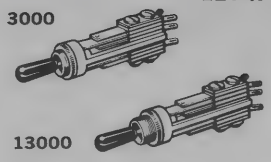
Switchcraft Part No. 531_____U.S.A. List Price **$0.15**
Switchcraft Part No. 532_____U.S.A. List Price **0.25**

AMBIENT LIGHT SHIELD

For use where **"LEVER-LITE" Series 27000** switches are mounted on minimum centers. Shield gives positive separation of lighting between switches. Shield is placed between panel and switch, held in place by mounting screws. Two shields can be used per switch if desired.

Switchcraft Part No. P-1864_____U.S.A List. Price **$0.10**

LEV-R SWITCHES



Small lever action switches in two and three position types, locking and non-locking action. Requires half the space usually needed for a lever switch; frame bushing and shaft nickel plated brass. Supplied with locknut and screw-on black knob. Fine silver contacts rated at 3 amps, 300 watts, max. A.C. non-inductive load. Non-locking types have spring return. **Series 3000** mounts in panels up to ³⁄₃₂" thick; **Series 13000** mounts in panels up to ¼" thick. Both Series are ⅝" wide; requires 2¼" behind panel; mounts in single ½" dia. hole. †n.o. center position off. ‡Inter-communications "Talk-Listen" switches, lever locks on one side of neutral and operates non-locking on the other side. *Add suffix letter "L" to Part No. to indicte locking type.

SERIES 3000
TWO POSITION TYPES

Part No. Non-Locking*	Action	Schematic Circuit Pos. 1	Pos. 2	U.S.A. List Price
3001	S.P.S.T. n.o.	1-A		$1.95
3002	S.P.S.T. n.c.	1-B		1.95
3003	S.P.D.T.	1-C		2.25
3003D	S.P.D.T.	1-D		2.40
3004	D.P.S.T. n.o.	2-A		2.50
3005	D.P.S.T. n.c.	2-B		2.50
3006	D.P.D.T.	2-C		2.75
3006D	D.P.D.T.	2-D		2.90
3009	3 P.D.T.	3-C		3.40

THREE POSITION TYPES

3033	S.P.D.T. n.o.	1-C†		$2.65
3034	S.P.S.T. n.o. Ea. Sec.	1-A	1-A	2.75
3035	S.P.S.T. n.c. Ea. Sec.	1-B	1-B	2.75
3036	S.P.D.T. Ea. Sec.	1-C	1-C	3.10
3036D	S.P.D.T. Ea. Sec.	1-D	1-D	3.25
3037	S.P.D.T. n.o. Ea. Sec.	1-C†	1-C†	3.10
30312	D.P.D.T. Ea. Sec.	2-C	2-C	4.00
30313	D.P.D.T. n.o. Ea. Sec.	2-C†	2-C†	4.00

SERIES 13000
TWO POSITION TYPES

13001	S.P.S.T. n.o.	1-A		$2.10
13002	S.P.S.T. n.c.	1-B		2.10
13003	S.P.D.T.	1-C		2.40
13003D	S.P.D.T.	1-D		2.50
13004	D.P.S.T. n.o.	2-A		2.65
13005	D.P.S.T. n.c.	2-B		2.65
13006	D.P.D.T.	2-C		2.75
13006D	D.P.D.T.	2-D		2.90
13009	3 P.D.T.	3-C		3.75

THREE POSITION TYPES

13033	S.P.D.T. n.o.	1-C†		$2.65
13034	S.P.S.T. n.o. Ea. Sec.	1-A	1-A	2.75
13035	S.P.S.T. n.c. Ea. Sec.	1-B	1-B	2.75
13036	S.P.D.T. Ea. Sec.	1-C	1-C	3.10
13036D	S.P.D.T. Ea. Sec.	1-D	1-D	3.25
13037	S.P.D.T. n.o. Ea. Sec.	1-C†	1-C†	3.10
130312	D.P.D.T. Ea. Sec.	2-C	2-C	4.00
130313	D.P.D.T. n.o. Ea. Sec.	2-C†	2-C†	4.00

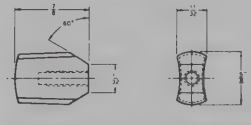
INTER-COM SWITCHES‡
SERIES 3000

Part No. Non-Locking*	Action	Schematic Circuit Pos. 1	Pos. 2	U.S.A. List Price
3033T	S.P.D.T. n.o.	1-C†		$2.50
3037T	S.P.D.T. n.o. Ea. Sec.	1-C†	1-C†	2.95

SERIES 13000

13033T	S.P.D.T. n.o.	1-C†		$2.65
13037T	S.P.D.T. n.o. Ea. Sec.	1-C†	1-C†	3.10

CONTOUR KNOBS FOR LEVER SWITCHES



Attractive contour knobs designed for today's modern equipment. Series M-1177 knobs, 8-32" tapped hole for use with "LEV-R" switches **Series 3000, 12000 and 13000.** Series M-1178 knobs, 6-32" tapped hole for use with "TEL-EVER" switches **Series 6000 and 16000.**

Part No. Series 1177	Part No. Series 1178	Color	U.S.A. List Price Per Pkg. of 10
M-1177-1	M-1178-1	Red	$3.50
M-1177-2	M-1178-2	Black	3.50
M-1177-15	M-1178-15	White	3.50

SPECIAL WRENCHES



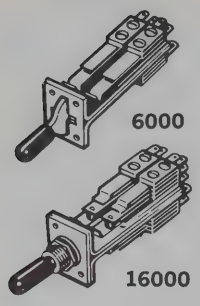
Special Switchcraft wrenches designed to assemble knurled locknuts normally furnished with lever and button switches and jacks. A-1070 wrench fits ¹⁵⁄₃₂"-32 locknuts; A-1071 for use with ¼"-32 knurled locknuts.

Part No. A-1070.....U.S.A. List Price **$6.65**
Part No. A-1071.....U.S.A. List Price **6.65**

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SWITCHCRAFT INC. Lever Switches

"TELEVER SWITCHES"



Series 6000 and 16000. Rugged telephone type lever switches featuring **"T-Beam"** frame construction which results in a relatively light construction with sturdiness of a structural "T-Beam". Available in two and three positions, locking and non-locking types. **Nylon rollers** on the lever actuate the special nickel silver springs, providing smooth action; assures long dependable spring life. Welded cross bar palladium contacts are standard, rated at 3 amps, 300 watts max., A.C., non-inductive load. **Series 6000** mounts with four No. 3-48 machine screws. Mounting centers 17/32" x 13/16", mounts in panels up to 1/4" thick. **Series 16000** features single hole mounting; 15/32"-32 threaded bushing. Mounts in 1/2" dia. hole in panels up to 1/4" thick. **Part No. 545, "Stop Plate"** provides positive "stops" for two position action. **Part No. 540, "Stop Plate"** provides non-locking or momentary action. The "Stop Plates" can be changed in the field. Both Series switches supplied with black insulated knob. All have tinned solder lug terminals. *Add suffix letter **"L"** to Part No. to indicate locking type. **Series 16000 non-locking type** can be converted to **locking type** by removing **"Stop Plate".**

SERIES 6000
TWO POSITION TYPES

Part No. Non-Locking*	Action	Schematic Circuit Pos. 1	Pos. 2	U.S.A. List Price
6006	D.P.D.T.	2-C		$5.00
6006D	D.P.D.T.	2-D		5.60
6008	4 P.S.T. n.o.	4-A		5.60
6009	3 P.D.T.	3-C		6.00
60012	4 P.D.T.	4-C		6.80
60012D	4 P.D.T.	4-D		7.50
60024	8 P.D.T.	8-C		10.00

THREE POSITION TYPES

6036	S.P.D.T. Ea. Sec.	1-C	1-C	$5.00
6036D	S.P.D.T. Ea. Sec.	1-D	1-D	5.60
6038	D.P.S.T. n.o. Ea. Sec.	2-A	2-A	5.60
60312	D.P.D.T. Ea. Sec.	2-C	2-C	6.80
60312D	D.P.D.T. Ea. Sec.	2-D	2-D	7.50
60316	4 P.S.T. n.o. Ea. Sec.	4-A	4-A	8.80
60324	4 P.D.T. Ea. Sec.	4-C	4-C	10.00

SERIES 16000
TWO POSITION TYPES

16006	D.P.D.T.	2-C		$5.00
16006D	D.P.D.T.	2-D		5.60
16008	4 P.S.T. n.o.	4-A		5.60
16009	3 P.D.T.	3-C		6.00
160012	4 P.D.T.	4-C		6.80
160012D	4 P.D.T.	4-D		7.50
160024	8 P.D.T.	8-C		10.00

THREE POSITION TYPES

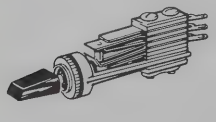
16036	S.P.D.T. Ea. Sec.	1-C	1-C	$5.00
16036D	S.P.D.T. Ea. Sec.	1-D	1-D	5.60
16038	D.P.S.T. n.o. Ea. Sec.	2-A	2-A	5.60
160312	D.P.D.T. Ea. Sec.	2-C	2-C	6.80
160312D	D.P.D.T. Ea. Sec.	2-D	2-D	7.50
160316	4 P.S.T. n.o. Ea. Sec.	4-A	4-A	8.80
160324	4 P.D.T. Ea. Sec.	4-C	4-C	10.00

Part No. 530 Escutcheon Plate. For Series 6000 Telever switches with 4 mounting screws.....U.S.A. List Price **$0.60**

Part No. 540 Stop Plate. For Series 16000 Telever switches. To convert from locking to non-locking action. Includes two mounting screws.....U.S.A. List Price **$0.25**

Part No. 545 Stop Plate. For Series 16000 Telever switches. To convert from 3-position to 2-position. Includes two mounting screws.....U.S.A. List Price **$0.25**

"LEV-R SWITCHES"



"LEV-R Switches." Series 28000. Compact, lever action switch in two and three position, locking and non-locking types. Smooth, easier lever action assured with special nylon roller. Supplied with locknut, non-turn ring (slips over slotted bushing to prevent switch from turning in mounting hole), and a black knob which is molded directly to the lever. Eliminates loose or lost knobs. Fine silver contacts rated at 3 amps, 300 watts, max., A.C., non-inductive load. Mounts on 5/4" centers in panels up to 3/32" thick. Requires only one 15/32" dia. mounting hole for bushing and one 1/8" dia. hole for non-turn device; depth behind panel, 2 1/4". *Add suffix letter "L" to Part No. to indicate locking type. †Center position open (OFF).

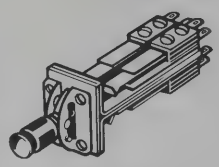
TWO POSITION TYPES

Part No. Non-Locking*	Action	Schematic Circuit Pos. 1	Pos. 2	U.S.A. List Price
28201	S.P.S.T. n.o.	1-A		$2.70
28203	S.P.D.T.	1-C		3.00
28204	D.P.S.T. n.o.	2-A		3.25
28206	D.P.D.T.	2-C		3.50

THREE POSITION TYPES

28304	S.P.S.T. n.o. ea. sec.	1-A	1-A	$3.35
28306	S.P.D.T. ea. sec.	1-C	1-C	3.65
28307	S.P.D.T. n.o. ea. sec.	1-C†	1-C†	3.70
28312	D.P.D.T. ea. sec.	2-C	2-C	4.50

SERIES 26000 "LEVER-LOCK" SWITCHES



Rugged telephone-type lever switches. "Lever-Lock" feature guards against accidental switching due to **shock, vibrations, operator fatigue,** or **unintended operation.** Ideal for mobile communication equipment. **Index bracket** and **release plunger "locks" lever** in any position. Turning actuator knob to extreme left actuator will be permanently locked. To unlock, turn knob to the right. Pressing release plunger frees actuator from index bracket and allows actuator to be moved to another switching position. Welded cross bar palladium contacts rated at 3 amps, 300 watts max., A.C., non-inductive load. Mounts with four No. 3-48 screws in panels up to 3/32" thick. Requires 31/32" depth behind panel.

TWO POSITION TYPES

Part No. Locking Type Only	Action	Schematic Circuits Pos. 1	Pos. 2	U.S.A. List Price
26206L	D.P.D.T.	2-C		$8.50
26208L	4 P.S.T. n.o.	4-A		9.10
26212L	4 P.D.T.	4-C		10.30
26212DL	4 P.D.T.	4-D		11.00

THREE POSITION TYPES

26306L	S.P.D.T. Ea. Sec.	1-C	1-C	$8.50
26308L	D.P.S.T. n.o. Ea. Sec.	2-A	2-A	9.10
26312L	D.P.D.T. Ea. Sec.	2-C	2-C	10.30
26312DL	D.P.D.T. Ea. Sec.	2-D	2-D	11.00
26316L	4 P.S.T. n.o. Ea. Sec.	4-A	4-A	12.30
26324L	4 P.D.T. Ea. Sec.	4-C	4-C	13.50



"LEV-R SWITCHES", SERIES 12000

Small **right-angle** action switches requiring minimum of depth behind panel. Available in two and three position, locking and non-locking types. Long leaf-type springs insure long switch life. Fine silver contacts rated at 3 amps, 300 watts max., A.C., non-inductive load. Requires only 7/8" depth behind panel; single 1/2" dia. mounting hole; mounts in panels up to 3/32" thick. Supplied with nickel plated locknut and removable black plastic knob. †n.o. center position off. *Add suffix letter **"L"** to Part No. to indicate locking type.

TWO POSITION TYPES

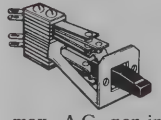
Part No. Non-Locking*	Action	Schematic Circuit Pos. 1	Pos. 2	U.S.A. List Price
12001	S.P.S.T. n.o.	1-A		$1.75
12002	S.P.S.T. n.c.	1-B		1.75
12003	S.P.D.T.	1-C		2.00
12003D	S.P.D.T.	1-D		2.25
12004	D.P.S.T. n.o.	2-A		2.25
12005	D.P.S.T. n.c.	2-B		2.25
12006	D.P.D.T.	2-C		2.50
12006D	D.P.D.T.	2-D		2.75

THREE POSITION TYPES

12033	S.P.D.T. n.o.	1-C†		$2.25
12034	S.P.S.T. n.o. Ea. Sec.	1-A	1-A	2.35
12035	S.P.S.T. n.c. Ea. Sec.	1-B	1-B	2.35
12036	S.P.D.T. Ea. Sec.	1-C	1-C	2.65
12036D	S.P.D.T. Ea. Sec.	1-D	1-D	2.85
12037	S.P.D.T. Ea. Sec.	1-C†	1-C†	2.75

THREE POSITION TYPES
LOCKING ONE SIDE—NON-LOCKING OTHER SIDE

12033T	S.P.D.T. n.o.	1-C†		$2.25
12037T	S.P.D.T. Ea. Sec.	1-C†	1-C†	2.75



"LK" LITTEL-KEY SWITCHES

Series 23000. Short frame lever-type switches available in 2 or 3 positions, locking or non-locking types. Ideal for applications where panel mounting space and depth behind panel is at a premium. Fine silver contacts, rated at 3 amps, 300 watts max., A.C., non-inductive load. Frame has 2 tapped No. 3-48 holes for easy mounting. Mounts in panels up to 1/8" thick. Depth behind panel only 2 3/32". *Add suffix letter "L" to Part No. to indicate locking type.

TWO POSITION TYPES

Part No. Non-Locking*	Action	Schematic Circuit Pos. 1	Pos. 2	U.S.A. List Price
23201	S.P.S.T. n.o.	1-A		$1.65
23203	S.P.D.T.	1-C		1.95
23206	D.P.D.T.	2-C		2.25

THREE POSITION TYPE

23304	S.P.S.T. n.o. Ea. Sec.	1-A	1-A	$2.10
23306	S.P.D.T. Ea. Sec.	1-C	1-C	2.25
23308	D.P.S.T. n.o. Ea. Sec.	2-A	2-A	2.50

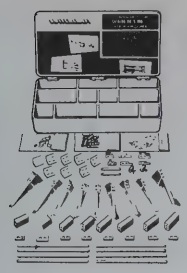
BASIC SCHEMATIC CIRCUITS

Switch circuitry can be described as combinations of basic schematic circuits as shown below. N.O. means normally open; N.C. means normally closed.



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SWITCHCRAFT INC. Switches



STACK SWITCH KITS

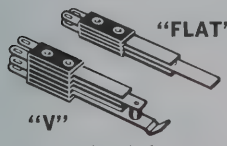
Experimental kits of component parts for assembling switch stacks. Designed to speed the assembly of engineering samples in the lab, aid maintenance men in the field and save time in general replacement. Ideal for mechanical engineers and coin machine servicing; used in relays, electronic organs, etc. Each kit consists of **136 springs** in different thicknesses, over **152 phenolic spacers** and insulators in various sizes, hard-rubber insulating tubing, two sets of stack assembling pins, two roller assemblies, assorted contacts, etc. **Kit No. K-119,** consisting of **"Tini-Stack"** components, are miniature variations of standard switch stack springs, spacers, etc. All in compartmented plastic box.

Kit No. K-101. Assorted ¼" and ⅜" mtg. center contact springs and associated parts.....NET **$9.90**

Kit No. K-102. Assorted ¼" mtg. center contact springs and associated parts.....NET **$9.90**

Kit No. K-103. Assorted ⅜" mtg. center contact springs and associated parts.....NET **$9.90**

Kit No. K-119. "Tini-Stack". Assorted 3/16" mtg. center contact springs and associated parts.....NET **$9.90**



STACK SWITCHES

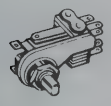
General purpose stack switch assemblies made from a pile-up of various actuator springs, contact springs and lifters. These stack switch assemblies can be used on manually operated devices where switching is operated by cams, levers, push buttons, and other mechanical devices. General purpose stack switches are available with a **"Flat"** or **"V"** actuator spring. Fine silver or palladium cross bar welded contacts are standard, rated at 3 amps., 300 watts max., A.C., non-inductive load. Supplied with pressure plate and two No. 5-40 screws; mount on ⅜" centers. **Height of stack** depends on switching circuit; 1-B circuit $^{21}/_{64}$" **H., min.;** 2-C circuit $^{45}/_{64}$" **H., max.**

FLAT ACTUATOR SPRING

Part No.	Contact Material	Action	Schematic Circuit	U.S.A. List Price
AA01AA	Silver	S.P.S.T. n.o.	1-A	$0.70
AA01AB	Palladium	S.P.S.T. n.o.	1-A	.80
AA02AA	Silver	S.P.S.T. n.c.	1-B	.70
AA02AB	Palladium	S.P.S.T. n.c.	1-B	.80
AA03AA	Silver	S.P.D.T.	1-C	.90
AA03AB	Palladium	S.P.D.T.	1-C	1.10
AA06AA	Silver	D.P.D.T.	2-C	1.25
AA06AB	Palladium	D.P.D.T.	2-C	1.55

"V" FORMED ACTUATOR SPRING

AA01BA	Silver	S.P.S.T. n.o.	1-A	$0.80
AA01BB	Palladium	S.P.S.T. n.o.	1-A	.90
AA02BA	Silver	S.P.S.T. n.c.	1-B	.80
AA02BB	Palladium	S.P.S.T. n.c.	1-B	.90
AA03BA	Silver	S.P.D.T.	1-C	1.00
AA03BB	Palladium	S.P.D.T.	1-C	1.20
AA06BA	Silver	D.P.D.T.	2-C	1.45
AA06BB	Palladium	D.P.D.T.	2-C	1.65



"RS-SWITCHES"

Rugged rotary switches, available in various multiple circuits, two and three position types, locking or non-locking action. Ideal for communication, musical and test equipment applications. **Fibre cam** actuates long, leaf-type springs resulting in easy action; good wiping action of contacts. Fine silver contacts rated at 3 amps, 300 watts max., AC, non-inductive load. Requires only ⅛" depth behind panel, mounts in single ⅜" hole in panels up to ¼" thick.
*Add suffix letter **"L"** to part number to indicate locking type.

TWO POSITION TYPES

Part No. Non-Locking*	Action	Schematic Circuit Pos. 1	Pos. 2	U.S.A. List Price
2001	S.P.S.T. n.o.	1-A		$1.25
2002	S.P.S.T. n.c.	1-B		1.25
2003	S.P.D.T.	1-C		1.50
2004	D.P.S.T. n.o.	2-A		1.50
2005	D.P.S.T. n.c.	2-B		1.50
2006	D.P.D.T.	2-C		1.95

THREE POSITION TYPES

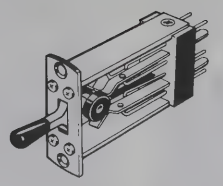
2034	S.P.S.T. n.o. Ea. Sec.	1-A	1-A	$1.50
2035	S.P.S.T. n.c. Ea. Sec.	1-B	1-B	1.50
2036	S.P.D.T. Ea. Sec.	1-C	1-C	1.95



"HOOK SWITCHES"

Quality constructed leaf-type switch actuated by a hook (or hanger). Ideal for equipment where it is necessary to actuate a circuit by hanging an accessory on a "hook", as a headset, telephone or microphone. Fine silver contacts, rated at 3 amps, 300 watts, max., A.C., non-inductive load. Requires only $^{19}/_{32}$" depth behind panel.

Part No.	Action	Schematic Circuit	U.S.A. List Price
14004	D.P.S.T. n.o.	2-A	$2.75
14005	D.P.S.T. n.c.	2-B	2.75
14006	D.P.D.T.	2-C	3.00
14012	4 P.D.T.	4-C	3.85



"LO-CAP" SWITCHES

Series 10000. Low-capacity lever actuated switches, previously referred to as **Federal Anti-Capacity switches.** Specially designed flat actuator springs and round contact springs are wide spaced in a large molded insulating block. This construction eliminates the build-up of induced alternating current between springs. Rugged "U" shaped aluminum frame. Roller actuation for easy lever operation. Available in 2 and 3 position models, locking and non-locking types. Actuator springs have fine silver contacts rated at 1 amp, 100 watts, max., A.C., non-inductive load. Supplied with polished chrome escutcheon plate. Mounts with two No. 6-32 flat head screws (not supplied). Mounting centers $1^{15}/_{16}$". Depth behind panel $3^{7}/_{16}$". †n.o. center position off.
*Add suffix letter **"L"** to Part No. to indicate locking type.

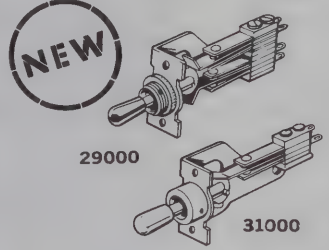
TWO POSITION TYPES

Part No. Non-Locking*	Old Federal No.**	Action	Schematic Circuit Pos. 1 Pos. 2	U.S.A. List Price
10204	1427	D.P.S.T.n.o.	2-A	$ 6.80
10205	1426	D.P.S.T.n.o.	2-B	6.80
10206	—	D.P.D.T.	2-C	7.00

THREE POSITION TYPES

10306	—	S.P.D.T.Ea.Sec.	1-C	1-C	7.00
10307	1425	S.P.D.T.n.o.Ea.Sec.	1-C†	1-C†	7.00
10312	—	D.P.D.T.Ea.Sec.	2-C	2-C	7.50
10313	1426	D.P.D.T.n.o.Ea.Sec.	2-C†	2-C†	7.50
10324	—	4P.D.T.Ea.Sec.	4-C	4-C	16.50
10325	12494	4P.D.T.n.o.Ea.Sec.	4-C†	4-C†	16.50

**Old Federal Part No. refer to locking type switches only.



"FEATHER LEVER" SWITCHES

Miniature lever switches, lightweight, compact, mount on $^{7}/_{16}$" centers. Available in 2 and 3 position, locking and non-locking types. Actuator designed with nylon roller for smoother, easy lever operation over entire life of switch. Rugged steel frame withstands rough usage, shock and vibration. Nickel silver springs with fine silver contacts, rated at 2 amperes, 200 watts, max., A.C., non-inductive load. Supplied with black plastic push-on knob. Other push-on knobs, available in 10 colors. See listing below. **Series 29000,** with bushing, mounts in $^{5}/_{16}$" O.D. panel hole. Supplied with locknut. **Series 31000,** mounts with 2 No. 2-56 machine screws. Both Series supplied with black push-on knob. Require only $1^{9}/_{32}$" depth behind panel, mount in panels up to ⅛" thick. †n.o., center position off. ‡Inter-communications "Talk-Listen" switches, lever locks on one side of neutral and operates non-locking on the other side. *Add suffix letter "L" to Part No. to indicate locking type.

SERIES 29000, 31000 TWO POSITION TYPES

Part No. Non-Locking* 29000	31000	Action	Schematic Circuit Pos. 1	Pos. 2	U.S.A. List Price
29201	31201	S.P.S.T. n.o.	1-A		$1.95
29203	31203	S.P.D.T.	1-C		2.25
29204	31204	D.P.S.T. n.o.	2-A		2.50
29206	31206	D.P.D.T.	2-C		2.75

THREE POSITION TYPES

29303	31303	S.P.D.T. n.o.	1-C†		$2.50
29304	31304	S.P.S.T. n.o. ea. sec.	1-A	1-A	2.60
29306	31306	S.P.D.T. ea. sec.	1-C	1-C	2.90
29307	31307	S.P.D.T. n.o. ea. sec.	1-C†	1-C†	2.95
29312	31312	D.P.D.T. ea. sec.	2-C	2-C	3.75

‡INTER-COMM SWITCHES

29303T	31303T	S.P.D.T. n.o.	1-C†		$2.50
29307T	31307T	S.P.D.T. n.o. ea. sec.	1-C	1-C	2.95



PUSH-ON COLOR KNOBS

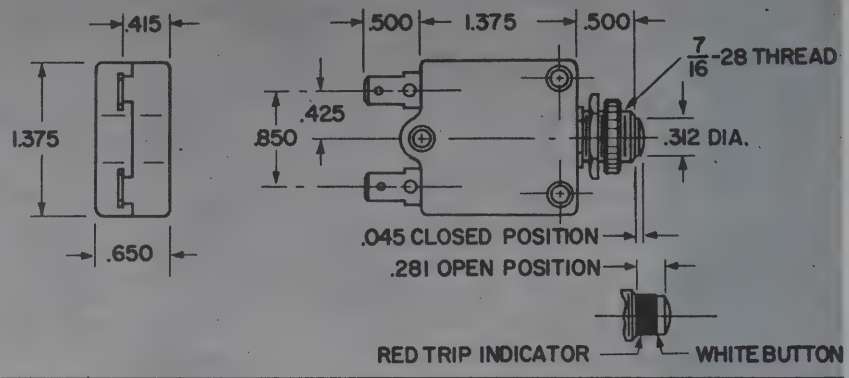
Kit of molded plastic knobs. Available in 10 colors. For "Feather-Lever" Switches, Series 29000, 31000. Knobs can be changed quickly—simply pull off present knob and push-on new one. For permanence, use plastic cement.

Part No.	Color	Part No.	Color	U.S.A. List Price Per Pkg. of 10
K-108	One of ea. color	K-114	Brown	$0.75
K-109	Red	K-115	Orange	0.75
K-110	Black	K-116	Yellow	0.75
K-111	Green	K-117	Ivory	0.75
K-112	Blue	K-118	Gray	0.75
K-113	White	—	—	0.75

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Models 374&375





GENERAL INFORMATION

The Models 374 and 375 were primarily designed for commercial applications capable of employing a low cost circuit breaker rather than a fuse.

The Model 374 has ratings of 1–4 amps. This model employs the famous Taylor bimetal blade which gives assured repeatability within a very close operating tolerance. In conjunction with the Taylor blade is a heater wire which gives an assist on low ratings.

The Model 375 has ratings of 5–20 amps. Because of the higher ratings it does not employ the heater wire principle and is a lower cost device than the Model 374.

Features of these models are:

1. Famous Taylor bimetallic blade for unsurpassed reliability.
2. Simple trip-free design with few moving parts. Cannot be reset during overload condition.
3. Red band around button for visual trip indication.
4. Low installation cost because of single hole mounting and quick connect terminals.
5. Amp rating appears on the end of the button for visual indication.
6. Designed to be attractive in the most sophisticated equipment.
7. Designed for long lasting endurance and repeatability.
8. Uniform panel mounting on ratings from 1 amp through 20 amps.
9. Special ratings between 1 amp and 20 amps can be designed for your requirements.
10. Available at all Wood Electric Authorized Distributors for "off the shelf" delivery.
11. Each unit carries the Wood Electric guarantee.

PERFORMANCE CHARACTERISTICS FOR MODELS 374 AND 375

CALIBRATION Will carry continuously 100% of rating. Must trip between 101% and 145% of rating at 25°C. Model 374 will trip between 15-40 sec. at 200% of rated load. Model 375 will trip between 8-20 sec. at 200% of rated load.

AC AND DC May be used on either DC or AC (up to 400 cycles).

INTERRUPTING CAPACITY The Model 374 will successfully interrupt over 2000% of rated load. Model 375 will interrupt a minimum of 300 amps.

OPERATING VOLTAGE Max. voltage on AC is 250 volts. Max. voltage on DC is 32 volts.

DIELECTRIC STRENGTH Over 1500 volts RMS.

VOLTAGE DROP Model 374 is less than 1½ volts. Model 375 is less than ½ volt.

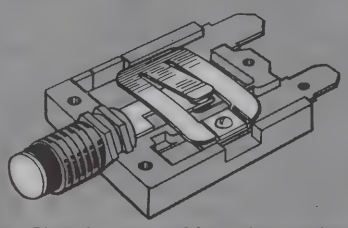
SHOCK Withstands up to 10 G's.

ENDURANCE CYCLING Over 1000 cycles at 200% of rated load.

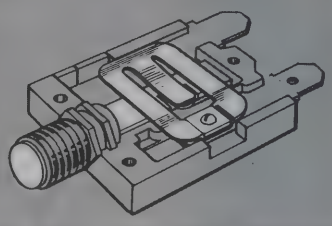
VIBRATION Withstands up to 10 G's at 10-55 CPS.

RESISTANCE Less than 1½ ohms for Model 374. Model 375 is less than ½ ohm.

WEIGHT Less than 1½ ounce.



Taylor Blade in open position. When overload occurs, action of Taylor Blade opens the contacts to allow the spring loaded button assembly to move between contacts.



Taylor Blade in closed position. During normal operation spring tension of the Taylor Blade maintains constant pressure between terminal and blade contacts.

ORDERING INFORMATION

WOOD P/N	AMP RATING	WOOD P/N	AMP RATING
374-201-101	1	375-205-101	5
374-202-101	2	375-207-101	7
374-203-101	3	375-210-101	10
374-204-101	4	375-215-101	15
		375-220-101	20

PRICE SCHEDULE

MODEL	1-9	10-24	25-99	100-249
374	2.52	2.10	1.82	1.61
375	1.62	1.35	1.17	1.04

Minimum Factory Order is 25 pieces. Quantities up to 249 pieces may be obtained from Wood Authorized Distributors at factory prices.

For prices on quantities above 249 pieces, consult factory or local Sales Rep.

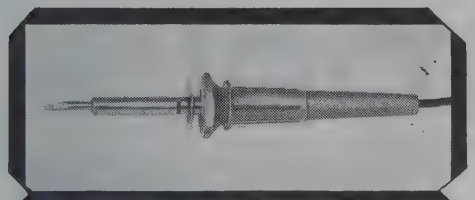
Write for Cat. CB-7-64 for information on full line of Thermal & Magnetic Circuit Breakers.

WOOD ELECTRIC CORPORATION

WOO-1

American Beauty

ELECTRIC SOLDERING IRONS



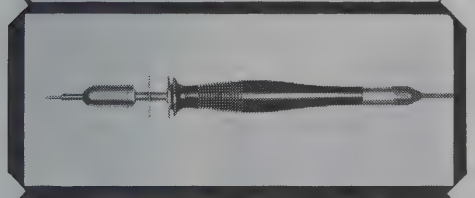
LITTLE DANDY

New kind of quality in economy iron. All parts replaceable in seconds, including element. Plug-type tip. Anti-roll, aerated handle. Heat-deflecting baffle. Super-flexible cord. Perfect balance.

CAT. NO.	TIP. DIA.	WATTS	NET WT.	NET
3110	3/16"	25	3 oz.	$ 4.20
3112	1/4"	40	4¼ oz.	5.60

Two-wire cord is standard. For 3-wire grounding cord and NEMA type plug, add "S3" to CAT. NO. and $1.00 to list price.

*Other options available (including higher wattages)



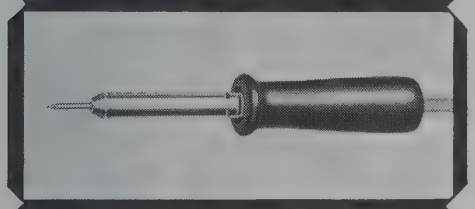
B-SERIES MINIATURES

Newest advance in truly miniature irons. Precise balance. Cool handle. Long-life, "floating," heating element. Anti-roll baffle. Simple three-piece assembly. Boxed with 6′ detachable cord set, 3 assorted tips. Packed 6 to case.

CAT. NO.	TIP. DIA.	WATTS	NET WT.	NET
B-2000-L	1/8"	22½	3 oz.	$ 8.40
B-2500-L	3/16"	30	3 oz.	8.40

Two-wire cord is standard. For 3-wire gounding cord and NEMA type plug, add "S3" to CAT. NO. and $1.00 to list price.

*Other options available

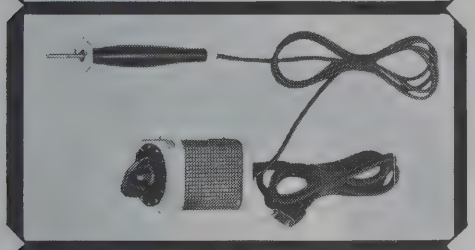


BANTAMS

Small American Beauty irons in wide range of watt-inputs and tip diameters to cover entire range of fine and medium-fine jobs on electronic and electrical production lines.

CAT. NO.	TIP. DIA.	WATTS	NET WT.	NET
3114	1/4"	60	8 oz.	$ 7.28
3118	1/8"	30	6 oz.	5.04
3120	3/16"	30	6½ oz.	5.04
3118-X	1/8"	50	6 oz.	5.60

*Other models & options available

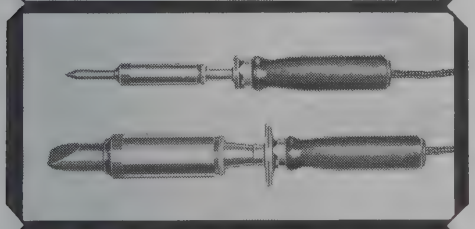


TRANSFORMER TYPES

Variable heat and non-variable heat models. T-6 model shown; precision 6-volt instrument with variety of heat levels, quick tip-heat changes. T-12 and T-30 models non-variable. All models for use where complete isolation from line voltage is desirable or necessary.

CAT. NO.	TIP. DIA.	WATTS	NET WT.	NET
T-6	Needle	Variable	19½ oz.	$16.80
T-12	1/16"	17	1 lb. 3 oz.	14.00
T-30	1/16"	30	1 lb. 12 oz.	15.44

*Other options available



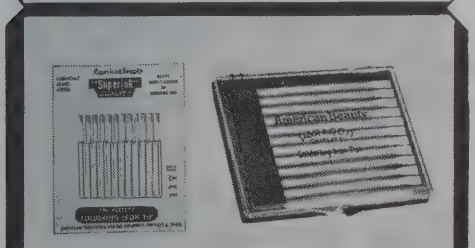
STANDARD SERIES

Hundreds of thousands of these models of American Beauty irons are on production lines all over the world. Stocked in tip sizes from ¼" to 1⅛", input wattages from 60 W to 550 W.

ANGLE-TYPE irons available. (Casings angled for hard-to-reach jobs.)

CAT. NO.	TIP. DIA.	WATTS	NET WT.	NET
3125	¼"	60	7½ oz.	$ 6.30
3138	⅜"	100	16 oz.	8.47
3158	⅝"	200	28 oz.	10.15
3178	⅞"	300	42 oz.	13.51
3198	1⅛"	550	60 oz.	16.94

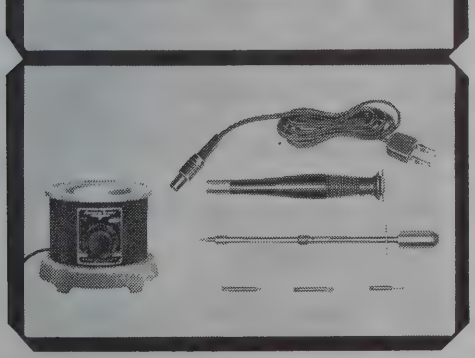
*Nine models available



SOLDERING TIPS—3 GRADES

Made of commercially pure copper rod. Shapes and sizes for all AB irons and other makes as well' Three grades: (1) Nickel-Plated. (2) "SuperioR" Quality—iron-clad working end silver-plated overall. (3) "Paragon" Quality—best tips made for high-spec. soldering; iron-clad; chrome-plated; pre-tinned; maintenance-free; for extra clean work.

Ask for FREE
American Beauty Tip Chart.



PARTS AND ACCESSORIES

You can always get original-equipment-quality parts for any American Beauty Soldering Iron—standardized for quick, easy repair. Also: AB cord sets; spooled and bulk heater cord in 250′ lengths; branding irons; soldering iron temperature regulating stands; safety guards for same; general-purpose solder pots; melting cups or ladles.

*Request American Beauty Catalog for complete selection.

NEW CATALOG—
New American Beauty Catalog now available. FREE.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

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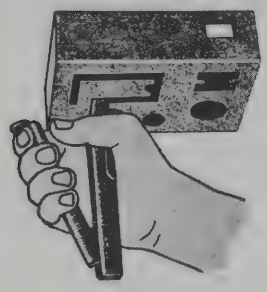
© U.C.P., Inc.

New ADEL HAND OPERATED

NIBBLING TOOL

CUTS SHEET METAL LIKE A PUNCH AND DIE

IDEAL FOR TEMPLETS, SHIMS, MODEL PARTS



RADIO CHASSIS



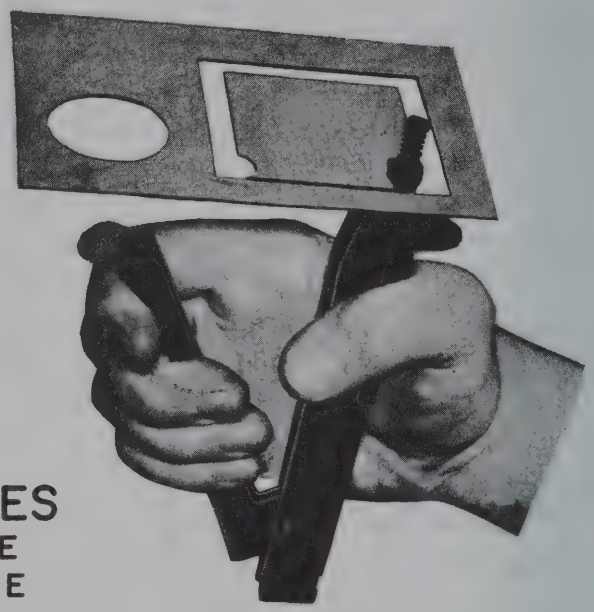
AIR DUCTS



MECHANICAL PARTS



PLASTIC SHEETS



CUTS HOLES
to any SHAPE
any SIZE

IT'S EASY TO USE

Start with a 7/16" hole
then "**NIBBLE**" to the size required.
It cuts **CLEAN** like a punch and die.
No strain or distortion is added to the edges or to the original form.

CUTS round, square, or irregular holes to any SHAPE, any SIZE over 7/16".

NOTCHES clearance on flanges of cabinets or air ducts.

TRIMS undersized holes to fit parts.

Capacity - steel 18ga.(.046) max. aluminum, copper, plastic 1/16".

$3.95 NET

Mfg. ADEL TOOL Co.

BOKER USA IN-DUS-TRONIC TOOLS QUALITY SINCE 1837 ®

DESIGN IN-DUS-TRONIC tools are more streamlined, with slender jaws and fine points, to reach into the tight spots and perform the specific work required of the electronics technician.

TEST AND INSPECTION Individually tested for hardness, each tool must maintain highest standards for handle strength and cutting ability. To assure perfect jaw alignment, pliers must cleanly cut single bond paper strips and snip cotton-covered lamp cord without fraying. Each tool is guaranteed against defects in workmanship and materials.

WORKMANSHIP IN-DUS-TRONIC tools are hot drop-forged from special analysis alloy steel, machined and finished with the same care and precision which have made world-famous BOKER TREE BRAND Fine Cutlery and surgical instruments for over a century. Individually fitted and adjusted, each is accurately heat-treated by HYDRIZING, which minimizes "carburization" and "decarb". Cutting blades are precision-hardened with electronic controls, and honed by hand for keen edges that retain their sharpness.

Individually Boxed

BOKER MANUFACTURING COMPANY

SUBSIDIARY OF THE NEW BRITAIN MACHINE CO.

RADIO AND TV NOSE CUTTING PLIERS

Reaches into tight spots to cut small wires, and to grip at the tips.



NO.	LIST EA.	NO.	LIST EA.
539-4½"	4.40	639-6"	5.20
539-6"	4.40	739-4½"	4.95
939-4½"	4.30	739-6"	4.95
939-6"	4.30		

SIDE TIP NOSE CUTTING PLIERS

Cuts flush at left side of tips. Turn tool over to cut flush at right side.



NO.	LIST EA.	NO.	LIST EA.
S939-4½"	4.75	S739-4½"	5.25
S939-6"	4.75	S739-6"	5.25
S639-6"	5.50		

TRANSVERSE END CUTTING PLIERS

For clean, flush cutting of small wires where ordinary cutters are too bulky.



NO.	LIST EA.	NO.	LIST EA.
523-6"	4.50	632-6"	5.00
932-6"	4.50	732-6"	5.00

SHORT JAW, LONG HANDLE NOSE CUTTING PLIERS

Extra long, narrow handles provide maximum reach of the slender jaws to cut and grip.



NO.	LIST EA.	NO.	LIST EA.
579-8"	4.95	779-8"	5.50
979-8"	5.00		

STOCK NUMBER CODE IDENTIFICATION ON PLIERS

First Digit in Pliers Stock No.	DESCRIPTION OF FINISH	
"5"	Polished Head, Standard Gunmetal Finish Handles — i.e.	51-6"
"9"	Polished Head, Factory molded Red Cushion Grip Plastisol Handles — i.e.	91-6"
"6"	Fully Nickel and Chrome Plated Head and Handles — i.e.	61-6"
"7"	Nickel and Chrome Plated Head, Factory molded Red Cushion Grip Plastisol Handles — i.e.	71-6"

SHORT CHAIN NEEDLE NOSE PLIERS

Sturdy, tapered jaws provide more positive grip. Checker-milled tips.



WITH SIDE CUTTERS

NO.	LIST EA.	NO.	LIST EA.
53-5"	3.50	63-5"	4.25
93-5"	3.65	73-5"	4.25

WITHOUT SIDE CUTTERS

NO.	LIST EA.	NO.	LIST EA.
530-5"	3.00	630-5"	3.60
930-5"	3.15	730-5"	3.60

LONG CHAIN NEEDLE NOSE PLIERS

Slender, checker-milled jaws taper to 1/32" at tips.



WITH SIDE CUTTERS

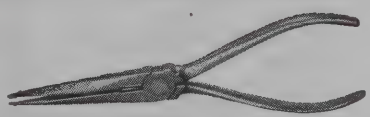
NO.	LIST EA.	NO.	LIST EA.
53-6"	3.75	63-6"	4.55
93-6"	3.95	73-6"	4.55

WITHOUT SIDE CUTTERS

NO.	LIST EA.	NO.	LIST EA.
530-6"	3.15	630-6"	3.75
930-6"	3.35	730-6"	3.70

EXTRA LONG CHAIN NOSE PLIERS

2¾" long jaws add extra reach to checker-milled tips.



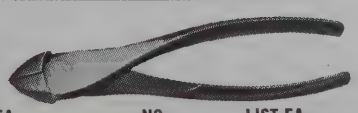
WITH SIDE CUTTERS

NO.	LIST EA.	NO.	LIST EA.
53-7"	4.50	63-7"	5.30
93-7"	4.90	73-7"	5.30

WITHOUT SIDE CUTTERS

NO.	LIST EA.	NO.	LIST EA.
530-7"	3.60	630-7"	4.10
930-7"	3.70	730-7"	4.10

HEAVY DUTY DIAGONAL CUTTING PLIERS



NO.	LIST EA.	NO.	LIST EA.
591-7"	3.65	691-7"	4.50
991-7"	4.00	791-7"	4.50

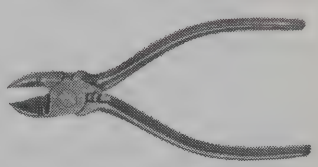
DIAGONAL CUTTING PLIERS



NO.	LIST EA.	NO.	LIST EA.
51-4½"	3.10	61-4½"	3.90
91-4½"	3.30	71-4½"	3.90
51-5"	3.25	61-5"	4.05
91-5"	3.45	71-5"	4.05
51-5½"	3.65	61-5½"	4.45
91-5½"	3.80	71-5½"	4.45
51-6"	3.70	61-6"	4.50
91-6"	3.90	71-6"	4.50
51-7½"	4.20	61-7½"	5.00
91-7½"	4.60	71-7½"	5.00

WIRE STRIPPING CUTTERS WITH INSULATION CRUSHER

"W" notches slit acetate cellulose and other thin insulations. Notch in blades strips heavier insulation. Grooves in handles crush insulation.



NO.	LIST EA.
517-5½"	4.50
917-5½"	4.65
617-5½"	5.00
717-5½"	5.00

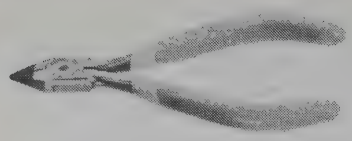
"THROAT-HOLD" DIAGONAL PLIERS

Plastisol inserts back of the blades tightly grip the cut-off end of wire after cut is made, preventing shorts, machine failures, and eye injuries.



NO.	LIST EA.	NO.	LIST EA.
TH51-4½"	4.70	TH91-5"	5.20
TH91-4½"	5.00	TH51-7½"	5.80
TH51-5"	4.85		

© U.C.P., Inc.



NO. XC1-4″ Cushion Grip Handles LIST EA. $20.60

NEW! INLAID TIP CUTTING PLIERS

Special high-speed inserts provide diamond-honed cutting edges of extreme hardness, extending service life in continuous cutting of abrasive wires and ribbons of nickel, silver, gold and copper. Will cut and dress medium diameters of Nichrome, Kovar, Dumet, and fine diameters of full hard wires. Special joint assembly assures precise cutting of component leads and wires in confined areas.

BOKER USA IN-DUS-TRONIC TOOLS QUALITY SINCE 1837 ®

BOKER MANUFACTURING COMPANY

SUBSIDIARY OF THE NEW BRITAIN MACHINE CO.

EXTRA FINE FLAT NOSE PLIERS

Flat, very thin, smooth jaws, spring tempered.



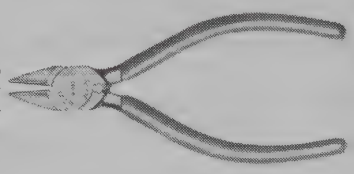
NO.	LIST EA.	NO.	LIST EA.
904-6″	3.80	704-6″	4.20
604-6″	4.20		

WITH STABILIZED TIPS

NO.	LIST EA.	NO.	LIST EA.
ST-904-6″	4.50	ST-704-6″	4.80
ST-604-6″	4.80		

NEEDLE POINT DIAGONAL CUTTING PLIERS

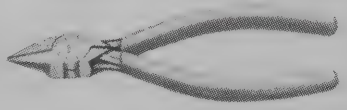
Narrow, pointed nose, semi-flush edges, for close cutting. Lightweight, easy-to-use, in electronics and light assembly. Coil spring keeps jaws open.



NO.	LIST EA.	NO.	LIST EA.
513-5½″	4.50	613-5½″	5.05
913-5½″	4.60	713-5½″	5.05

THIN, NARROW, POINTED DIAGONAL CUTTING PLIERS

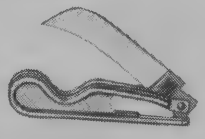
Jaws relief-ground back of blades, to cut in confined areas. Also used for removal of I. F. Cans.



NO.	LIST EA.	NO.	LIST EA.
RA91-5½″	5.15	RA71-5½″	5.95

WIRE JACK POCKET KNIFE

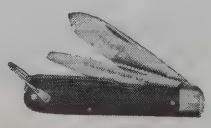
Rugged construction, unbreakable spring. Chrome Vanadium steel blade.



NO.	LIST EA.
75-3¾″	1.50

ELECTRICIANS' UTILITY KNIFE

One blade and one self-locking Screwdriver and Insulation Scraper.



NO.	LIST EA.	
9229	3.00	3¾″ long

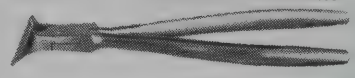
ELECTRONIC DIAGONAL END NIPPERS

Flush-cutting blades, with extremely fine points, set at 22.5° angle. For very fine subminiature work.



NO.	LIST EA.	NO.	LIST EA.
XA582-4½″	6.40	XA782-4½″	7.20
XA982-4½″	6.60		

ANGLE JAW DIAGONAL NIPPERS



Flush cutting blades set at 22½° angle. Fine, pointed tips for precision work in confined areas.

NO.		LIST EA.
AJ-982-4½″	Polished Head. Cushion-grip Handles.	8.80
AJ-482-4½″	Full Polished Head and Handles.	8.95

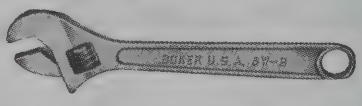
THIN HEAD, FLUSH CUTTING MIDGET DIAGONALS

Head is ground thinner, narrower. Flush edges.



NO.	LIST EA.	
XA981-4½″	4.60	Pointed jaws
XC981-4½″	4.30	Standard shape jaws, slightly shortened

THIN, ALLOY STEEL ADJUSTABLE WRENCHES



Nickel and Chrome Plated		Polished Head, Gunmetal Handles	
NO.	LIST EA.	NO.	LIST EA.
6W-4″	2.88	5W-4″	2.26
6W-6″	2.94	5W-6″	2.30
6W-8″	3.32	5W-8″	2.78
6W-10″	4.20	5W-10″	3.40
6W-12″	6.16	5W-12″	5.15
6W-15″	9.36	5W-15″	8.20
6W-18″	15.42	5W-18″	12.00

Nickel, Chrome-Plated, Cushion-Grip Handles

NO.	LIST EA.	NO.	LIST EA.
P6W-4″	3.08	P6W-10″	4.70
P6W-6″	3.14	P6W-12″	6.70
P6W-8″	3.72	P6W-15″	10.56

LOCKING ADJUSTABLE WRENCHES

Nickel and Chrome Plated		Nickel Chrome Plated Cushion-Grip Handles	
NO.	LIST EA.	NO.	LIST EA.
L6W-6″	3.02	PL6W-6″	3.22
L6W-8″	3.40	PL6W-8″	3.80
L6W-10″	4.28	PL6W-10″	4.78
L6W-12″	6.26	PL6W-12″	6.76

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BOKER USA IN-DUS-TRONIC TOOLS QUALITY SINCE 1837 ®

JEWELERS' 4½" PRECISION PLIERS



JEWELERS' PLIERS SETS

Crystal Case, 5" x 7", lined to nest 4½" Pliers.

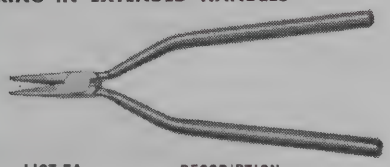
NO.	CONTENTS	LIST
C63	One ea. 681, 683, 684	11.75
C64	One ea. 681, 683, 684, 6517	14.25
C65	One ea. 681, 682, 683, 684, 865	19.50
C73	One ea. 781, 783, 784	11.85
C93	One ea. 981, 983, 984	10.95
C95	One ea. 981, 982, 983, 984, 985	18.00

	POLISHED HEAD, GUN METAL HANDLES		POLISHED HEAD, CUSHION-GRIP HANDLES		FULL NICKEL AND CHROME PLATED		NICKEL, CHROME-PLATED CUSHION-GRIP HANDLES	
	Tool No.	List Ea.	Tool No.	List Ea.	Tool No.	List Ea.	Tool No.	List Ea.
Diagonal Cutting Pliers	581	3.35	981	3.50	681	3.95	781	3.80
End Cutting Nippers	582	3.80	982	4.00	682	4.50	782	4.50
*Needle Nose Pliers	583	3.00	983	3.15	683	3.75	783	3.65
*Flat Nose Pliers	584	3.00	984	3.15	684	3.75	784	3.65
*Round Nose Pliers	585	3.10	985	3.40	685	3.80	785	3.80

*Note: Inside jaws are smooth. Supplied with milled jaws at no extra cost.

PRECISION PLIERS WITH SPRING IN EXTENDED HANDLES

Midget jaws, extra long handles, to reach into deep areas normally inaccessible.



NO.	LIST EA.	DESCRIPTION
L903S-8"	6.75	Extra Fine Needle-Nose Pliers (as 903-4½")
L981S-8"	6.75	Diagonal Cutters
L983S-8"	6.50	Needle Nose Pliers
L984S-8"	6.50	Flat-Nose Pliers
L781S-8"	6.95	Diagonal Cutters
L783S-8"	6.95	Needle-Nose Pliers
L784S-8"	6.95	Flat-Nose Pliers
L703S-8"	6.95	Extra Fine Needle-Nose Pliers (as 703-4½")

TAPERED JAWS, FLUSH CUTTING DIAGONALS

Midget pliers with sharply tapered jaws and very fine flush cutting edges.



NO.	LIST EA.
A981-4½"	4.00

STANDARD SHAPE JAWS, FLUSH CUTTING DIAGONALS

NO.	LIST EA.
C981-4½"	3.80

SHORT NOSE, FLUSH CUTTING DIAGONALS

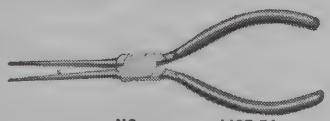
NO.	LIST EA.
E981-4½"	3.90

STOCK NUMBER CODE IDENTIFICATION ON PLIERS

First Digit in Pliers Stock No.	DESCRIPTION OF FINISH	
"5"	Polished Head, Standard Gunmetal Finish Handles — i.e.	51-6"
"9"	Polished Head, Factory molded Red Cushion Grip Plastisol Handles — i.e.	91-6"
"6"	Fully Nickel and Chrome Plated Head and Handles — i.e.	61-6"
"7"	Nickel and Chrome Plated Head, Factory molded Red Cushion Grip Plastisol Handles — i.e.	71-6"

EXTRA FINE NEEDLE NOSE PLIERS WITH STABILIZED TIPS

Dowel pin in jaw engages hole in other jaw when closed, stabilizing tips and maintaining perfect alignment.



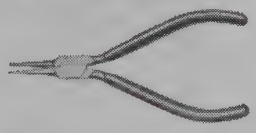
NO.	LIST EA.	NO.	LIST EA.
ST903-6"	4.20	ST-703-6"	4.60

CURVED EXTRA FINE NEEDLE NOSE



NO.	LIST EA.
508-6"	4.20
908-6"	4.20
608-6"	4.80
708-6"	4.80

SHORT JAW, EXTRA FINE NEEDLE NOSE PLIERS



NO.	LIST EA.
503-4½"	3.60
903-4½"	3.90
603-4½"	4.25
703-4½"	4.25

EXTRA FINE NEEDLE NOSE PLIERS

Long, very slim, spring tempered jaws for assembling miniature parts.



NO.	LIST EA.	NO.	LIST EA.
503-6"	3.30	603-6"	3.95
903-6"	3.50	703-6"	3.95

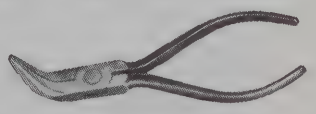
LONG NEEDLE NOSE PLIERS

Unusual gripping ability without distortion for such long, slender jaws. Checker-milled at tips.



NO.	LIST EA.	NO.	LIST EA.
533-6"	3.50	633-6"	4.00
933-6"	3.70	733-6"	4.00

CURVED NEEDLE NOSE PLIERS



NO.	LIST EA.
538-6"	3.80
938-6"	4.00
638-6"	4.30
738-6"	4.30

END CUTTERS AND LEAD-IN STRIPPERS

Quickly strips TV transmission cable. Full throat for general purpose cutting.



NO.	LIST EA.	NO.	LIST EA.
902-6"	4.80	702-6"	5.25

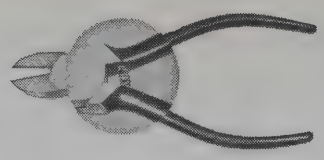
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BOKER USA IN-DUS-TRONIC TOOLS QUALITY SINCE 1837 ®

PLIERS WITH SPRING IN HANDLES

Bauer type coil spring keeps pliers in open position, ready-to-work.



Specify "S" as a Suffix to tool number (i.e., **91S-5"**
Additional List Ea. .30

HOLDING FORCEPS

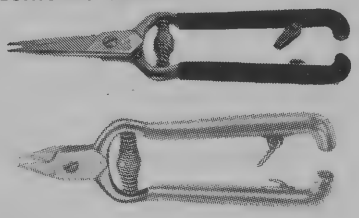
Slender, long-reaching, with ratchet type lock. Acts as third hand, and as heat sink. Box joint, polished stainless spring steel.



NO.	LIST EA.	
HF-4½"	4.95	Straight Pattern
HF-6¼"	5.25	Straight Pattern
HFC-6¼"	5.50	Curved Pattern

ELECTRONIC SNIPS

Pointed, serrated blades cut wire, filament, sheet metal, insulating materials, plastics, fabrics. spring keeps blades open, ready-to-work.



NO.	LIST EA.	
PA-7⅛"	3.95	Long Blades
P4E-6½"	4.70	Short Blades

ELECTRICIANS' SNIPS

Scraper, file on back of blade.



NO.	LIST EA.
709-5"	2.95

Nickel Plated —

SHORT JAW, LONG HANDLE, NEEDLE NOSE PLIERS

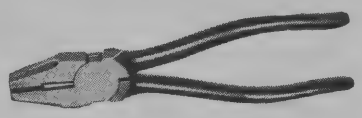


NO.	LIST EA.	NO.	LIST EA.
573-8"	3.50	673-8"	4.00
973-8"	3.90	773-8"	4.00

SHORT JAW, LONG HANDLE DUCKBILL PLIERS

NO.	LIST EA.	NO.	LIST EA.
574-8"	3.40	974-8"	3.50

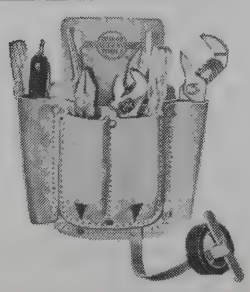
ELECTRICIANS' SIDE CUTTING PLIERS



NO.	LIST EA.	NO.	LIST EA.
92-6"	3.80	52-6"	3.60
92-7"	4.30	52-7"	3.90
92-8"	4.65	52-8"	4.25

LEATHER TOOL HOLSTER

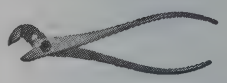
Five pockets of pliable form-fitting Russet leather. Stitched with 7-cord linen hot waxed thread, locked to solid leather back with steel rivets. Handy tape holder is of leather, not chain, an extra safety insulation feature.



NO.	LIST EA.
99	5.95

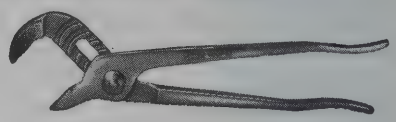
MIDGET "GROOVE-GRIP" PLIERS

Slender and wiry, indispensable for gripping small nuts and other objects in tight spots.



NO.	LIST EA.	
6517-5"	2.65	Nickel, Chrome Plated
PS6517-5"	2.75	Nickel, Chrome Plated, Cushion Grips

"GROOVE-GRIP" 5-ADJUSTMENT PLIERS



NO.	LIST EA.	
6507-6½"	3.00	Nickel and Chrome Plated
6507-8"	3.25	
6507-10"	3.60	
P5507-6½"	3.00	Polished Head Cushion-Grip Handles
P5507-8"	3.30	
P5507-10"	4.00	
P5507-14" 7 Adjustment	4.50	

COMBINATION SLIP-JOINT PLIERS



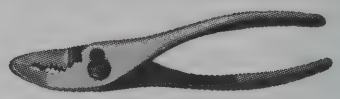
NO.	LIST EA.	
6041-6½"	1.60	Nickel and Chrome Plated
6041-8"	1.95	
6041-10"	2.80	

THIN NOSE COMBINATION PLIERS



NO.	LIST EA.	
6042-6½"	1.75	Nickel, Chromed

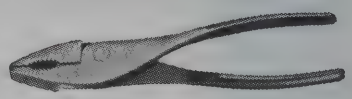
BENT THIN NOSE COMBINATION PLIERS



NO.	LIST EA.	
6043-6½"	2.00	Nickel, Chromed

PROFESSIONAL SLIP-JOINT SIDE CUTTERS

Flat, serrated nose for gripping. Curved inner section to grip round shapes. Keen-cutting knives.



NO.	LIST EA.	
6395-7½"	4.00	Nickel, Chromed

BENT EXTRA FINE NEEDLE NOSE PLIERS



NO.	LIST EA.	NO.	LIST EA.
B508-6"	4.25	B608-6"	4.80
B908-6"	4.20	B708-6"	4.80

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GC ELECTRONICS

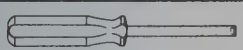
GC ALIGNMENT TOOLS



G-C SHORTY ALIGNMENT TOOL
A convenient tool for hard-to-get-at places. Has 3/16" shaft, 2" length. Over
3/16" shaft, 2" length. Overall length of tool 4".
Cat. No 9298 ..... Net $ .48



G-C COLOR TV TOOL
Used on convergence controls and others in color sets. The outer sleeve fits into the O.D. adjusting slot and the inner drive penetrates to the inside slot.
Cat. No. 9299 ..... Net $1.45



G-C RCA WRENCH FOR VHF CHANNEL SELECTOR
Tool is made to fit square headed set screws in RCA VHF Channel Selector gear assembly without removing chassis.
Cat. No. 6035 ..... Net $1.20



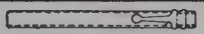
G-C NEW TRANSISTOR I.F. CORE ALIGNMENT TOOL
One end square .055, opposite end rectangle nib. .047 x .078 to reach bottom slugs in iron cores.
Cat. No. 9440 ..... 11-3/4" long ..... Net $ .63

G-C RCA ALIGNING TOOL
Made of 7/32" Butyrate rod, narrow screwdriver on one end and screw nig inserted on other end.
Cat. No. 5003 ..... Net $ .53

G-C NO-METAL INSULATING ADJUSTMENT SCREWDRIVER
Made of black bone fibre. Indispensable for aligning all-wave sets.
Cat. No. 5004 ..... 7" long ..... Net $ .48
Low-Loss Polystyrene Type—Ideal for U.H.F. Sets



G-C NEUTRALIZING TOOL
Combination screw driver and 5/16" hex wrench. Approved by U. S. Army Signal Corps.
Cat. No. 5027 ..... Net $2.10

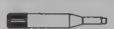


G-C 4-in-1 ALIGNMENT TOOL
Screw driver with metal nib, 1 4" hex wrench slotted and 5 16" hex wrench on other end.
Cat. No. 5014 ..... Net $1.00

G-C 5-in-1 ALIGNMENT TOOL
Consists of screw driver with metal nib, 5 16" hex wrench, 1 4" hex wrench slotted, with metal screw driver on one end.
Cat. No. 5015 ..... Net $1.27

G-C 6-in-1 ALIGNMENT TOOL
Consists of screw driver with metal nib, 5 16" hex wrench, 1 4" hex side wrench and 1 4" hex end wrench slotted.
Cat. No. 5016 ..... Net $1.57

G-C ALIGNMENT SCREWDRIVER
Low inductance metal tip screwdriver made of Butyrate material.
Cat. No. 5000 1 4" Diameter x 6" Tool Net $ .42

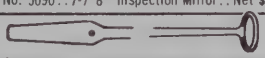


G-C TV ALIGNMENT TOOL
Very short, sturdy tool with a fine metal screwdriver blade.
Cat. No. 5066 2-1 2" long, 3 16" Shaft Dia. Net $ .40

G-C TV ALIGNING WRENCH
New tool with 1 8" square socket wrench, 7 32" shaft with insulated handle.
Cat. No. 5080 ..... Net $ .60



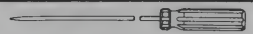
G-C INSPECTION MIRROR
Handy inspection mirror to inspect parts, coils, wiring, etc. Made of metal shaft with glass mirror and a plastic handle.
Cat. No. 5090 .. 7-7 8" Inspection Mirror .. Net $ .42



G-C NEW ALL PLASTIC INSPECTION MIRROR
Use to inspect coils, resistors, sockets, etc. while the chassis is hot. No danger of shorting.
Cat. No. 5090-P ... 7-7 8" Plastic Mirror .. Net $ .38



G-C K-TRAN TOOL
Specially designed for K-tran and I.F. transformers. Butyrate material, screwdriver on both ends.
Cat. No. 5097 ..... Net $ .78
6" long, 5 32" Delrin tip, 1 8" metal Tip



G-C TV CHANNEL TUNING TOOL
Completely insulated, non-metallic tool with long 1 8" narrow blade. Made of bone fibre.
Cat. No. 8195 7-1 4" long, 1 8" shaft dia. Net $ .72

G-C TV AND FM TUNING TOOL
Special short tool with fine recessed screwdriver top for Television and FM adjustments. Made of Butyrate
Cat. No. 8196 ..... Net $ .42
2-1 2" long, 7 32" shaft dia.

G-C TV CORE ALIGNER
For Motorola and other sets using Stackpole or other stud-type cores that are not slotted. Milled steel insert on one end, thin screwdriver blade on other end.
Cat. No. 8271 16" long, 7 32" shaft dia. Net $ .60



G-C TV I.F. OSCILLATOR ALIGNER
Specially made for I.F. and oscillator adjustments. Will fit all makes of sets—R.C.A., G.E., Philco, Admiral and others.
Cat. No. 8272 6-1 2" long, 1 4" tip dia. Net $1.20



G-C TV ALL-PURPOSE ALIGNER
Specially made for TV I.F. adjustments. Very thin spring steel tip is recessed so the tool will guide itself over the screws.
Cat. No. 8273 8" long, 7 32" shaft dia. Net $ .92



G-C TV LONG REACH ALIGNER
Specially made for Admiral, Zenith, R.C.A. and other sets for adjustments of nested iron cores that are hard to reach.
Cat. No. 8274 .. 9" long, 1 8" shaft dia. .. Net $ .90



G-C TV ZENITH UNIVERSAL ALIGNER
Specially designed for Zenith and other sets. Made of bone fibre and plastic handle.
Cat. No. 8275 5" long, 1 8" shaft dia., 1 4" Net $ .52

G-C TV DUPLEX ALIGNER
An all-purpose TV aligner for trimmers and I.F. transformers. Made of Butyrate material with extra thin spring steel tips.
Cat. No. 8276 6" long, 7 32" shaft dia. Net $ .52

G-C TV "SHORTY" DUPLEX ALIGNER
Specially made for trimmer and I.F. transformers where space does not permit the use of a longer tool.
Cat. No. 8277 2-1 2" long, 7 32" shaft dia. Net $ .52

G-C TV TUNING WAND
Brass insert on end reduces inductance and iron core on other end increases the inductance.
Cat. No. 8278 6" long, 7 32" shaft dia. Net $ .60

G-C TV CORE ALIGNER
Tool has a recessed steel milled slot to fit over the Stackpole and other type stud cores that are not slotted.
Cat. No. 8279 ..... Net $ .75
7-1 2" long, 7 32" shaft dia.

G-C NEW ZENITH TV WRENCH & ALIGNER
New nylon plastic molded special tool made specially for Zenith TV sets.
Cat. No. 8282 ..... Net $ .37
5-7 16" long, .100 Dia. Hex Wrench, .109 Screw Driver Dia.



G-C "SHORTY" TV ALIGNMENT SCREW DRIVER
Only 2" long overall to adjust hard-to-get-at places under TV tubes, etc.
Cat. No. 8289 2" long, 7 32" shaft dia. Net $ .60



G-C UNIVERSAL SCREW DRIVER ALIGNER
Made of unbreakable flexible clear plastic shaft and an amber plastic handle.
Cat. No. 8290 7" long, 7 32" shaft dia. Net $ .70

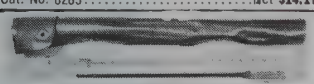


G-C ZENITH-ADMIRAL NYLON HEX WRENCH
New nylon hex wrench alignment tool for Zenith, Admiral and other sets.
Cat. No. 8606 .. 5" wrench, 11" long .. Net $ .48
Cat. No. 8606-L .. 11" wrench, 11" long .. .63

GC ALIGNMENT TOOL KITS



MASTER DELUXE TOOL KIT
A super-deluxe kit in a leatherette roll type case. Contains 25 tools and includes all TV alignment tools except extra long ones (over 9").
Cat. No. 8283 ..... Net $14.17



DELUXE ALIGNMENT TOOL KIT
Case is made of durable leatherette for long service. Steel tips are extra thin and of the best grade hardened spring steel. Kit contains one each of 16 tools.
Cat. No. 8280 ..... Net $8.63



NEW TINNERMAN NUT REMOVER
G-C Tinnerman Nut Remover is a handy dual purpose tool for removing large or small tinnerman nuts with just a twist. Eliminates fumbling with hard-to-remove nuts.
Cat. No. 9355 ..... Net $ .93



G-C ILLUMINATED INSPECTION AND SERVICE MIRROR
A hinge-mounted mirror fastens to a 6" transparent lucite rod which transmits light from a small anodized aluminum flashlight.
Cat. No. 8725 ..... Net $2.02
7 8" Mirror, frame O.D. 1-1 16"



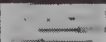
G-C CONTACT BURNISHING TOOL KIT
A complete kit for the servicing of relays, switches, etc. where critical contact points must be kept clean.
Cat. No. 9339 ..... Net $ .75



STANDARD ALIGNMENT TOOL KIT
Made to last and wear—a quality kit; contains 9 essential tools in roll type case.
Cat. No. 8455 ..... Net $4.77



G-C SPEEDEX SLIM TYPE SOLDER IRON TIPS
A new high-heat, turned-down tip made of one piece copper. Will fit 3/8" irons. Tips 4-1/2" long.
Cat. No. 8741 ..... Net $ .73



G-C No. 5040 TOP 12 TOOL KIT
12 most popular TV alignment tools. Plastic roll-up case.
Cat. No. 5040 ..... Net $7.50



CB ALIGNMENT TOOL KIT
Plastic pouch with nine precision tools for tuning I.F. transformers, R.F. coils, Antenna and oscillator coils; countless other fine adjustments.
Cat. No. 9210 ..... Net $4.89



G-C SOLDER IRON TIPS
Bright plated to resist corrosion. These tips are made of best grade hard-drawn copper.
Dia. Long
Cat. No. 724 1/4" x 3" Net $ .50
725 5/16" x 4-1/2" .55
726 3/8" x 4-1/2" .62

GC SERVICE AIDS....WIRE STRIPPERS .... GC SERVICE AIDS...WIRE STRIPPERS



G-C TV CHASSIS SUPPORT
Prop chassis to easy working position on your bench or in the home. Simply slip on the flange of chassis, tighten thumb screws and tilt chassis to position desired.
Cat. No. 9176 Pair ..... Net $1.80

SPEEDEX WIRE STRIPPER KITS
Complete with Wire Strippers and seven different size blades in plastic box. Handy for tool box, home workshop, maintenance and production.
Cat. No. 733-K ... Standard Stripper Kit ... Net $10.83
744-K .. Automatic Stripper Kit .. Net $13.16
766-K .Speed-O-Matic Stripper Kit Net $13.16

SPEEDEX STANDARD WIRE STRIPPER
Popular inexpensive Speedex model for 90% of all stripping jobs. Blades are inter-changeable, hardened and precision ground to razor sharp edges

No.	For Sizes Listed Below
733	12 to 20 Wire
733-A	14 to 30 Wire
733-B	10 to 18 Wire
733-C	8 to 10 Wire
733-D	16, 18, 20, 22 Wires
733-E	14, 16, 18 Wires
733-F	10, 12, 14 Wires
733-G	For No. 18 POSJ or Parallel Wire
733-H	For 300 ohm TV and FM twin transmission line
733-I	10, 12, 14, 16, 18, 20, 22 Wire
733-M	10 to 20 Wire
733-N	Straight Cutter Blades

Cat. No. 733 ..... Net $4.77

SPEEDEX AUTOMATIC WIRE STRIPPER
Equipped with "Trig-O-Matic" Stay-Open feature; keeps wires from being crushed.

No.	For Sizes Listed Below
744	12 to 20 Wire
744-A	14 to 30 Wire
744-B	10 to 18 Wire
744-C	8 to 10 Wire
744-D	16, 18, 20, 22 Wires
744-E	14, 16, 18 Wires
744-F	10, 12, 14 Wires
744-G	For No. 18 POSJ or Parallel Wire
744-H	For 300 ohm TV and FM twin transmission line
744-I	10, 12, 14, 16, 18, 20, 22 Wire
744-M	10 to 20 Wire
744-N	Straight Cutter Blades

Cat. No. 744 ..... Net $5.93

SPEEDEX SPEED-O-MATIC WIRE STRIPPER
Fully automatic delayed return action to prevent crushing fine wires. The Speed-O-Matic combines the features of all Speedex Wire Strippers.

No.	For Sizes Listed Below
766	12 to 20 Wire
766-A	14 to 30 Wire
766-B	10 to 18 Wire
766-C	8 to 10 Wire
766-D	16, 18, 20, 22 Wire
766-E	14, 16, 18 Wire
766-F	10, 12, 14 Wire
766-G	For No. 18 POSJ or Parallel Wire
766-H	For 300 ohm TV and FM twin transmission line
766-I	10, 12, 14, 16, 18, 20, 22 Wire
766-M	10 to 20 Wire
766-N	Straight Cutter Blades

Cat. No. 766 ..... Net $5.93

SPEEDEX WHIZ WIRE STRIPPER
Economy model—an all round general use wire stripper. Precision milled, hardened steel cutters.
Cat. No. 788 3 Hole Blade, Gauges 12 thru 22
788-B 3 Hole Blade Gauges 10 thru 16
788-D 4 Hole Blade Gauges 14 thru 24
788-H 300 ohm Blade for Twin Lead-In
Cat. No. 788 ..... Net $3.97

GC ELECTRONICS

GC ALIGNMENT TOOLS & Service Aids



GC DUO-TONGS
Universal Fuse Pullers . . .will accommodate all types of fuses, including household screw-in plug type, industrial cartridge fuses up to 3/4" or 100 amp. capacity, as Automotive, Aircraft, Television and Electronic Industries. Non-conductive, non-inflammable, and virtually unbreakable thus exceeding all Military Specifications.
Cat. No. 9356 ..... Net $ .89



HEAT SINK
Protects Transistors and Diodes when Soldering. . . firm grip. Aluminum will not stick to solder.
Cat. No. 9077 ..... Net $ .36

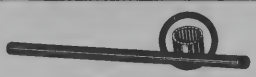


G-C SWED. STEEL SPEAKER SHIMS
Four sizes are furnished in a handy gold-lettered partitioned snap case. .004, .006, .008, and .010 in. Instructions included with kit.
Cat. No. 701. ..... Net $ .53

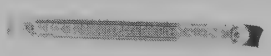
CAPACITOR AND TUNER ADJUSTING TOOL
For trimmer capacitors, sealed capacitors, and miniature L. C. Tuners. White Delrin with .050" hex head one end and screwdriver tip on the other end. Overall length 5-1/8".
Cat. No. 8605 ..... Net $ .63



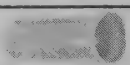
GC CAPACITOR TAB TWIST TOOL
For replacing twist lock condensors. Slotted end fits over capacitor tabs; won't slip off. A quick twist locks or unlocks the tabs. 8" long; plastic handle.
Cat. No. 9446 ..... Net $ .89



SHAFT EXTENSION INSULATOR
Standard TV control 21 Suregrip ribs . . . Fits all shafts. Cut off worn ends, or to desired length.
Cat. No. 5150 ..... Net $ .36

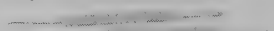


HI-VOLTAGE GAUGE
Measures TV Voltage Pulse . . . No current drain during operation. Snaps directly to plate cup of any listed tubes. Push plunger in slowly till neon light glows. Voltage read on calibrated rod.
Cat. No. 8840 ..... Net $2.30



TWISTMASTER
Twice the Leverage of the Bare Hand . . . Slips easily on any standard screwdriver. Insulates against shock, prevents blisters.
Cat. No. 9320 ..... Net $ .29

PIGTAILER
Makes connections quickly and easily . . . For lengthening pigtails, repairing broken leads, connections, tuners, printed circuits. For 18 gauge wire.
Cat. No. 5077 ..... Net $1.20



SOLDERING AID TOOLS
Won't stick to Solder...Heat-treated tool steel, chrome plated.
Cat. No. 9075 ..... Straight ..... Net $ .80
Cat. No. 9076 ..... Angled ..... Net $ .80



GC MAGNAVOX TUNING TOOL
Head for Magnavox chassis Nos. 201 and 202 and other sets. Hex wrench on both ends, one end undercut so it will reach bottom slugs in iron coils.
Cat. No. 8284 ..... Net $ .48



DOUBLE END HEX CORE ALIGNER
Adjusts Coil Slugs...General purpose alignment tool, coil slug adjuster. Both ends are .075" Hex; one end undercut.
Cat. No. 9300 ..... Net $ .48



G-C PLASTIC SARAN WOVEN GRILLE CLOTH
A beautiful "lumite" plastic woven cloth in attractive patterns. Easily cleaned with a damp cloth. Won't stain, rot or mildew.

Cat. No. 8736	12"x18"	Bronze & Gold	Net $ .98
8739	36"x36"	Bronze & Gold	Net 5.55
8737	12"x18"	Ecru & Ivory	Net .98
8740	36"x36"	Ecru & Ivory	Net 5.55

G-C GRILLE CLOTH ASSORTMENT
All patterns are modern and the assortment will provide for nearly all of the smaller and moderate size speaker grille openings.
Cat. No. 9114 ..... Net $1.08



G-C ORNAMENTAL METAL GRILLE SCREEN
Made of heavy metal, finished in beautiful "Brushed Brass-Rich Gold Color" and lacquered for durability.

Cat. No. 9252	12"x18"	Net $	2.10
9253	18"x24"		3.67
9254	24"x36"		6.27
9255	24"x48"		8.67
9256	36"x48"		11.70



3-IN-1 HEX CORE ALIGNER
Adjusts Coil Slugs . . . For Magnavox sets and others Hex ends, one .100" with under-cut shaft; other end is .075" and .100".
Cat. No. 9302 ..... Net $ .55

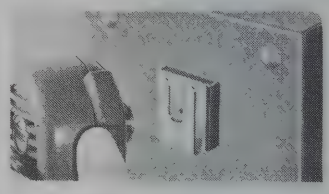
DOUBLE END ALIGNER
Adjusts Coil Slugs . . . For coil slugs on Webcor and other sets. One end .075" Hex shaped with undercut shaft; other is a handy screw driver.
Cat. No. 9304 ..... Net $ .48

G-C TV GRILLE CLOTH
New, modern patterns specially selected to blend in with the best of television cabinets. Gold metallic braid makes this an outstanding TV grille cloth. Colors: Walnut, Mahogany and Blonde.(Specify color when ordering).

Cat. No. 8656-E	Envelope 18"x24"	Net $1.92
8657-E	Envelope 24"x36"	3.50
8658-E	Envelope 36"x36"	5.13
8659	36"Wide, per yard, bulk	4.97

G-C RADIO CABINET SPEAKER GRILLE CLOTH
The cloth is supplied in light and dark shades in patterns for both small and large cabinets. It is also available in the light and ivory shades for light wood and plastic cabinets. Colors: Walnut, Mahogany, Ivory. (Specify Color Wanted).

Cat. No. 949-1	1-Yard Packages	Net $3.78
949-1R	40"Wide Cont. Length, Yd	3.60
949-2R	50"Wide Cont. Length, Yd	3.90
940	18"x20"	.98
941	9"x18"	.45
942	12"x12"	.65
943	14"x18"	.60
944	24"x13"	.82
945	18"x13"	.53
955	18"x25"	1.73



MAGNETIC MICROPHONE HOLDER
For Citizens Band and other Mobile Radio units. No holes to drill, no brackets to mount. Attach to any steel surface. Capable of holding up to 12 lbs. Clips to Microphone.
Cat. No. 65-525 ..... Net $ .99

GC ALIGNMENT TOOLS ● GC ALIGNMENT TOOLS ● GC ALIGNMENT TOOLS



G-C NEW NYLON TV LONG REACH ALIGNER
Long-reach TV aligner with insulated metal shaft and nylon tip. 12-1/4" long overall, .195 Shaft Dia.
Cat. No. 8607 ..... TV Tool ..... Net $1.60

G-C ALIGNMENT TOOL
Handy to align and adjust TV sets, radio sets, etc. Made of clear plastic 5" long x 3/8" dia.
Cat. No. 8609 ..... Net $ .63



G-C TV 2-IN-1 LONG-REACH DUPLEX ALIGNER
Made of clear, unbreakable plastic material. Ends colored red and blue for size identification. Tips are made of spring steel recessed for easy location of stud.

Cat. No. 8721	9" long, 7/32" Shaft Dia.	Net $	.78
8722	7" long, 7/32" Shaft Dia.	Net $	.67

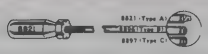


NEW G-C K-TRAN TELEVISION ALIGNER
Specially made for K-Tran I.F. Transformer tuner slugs. Precision made of bone fibre.
Cat. No. 8727 6-1/4" long, 5/32" Tip Dia. Net $ .65



TV LONG REACH ALIGNMENT SCREWDRIVER
Made of bone fibre, extra thin 1/8" diameter screw drivers for adjustment of TV receivers. Screw driver tip on both ends--can be re-ground.

Cat. No. 8728A	1/8"x 7" long	Net $	.43
8728	1/8"x12" long		.53
8729	1/8"x16" long		.70



G-C LONG ARM TV TOOL PLASTIC SHAFT
Extra-long-reach alignment tool for Zenith sets and others where adjustments are hard to get at. Tool is 18" long overall. 18" long, 7/32" Shaft Diameter.

Cat. No. 8821	TV Tool (Type A)	Net $	1.00
8896	TV Tool (Type B)		1.00
8897	TV Tool (Type C)		1.00



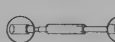
ZENITH-RCA ALIGNING TOOL WITH HANDLE
For better grip and easier adjustments. Length is 2-1/2" with a 1-1/2" shaft length. 7/32" diameter blade with recessed slot in blade end.
Cat. No. 9051 ..... Net $ .58



G-C STANDARD COIL SLUG TUNER ADJUSTING TOOL
A new special slug tuning tool for adjusting Standard Tuners, etc. Completely insulated. 7-1/2" long, 1/4" shaft diameter shaft ends .170 diameter.
Cat. No. 9087 ..... Net $ .75



G-C ADJUSTABLE SHORTY
Recessed tip TV alignment tool. Adjustable from 1-1/4" to 2" in length, for hard-to-get-at places.
Cat. No. 9090 ..... Net $ .65



G-C DOUBLE END IRON CORE TOOL
All nylon hex tool for cores with .125 hex opening. One end of tool undercut so it can reach the bottom slug in coils without turning the top slug.

Cat. No. 9091	5" long	Net $	.48
9091-L	11" long		.70



G-C PRINT KOTE SOLDER AID PROBE
Handy, fine point probe specially designed to aid in probing and soldering printed circuits.
Cat. No. 9093 ..... 8" Length ..... Net $1.00



G-C PRINT KOTE BRUSH AND SCRAPER
Fine Stainless Steel brush and hardened steel scraper are required to scrape and clean the Silicone Resin from printed circuits.
Cat. No. 9094 ..... 8" Length ..... Net $ .98



G-C SLUG RETRIEVER TOOL
A precision made tool with hardened steel tips made for removing lost TV tuner slugs in Standard Coil tuners. Ends ground to fit standard coils.

Cat. No. 9096	12" Retreiver	Net $	2.70
9097	15" Retreiver		3.25

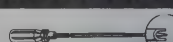


G-C MINI HOLD SCREWDRIVERS
Designed with exclusive "Wedge Action" for gripping of tiny screws. (Nos. 0, 1, 2, 3 and No. 8 set screws and smaller) Special short length (2-7/8" when in use).

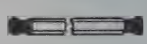
Cat. No. 9346	3-1/4" long, 2-7/8" in use	Net $	2.14
9347	7" long, 6-3/4" in use		2.40



G-C RCA TV ALIGNMENT TOOL
Double end nylon tool with a recessed metal tip on one end and a plastic slot on the other end.
Cat. No. 9150 ..... 6" Length ..... Net $ .93



G-C SCREW STARTER SCREW DRIVER
A handy screw holding screwdriver that will start screws in hard-to-get-at places. Holds the screw securely while it starts it.
Cat. No. 9148 ..... 12" ..... Net $2.75



G-C DUAL NUT STARTER
New tool that holds and starts hex nuts or hex head screws in hard-to-get-at places. Fits 1/4" and 5/16" hex nuts. Pat. 2664021.
Cat. No. 9147 ..... Net $1.85



G-C TV AND AUTO RADIO WRENCH
Special female slotted wrench to remove screws and stud screws from auto radios and backs of TV sets, etc.
Cat. No. 9211 ..... Net $1.20



G-C FIBREGLASS SCREWDRIVER
Gives full protection on hot chassis when adjusting high potentials. For close-up hard-to-reach places.
Cat. No. 9291 ..... 7" ..... Net $ .85

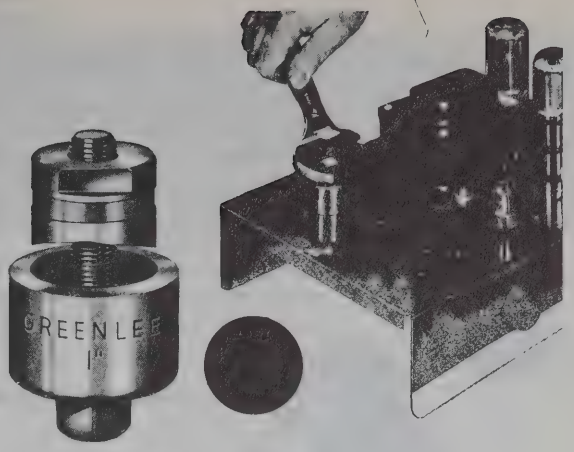


G-C NYLON HEX TOOLS
For adjusting iron cores inside mounted chassis, and tuner adjustment of iron and brass slugs with hex heads. Has .100" hex and 5/32" handle.

Cat. No. 9295	11"x.100" Hex	Net $	.63
9296	11"x.075" Hex		.63
9297	11"x.075" Hex		.63

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CHASSIS PUNCHES FOR RADIO, TV AND ELECTRONIC WORK



First choice of amateur and professional electronic craftsmen for cutting uniform holes in metal, hard rubber, plastics, etc.

Greenlee chassis punches save hours of tedious drilling, sawing, filing and hand fitting . . . produce clean, true holes in seconds for sockets, controls, meters and other components.

Easy to operate. Simply insert the punch in small drilled hole . . . a few quick turns with a hand wrench does the job. Cuts through up to 16-gauge metal.

For faster punching with punches 11/16" and larger, use Greenlee No. 7646 Hydraulic Knockout Punch Driver or No. 1804 Ratchet Knockout Punch Driver

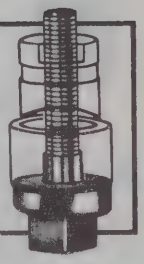
No. 730 Round Chassis Punches

Swiftly cut clean, accurate holes in chassis, cabinets and panels for sockets, plugs, electronic controls, meters, panel lights, etc. Cuts up to 16-gauge metal. For easier hand operation use ball bearing drive shown on page 41.

No. 730X—Sizes 1-1/8", 1-3/16", 1-1/4", 1-3/8" and 1-1/2" are also available, as the No. 730-X, with a 3/4" heavy-duty drive screw for cutting up to 10-gauge metal and stainless steel sheets.

No. 730M is available for punching 2-25/32" diameter holes for meter units.

For easier hand operation on No. 730 Round Chassis Punches use ball bearing drive screw and nut. Ball bearings soak up friction . . . enable workmen to punch holes faster, with less effort.



Hole Size	Control No.	Cat. No.	Description
1/2"	500 2408.6	730	Complete
	500 6996.9	AV-1760	Punch
	500 4235.1	AV-1759	Die
	500 4218.1	AV-1675	1/4" Screw
9/16"	500 2433.7	730	Complete
	500 4230.0	AV-1754	Punch
	500 4229.7	AV-1753	Die
	500 4218.1	AV-1675	1/4" Screw
5/8"	500 2409.4	730	Complete
	500 4223.8	AV-1742	Punch
	500 4224.6	AV-1743	Die
	500 4218.1	AV-1675	1/4" Screw
11/16"	500 2410.8	730	Complete
	500 4228.9	AV-1752	Punch
	500 4227.0	AV-1751	Die
	500 6976.4	AV-322	3/8" Screw
3/4"	500 2411.6	730	Complete
	500 3998.9	AV-113	Punch
	500 3999.7	AV-114	Die
	500 6976.4	AV-322	3/8" Screw
13/16"	500 2412.4	730	Complete
	500 4226.2	AV-1745	Punch
	500 4225.4	AV-1744	Die
	500 6976.4	AV-322	3/8" Screw
7/8"	500 2413.2	730	Complete
	500 4006.5	AV-121	Punch
	500 4007.3	AV-122	Die
	500 6976.4	AV-322	3/8" Screw
15/16"	500 2414.0	730	Complete
	500 4238.6	AV-1762	Punch
	500 4237.8	AV-1761	Die
	500 3996.2	AV-112	3/8" Screw
1"	500 2415.9	730	Complete
	500 3986.5	AV-87	Punch
	500 3987.3	AV-88	Die
	500 3996.2	AV-112	3/8" Screw
1-1/16"	500 2416.7	730	Complete
	500 4240.8	AV-1763	Punch
	500 4242.4	AV-1764	Die
	500 3996.2	AV-112	3/8" Screw
1-1/8"	500 2417.5	730	Complete
	500 3990.3	AV-91	Punch
	500 3991.1	AV-92	Die
	500 3996.2	AV-112	3/8" Screw
1-5/32"	500 2428.0	730	Complete
	500 3984.9	AV-83	Punch
	500 3985.7	AV-84	Die
	500 3996.2	AV-112	3/8" Screw
1-3/16"	500 2418.3	730	Complete
	500 4000.6	AV-115	Punch
	500 4001.4	AV-116	Die
	500 3996.2	AV-112	3/8" Screw
1-1/4"	500 2419.1	730	Complete
	500 4002.2	AV-117	Punch
	500 4003.0	AV-118	Die
	500 3996.2	AV-112	3/8" Screw
1-5/16"	500 3912.1	730	Complete
	500 6587.4	AV-1747	Punch
	500 6586.6	AV-1746	Die
	500 3996.2	AV-112	3/8" Screw
1-3/8"	500 2420.5	730	Complete
	500 4004.9	AV-119	Punch
	500 4005.7	AV-120	Die
	500 3996.2	AV-112	3/8" Screw
1-1/2"	500 2421.3	730	Complete
	500 3988.1	AV-89	Punch
	500 6970.5	AV-90	Die
	500 3996.2	AV-112	3/8" Screw
1-5/8"	500 2422.1	730	Complete
	500 4251.3	AV-1794	Punch
	500 4250.5	AV-1793	Die
	500 4039.1	AV-249	3/4" Screw
1-3/4"	500 6828.8	730	Complete
	500 4257.2	AV-1816	Punch
	500 4256.4	AV-1815	Die
	500 4039.1	AV-249	3/4" Screw
1-7/8"	500 2424.8	730	Complete
	500 4248.3	AV-1791	Punch
	500 4249.1	AV-1792	Die
	500 4041.3	AV-304	3/4" Screw
2"	500 2425.6	730	Complete
	500 4232.7	AV-1756	Punch
	500 4231.9	AV-1755	Die
	500 4041.3	AV-304	3/4" Screw
2-1/8"	500 2426.4	730	Complete
	500 4245.9	AV-1783	Punch
	500 4244.0	AV-1782	Die
	500 4041.3	AV-304	3/4" Screw
2-1/4"	500 2427.2	730	Complete
	500 4058.8	AV-437	Punch
	500 4059.6	AV-438	Die
	500 4041.3	AV-304	3/4" Screw
2-1/2"	500 2429.9	730	Complete
	500 4234.3	AV-1758	Punch
	500 4233.5	AV-1757	Die
	500 4041.3	AV-304	3/4" Screw
2-3/4"	500 2430.2	730	Complete
	500 4247.5	AV-1790	Punch
	500 4246.7	AV-1789	Die
	500 6992.6	AV-1433	Nut
	500 4188.6	AV-1434	3/4" Screw
3"	500 2431.0	730	Complete
	500 4259.9	AV-1821	Punch
	500 4258.0	AV-1820	Die
	500 6992.6	AV-1433	Nut
	500 4188.6	AV-1434	3/4" Screw

No. 730-X Radio Chassis Punch with 3/4" heavy-duty drive screw.

Hole Size	Control No.	Cat. No.	Description
1-1/8"	500 2436.1	730-X	Complete
	500 4728.0	AV-3197	Punch
	500 4729.9	AV-3198	Die
	500 4039.1	AV-249	3/4" Screw
1-3/16"	500 6829.6	730-X	Complete
	500 4730.2	AV-3201	Punch
	500 4731.0	AV-3202	Die
	500 4039.1	AV-249	3/4" Screw
1-1/4"	500 2438.8	730-X	Complete
	500 4732.9	AV-3203	Punch
	500 4733.7	AV-3204	Die
	500 4039.1	AV-249	3/4" Screw
1-3/8"	500 2439.6	730-X	Complete
	500 4734.5	AV-3205	Punch
	500 4735.3	AV-3206	Die
	500 4039.1	AV-249	3/4" Screw
1-1/2"	500 6831.8	730-X	Complete
	500 4736.1	AV-3207	Punch
	500 7044.4	AV-3208	Die
	500 4039.1	AV-249	3/4" Screw

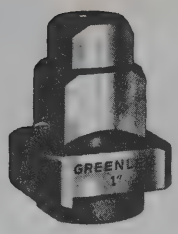
No. 730-M Meter Punch. Hole size 2-25/32".

Hole Size	Control No.	Cat. No.	Description
2-25/32"	500 2434.5	730-M	Complete
	500 2445.0	730-101	Punch
	500 2443.4	730-100	Die
	500 4041.3	AV-304	3/4" Screw

TOOLS FOR CRAFTSMEN
GREENLEE

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No. 731 Square Chassis Punch



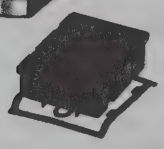
No. 731

For cutting square openings in chassis, cabinets, panels. Oblong or rectangular larger openings easily made by overlapping cuts. Operates with ordinary wrench. Five sizes.

No. 731R P & B Relay Socket Punch—Makes clean, accurate, finished holes for Potter & Brumfield KHP miniature relay sockets. All holes are identical . . . every job has a neat professional appearance and relay sockets fit perfectly every time.



No. 731R



No. 731 Square Chassis Punches

Hole Size	Control No.	Cat. No.	Description
1/2"	500 2446.9	731	Complete
	500 5246.2	AV-4595	Punch
	500 5247.0	AV-4596	Die
	500 5248.9	AV-4597	Screw
	500 5244.6	AV-4594	Nut
5/8"	501 3170.2	731	Complete
	501 3037.4	1-3037	Punch
	501 3036.6	1-3036	Die
	501 3038.2	1-3038	Screw
	500 4638.1	AV-2929	Nut
3/4"	501 3171.0	731	Complete
	501 3040.4	1-3040	Punch
	501 3039.0	1-3039	Die
	501 3031.5	1-3031	Screw
	500 4638.1	AV-2929	Nut
7/8"	500 2448.5	731	Complete
	500 5557.7	AV-5452	Punch
	500 5558.5	AV-5453	Die
	500 5559.3	AV-5454	Screw
	500 4638.1	AV-2929	Nut
1"	501 3172.9	731	Complete
	501 3042.0	1-3042	Punch
	501 3041.2	1-3041	Die
	501 3043.9	1-3043	Screw
	500 4638.1	AV-2929	Nut

No. 731R Relay Punch

Hole Size	Control No.	Cat. No.	Description
1.018" x .861	501 5115.0	731-R	Complete
	501 5116.9	1-5116	Punch
	501 5117.7	1-5117	Die
	501 5118.5	1-5118	Screw
	500 4638.1	AV-2929	Nut

No. 732 "Key" Chassis Punch

Quickly cuts holes for key sockets and other components through up to 16-gauge metal. Ordinary hand wrench supplies the power. Five sizes.





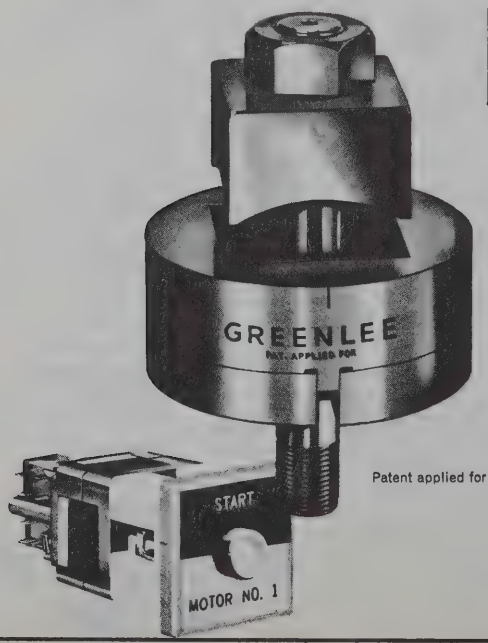
Hole Size	Control No.	Cat. No.	Description
15/32"	500 2451.5	732	Complete
	500 2458.2	732-53	Punch
	500 2457.4	732-52	Die
	500 2456.6	732-51	Screw
	500 5244.6	AV-4594	Nut
15/16"	500 2452.3	732	Complete
	500 4647.0	AV-2973	Punch
	500 4646.2	AV-2972	Die
	500 4648.9	AV-2974	Screw
	500 4638.1	AV-2929	Nut
1-11/64"	500 2453.1	732	Complete
	500 4761.2	AV-3257	Punch
	500 4760.4	AV-3256	Die
	500 4762.0	AV-3258	Screw
	500 4638.1	AV-2929	Nut
1-17/64"	500 6832.6	732	Complete
	500 4650.0	AV-2976	Punch
	500 4649.7	AV-2975	Die
	500 4651.9	AV-2977	Screw
	500 4638.1	AV-2929	Nut
1-21/64"	500 2455.8	732	Complete
	500 4764.7	AV-3263	Punch
	500 4763.9	AV-3262	Die
	500 4765.5	AV-3264	Screw
	500 4638.1	AV-2929	Nut

No. 733 "D" Chassis Punch

For fast easy cutting of "D"-shaped openings for high-frequency miniature tube sockets and equipment. Operates with ordinary hand wrench. Two sizes.



Hole Size	Control No.	Cat. No.	Description
1/2"	500 2459.0	733	Complete
	500 4681.0	AV-3033	Punch
	500 4680.2	AV-3032	Die
	500 4682.9	AV-3034	Screw
	500 4683.7	AV-3035	Nut
5/8"	500 2460.4	733	Complete
	500 5136.9	AV-4240	Punch
	500 5135.0	AV-4239	Die
	500 5137.7	AV-4241	Screw
	500 4683.7	AV-3035	Nut



Patent applied for

No. 731M 2-inch Square Punch

This punch takes the hard work out of making openings for Micro-Switch® manual control units. Does the job in a fraction of the time previously needed for old-fashioned "drilling, sawing and filing" methods. Can also be used as a "nibbler" to make any size square or rectangular hole over 2 inches square. Recommended for up to 10-gauge sheet steel, hot-rolled, low carbon. Must be used in conjunction with a Greenlee No. 7646 hydraulic punch driver.

No. 731M 2-inch Square Punch

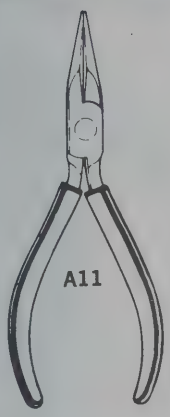
Hole Size	Control No.	Cat. No.	Description
2" x 2"	501 6407.4	731-M	2" Square Punch Complete
	501 6409.0	1-6409	2-inch square punch
	501 6410.4	1-6410	2-inch square die
	501 6411.2	1-6411	Die support
	501 6408.2	1-6408	Shaft
	500 4048.0	AV-325	Feed nut

TOOLS FOR CRAFTSMEN
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HUNTER TOOLS ...the name to work!

America's most diversified

PLIERS







Box-Joint Pliers Available—Keeps blades always in alignment.

CUTTERS



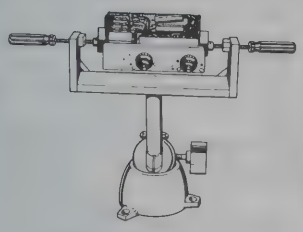




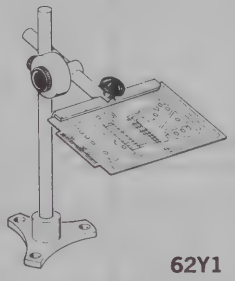
Box-Joint Cutters Available—Stop play in joints, feather touch opening and closing.

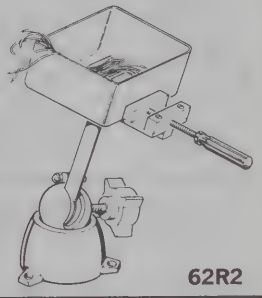
Special "Anti-Shock" cutters made to order.

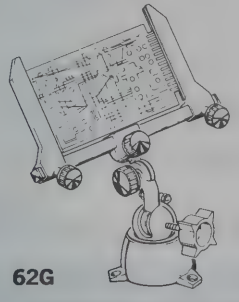
WORK POSITIONERS

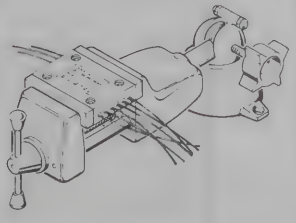

62U1

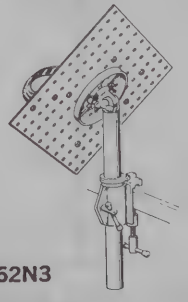

62

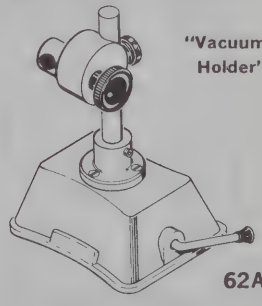

62Y1


62R2


62G

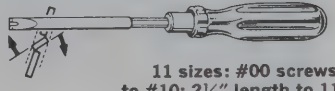

62B


62N3


"Vacuum Holder"
62A2

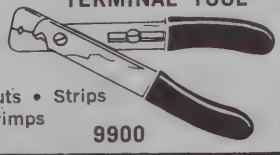
Magic-Tip SCREWHOLDING SCREWDRIVER





11 sizes: #00 screws to #10; 2¼" length to 11¼"

TERMINAL TOOL



Cuts • Strips Crimps

9900

SOLDERING AIDS


51


51A


51B


51C

MICRO MODELS


51C1


51C2

Dura-Tip SCREWDRIVER





40 models: 2" blades up to 10", square blades available

NUT DRIVERS

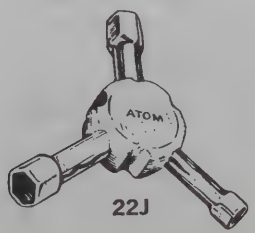
Sizes down to #00.


22


20B


24G

ATOM 3-IN-1 NUT DRIVER



22J

1374A

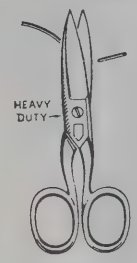
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line of electronic tools!

HUNTER TOOLS

SCISSORS



F15

SNIPPERS



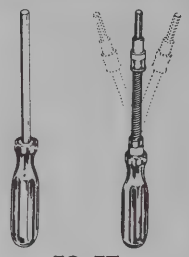
F213

"SMITTY"
Hex Socket Key Set



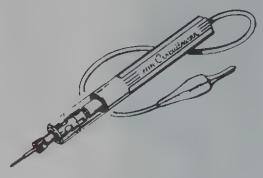
1P5
7 Models

HEX DRIVERS



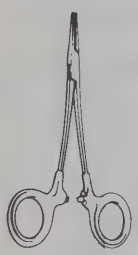
5G, 5T
From 1/16" to 5/32"

CIRCUITRACER



54
5 Models

SCISSOR-CLAMP



F35

TRI-TAP



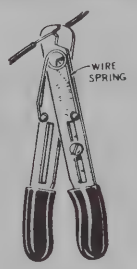
47
5 combinations

HEAT SINK



51E
6 Models

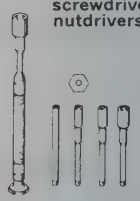
WIRE STRIPPER



55BB
4 Models

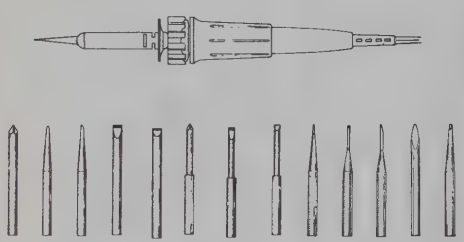
SUB-MINIATURE KITS

End wrenches, screwdrivers, nutdrivers



K24R

SOLDERING IRONS AND TIPS

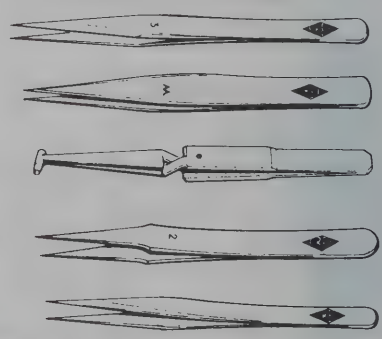


ALL PURPOSE KNIFE



E20D
4 Models

TWEEZERS 100 Models



HOT TUBE PULLERS



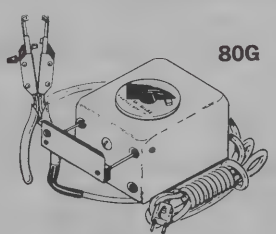
57A

TENSION TWEEZIE

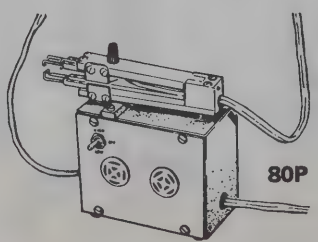


56A

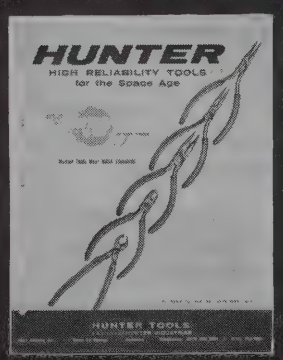
THERMAL WIRE STRIPPERS



80G



80P



Send for our complete tool catalog!

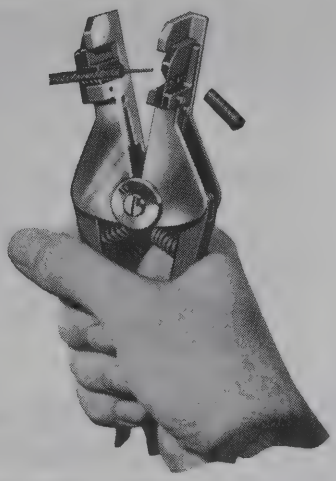
HUNTER TOOLS

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IDEAL Stripmaster®

2 SECOND "ONE SQUEEZE" OPERATION

Unexcelled for fast assembly work, this 10 oz. stripper can be used all day without fatigue. Exclusive "automatic" feature holds jaws open after stripping to permit removal of wire and to prevent crushing. No nicking, fraying, or cutting of wire ends possible. 7 models for all wire gauges from 8 to 30.

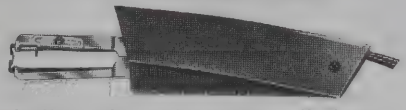


MODELS FOR ALL WIRE GAUGES — FROM 8 TO 30

Catalog No.	Wire Gauge	No. of Holes	List Price◆	Suggested Resale
45-090	8 to 12	3	$9.60	$5.75
45-091	10 to 18	4	9.60	5.75
45-092	10 to 22	6	9.60	5.75
45-093	14 to 22	4	9.60	5.75
*45-095	16 or 18, SP & SPT Slot		9.60	5.75
45-097	16 to 26	6	9.60	5.75
45-098	20 to 30	6	9.60	5.75

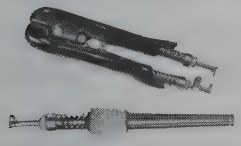
***Also strips 2 and 3-conductor low-voltage wire used in G.E. and Touchplate remote control wiring systems.**

SWING-GRIP (TM) THERMAL STRIPPER

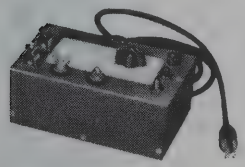


One squeeze automatically melts and removes all thermoplastic insulations — even Teflon — without nicking or scraping wires. Exclusive one-piece heating element melts insulation all the way around wire without twisting tool. Separate grippers remove insulation. Element doesn't scrape wire or drag-out insulation. Adjustable wire depth-stop. Replaceable heating elements for 30 to 12 AWG wire. Tool is furnished with 16 to 28 ga. element as standard. Use with 45-133, 45-135, or 45-136 Power Units.

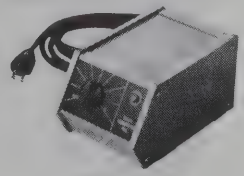
THERMO-STRIP (TM) THERMAL STRIPPERS



Choice of tools: plier-type Pincer Tool for normal production use; probe-type Single Loop Tool for miniaturized or crowded assemblies. For Pincer Tool, use 45-133 Power Unit only. For single Loop Tool, use 45-133, 45-135, or 45-136 Power Units.



Model 45-133



Model 45-134
Model 45-135

POWER UNITS

Model 45-133 operates on 115v, 60cy current. Has pilot light, thermal over-load protection, and infinitely variable heat control.

Model 45-135 operates on 115v, 60cy current; and Model 45-136 on 230v, 50-60cy current. Both have an 8-step temperature control, pilot light, and thermal over-load protector.

Cat. No.	Item	List Price	Sugg. Resale
45-133	Power Unit, 115v (for 45-140, 45-141, 45-143)	$75.75	$45.45
45-135	Power Unit, 115v (for 45-141, 45-143)	58.35	35.00
45-136	Power Unit, 230v (for 45-141, 45-143)	72.50	43.50
45-140	Pincer Tool only	36.15	21.70
45-141	Single Loop Tool only	17.50	10.50
45-143	Swing-Grip Tool only	36.15	21.70

IDEAL WIRE STRIPPERS

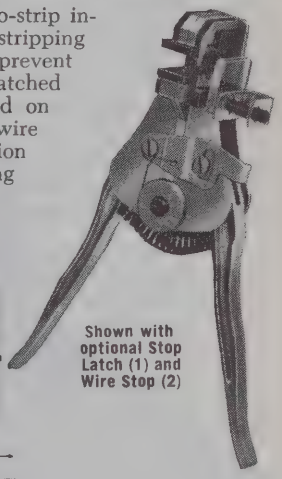
FOR ALL TYPES OF THERMO-PLASTIC INSULATIONS . . . EVEN TOUGH TEFLONS*

IDEAL CUSTOM Stripmaster®

Patented No. 2,889,728

FOR PRECISION WIRE STRIPPING

Removes Teflon* and other hard-to-strip insulation. New "concentric hole" stripping blades and special design of jaws prevent damage to insulation and wires. Matched sets of blades are precision drilled on watchmaker's equipment to exact wire sizes. Chucking action on insulation guides conductor through stripping hole, preventing nicks and scrapes. 3 models, wire sizes from 10 to 30.



Shown with optional Stop Latch (1) and Wire Stop (2)

EXTRA FEATURES (optional)

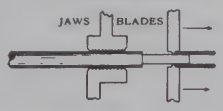
"SHORT-STOP" LATCH protects wire by limiting stroke to 5/32" — disengages without removal for full 7/8" strip.



"SEE-THRU" WIRE STOP assures uniform lengths by adjusting to strip length desired.



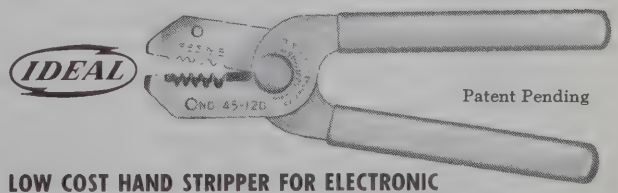
Counterbored stripping hole "chucks" insulation



FOR GENERAL PURPOSE STRIPPING OF PLASTIC, FIBRE GLASS AND OTHER HARD-TO-STRIP INSULATIONS

WIRE GAUGE	NO. OF HOLES	CATALOG NO. (without stop latch and wire-stop)	CATALOG NO. (with stop latch and wire-stop)
		List $28.25 Suggested Resale $16.95	List $34.60 Suggested Resale $20.75
10 to 14	3	45-170	45-180
16 to 26	6	45-171	45-181
26 to 30	3	45-172	45-182
FOR TYPE EE — 1000 VOLT TEFLON* WIRE			
10 to 14	3	45-173	45-183
16 to 26	6	45-174	45-184
26 to 30	3	45-175	45-185
FOR TYPE E — 600 VOLT TEFLON* WIRE			
10 to 14	3	45-176	45-186
16 to 26	6	45-177	45-187
26 to 30	3	45-178	45-188

* Reg. Trademark of DuPont



Patent Pending

LOW COST HAND STRIPPER FOR ELECTRONIC AND APPLIANCE PRODUCTION STRIPPING

For quick, easy, clean stripping of wires used in electronic instruments and appliances. Sturdy, compact, constructed of hardened steel for rugged duty and long service. Comfortable plastic grips for sure handling and safety.

	Cat. No.	List	Sugg. Resale
T-5 MODEL, strips 10, 12, 14, 16 and 18 gauge wires	45-120	$3.25	$1.95
T-6 MODEL, strips 16, 18, 20, 22, 24 and 26 gauge wires	45-121	$3.25	$1.95

© U.C.P., Inc.

RESISTANCE SOLDERING TOOLS

IDEAL

Because Ideal Thermo-Tip soldering equipment uses the resistance heat principle, you can get more work done faster and safer at lower cost and still achieve higher quality, stronger, more uniform joints. Cold flow is practically impossible. High amperage, low voltage current passes through and heats work only. Burning of nearby parts, or operators, never occurs because heat is concentrated at point of contact. No setup or pre-heating is necessary. Solder adheres instantly all around, making the strongest possible joint.

A wide range of Pencil-Grip attachments are available. You select from double or single metal or carbon electrode styles to fit your soldering needs. A perforated aluminum sleeve dissipates heats and provides exceptionally cool operation. Three different power units provide from 2 to 9 heat variations. All units come equipped with a 5-ft. power cord.

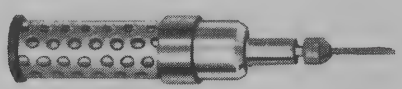
COMPLETE THERMO-TIP ATTACHMENTS AND POWER UNITS

DOUBLE METAL ATTACHMENTS



"Pencil" Type attachment with double metal electrodes. "Feed-thru" electrodes, adjustable for length.

Cat. No. 12-167 with double metal electrodes. List Price $18.35 ◆ Suggested Resale $11.00.



SINGLE METAL ATTACHMENT

Collet chuck holds feed-thru electrode. For smallest work. Complete with ground clamp and lead assembly for jig-soldering.

Cat. No. 12-169 Pencil Grip. List Price $18.35 ◆ Suggested Resale $11.00.

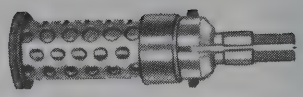
Cat. No. L-5241 Replacement Electrodes for **12-169,** packaged 6 per tube. Shipping wt., 2 oz. List Price $.90 ◆ Suggested Resale $.55.



FOOT SWITCH Cat. No. 12-146

List Price $11.90 ◆ Suggested Resale $7.15

Used to eliminate arcing at point of electrode contact. Also permits the use of electrodes to position or hold work after heat has been applied. Small and convenient to use (3⅝" dia. x 1⅛" high). Wired normally open (with series plug). Rated 5 amps., 115V. Shipping Wt., 12 oz.



DOUBLE CARBON ATTACHMENTS

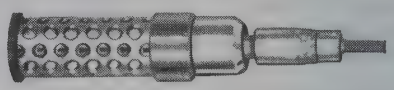
Carbons provide more heat than metal tips. Available in two sizes — 1/8" for small work, 3/16" for larger work.

Cat. No. 12-166 Pencil Grip with 1/8" carbons. List Price $18.35 ◆ Suggested Resale $11.00.

Cat. No. 12-165 Pencil Grip with 3/16" carbons. Lits Price $18.35 ◆ Suggested Resale $11.00.

Cat. No. L-4866 3/16" dia. replacement carbons for **12-165,** six per pkg. Shipping wt., 2 oz. List Price $2.10 ◆ Suggested Resale $1.25.

Cat. No. L-4848 1/8" dia. replacement carbons for **12-166,** six per pkg. Shipping wt., 2 oz. List Price $1.15 ◆ Suggested Resale $.70.



SINGLE CARBON ATTACHMENTS

Collet chuck holds feed-thru carbon. Permits adjustment. Complete with ground-clamp and lead assembly for jig-soldering.

Cat. No. 12-168 Pistol Grip. List Price $18.35 ◆ Suggested Resale $11.00.

Cat. No. L-5202 Replacement Carbons 1/8"x3" for **12-168,** packaged 6 per tube. Shipping wt., 2 oz. List Price $3.90 ◆ Suggested Resale $2.35.

REPLACEMENT CARBON HOLDERS

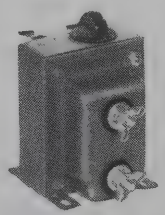


Cat. No. L-5246 — 3/16" Dia. List Price $1.15 ◆ Suggested Resale $.70.



Cat. No. L-5247 — 1/8" Dia. List Price $.60 ◆ Suggested Resale $.35.

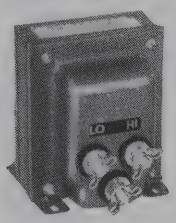
Provides easy replacement of only part attacked by corrosive fluxes. Holders can be used interchangeably with either the 12-165 or 12-166, depending on diameter of carbons desired.



POWER UNITS

125-Watt Power Unit. **Cat. No. 12-124**
List Price $31.85 ◆ Sug. Resale $19.10

For light production and intermittent work. Selector switch for choice of three heats. Complete with power cord and clip for holding pencil style attachments. 115V — 60 cy.



250-Watt Power Unit. **Cat. No. 12-123**
List Price $46.15 ◆ Sug. Resale $27.70

For heavier production work. Faster. Handles larger components than 12-124. Choice of two heats through "high" and "low" secondary connections. Complete wih power cord. 115V — 60 cy.



500-Watt Power Unit
Cat. No. 12-163
List Price $76.00
Suggested Resale $45.60

For continuous production work. Widest selection of heats — nine choices through 3-position selector switch plus "high", "medium" and "low" secondary terminals. Complete with power cord and pilot light. 115V — 60 cy.

IDEAL INDUSTRIES, Inc.

© U.C.P., Inc.

GAS WELDING TORCH

Uses OXYGEN and BUTANE to weld, braze, solder.

Produces over 5000° F. pin-point accurate flame using self-contained miniature oxygen and butane compressed gas cylinders.
Easy to use for lightweight welding, brazing, and soldering . . . and it fits conveniently into a pocket or tool box when not in use.

PATENT PENDING.



COMPLETE
$19.95

MICROFLAME INC.

HUNDREDS OF LIGHTWEIGHT USES



ADAPTERS
GIVE SMALLER FLAME



REPAIR AND
SERVICE SHOPS



HOME
WORKSHOP



METALLURGICAL
LABS



SCHOOL
SHOPS



ELECTRONIC
TECHNICIANS



JEWELRY REPAIR
AND MANUFACTURE



DENTAL
LABS



TOOL AND
MODEL MAKERS

1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625

MICROFLAME

GAS WELDING TORCH

OPERATING TIME ... When the heat is adjusted for welding, the oxygen is consumed 2 to 3 times as fast as the butane. The consumption of gas is controlled by valve opening and tip size. The following times per oxygen cylinder life are approximate.

With Large Tip – (#20 Gauge)..... 10 Minutes
With Medium Tip – (#22 Gauge).... 20 Minutes
With Smallest Tip – (#25 Gauge).... 1 Hour, 20 Minutes

For work permitting lower flame temperatures, the oxygen consumption decreases accordingly.

FUEL SUPPLY ... The Microflame cylinders are not refillable. Some drug, medical, and tobacco outlets have replacement cylinders, but our field experience indicates that they are not generally available. Your best practice is to get them from your local Microflame, Inc. Distributor or directly from the factory.

The cylinders can be shut off for an indefinite period of time and the fuel supply will be maintained. There is no aging or loss of gas when the cylinders are stored.

Warning: To avoid violent combustion, keep oxygen away from oil and grease. Keep oxygen and butane away from open flame. Store cylinders of oxygen and butane at room temperature (not over 130° F). Keep them away from direct sunlight, radiators, stoves, hot water and other heat. Do not incinerate cylinders. Butane is flammable. Do not store butane in a room used for habitation. Keep cylinders away from children.

FLAME TEMPERATURE ... A number of variables affect flame temperature. When adjusted for high heat, flame temperature exceeds 5000° F.

METALS HANDLED ... The Microflame Torch can weld, braze, or cut most metals, including the noble and rare metals. The controlling factors are the coefficient of heat conductivity of the metal, the size of the metal, and the melting point of the metal.

SIZE OF WORK ... In Item 4 we indicated the three variables affecting the ability of the torch to cut or melt a metal. It would be impractical to list the size work for all metals, but we will give you the following as a guide.

The Microflame Torch, using the large tip, can silver sodder two copper pieces 1" x 2" x 1/16". Two copper pieces larger than 2" x 4" x 1/16" in total mass will conduct the heat away so that the time to perform the task exceeds a practical limit, or the fuel runs out before brazing temperature is reached. This size can be increased for all other metals except pure silver, which has a higher coefficient of thermal conductivity.

ROD SIZE ... Welding and brazing rod size should be 1/32" diameter or less. Size can go to 1/16" diameter, but it is not recommended.

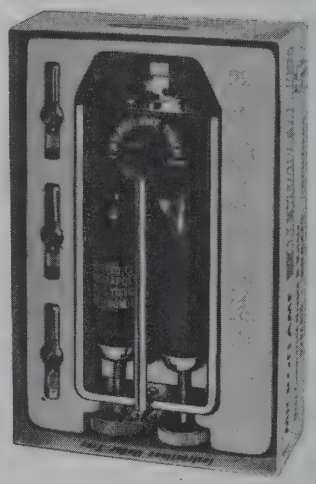
ROD TYPE ... Welding and brazing rods of the type available through either Eutectic Welding Alloys Corporation or Handy & Harman work well with the Microflame Torch. Both companies have sales outlets throughout the country.

USE OF GOGGLES ... When cutting, brazing, or welding it is advisable that one wear dark glasses.

SIZE ... Over-all size, including controls and clamping screws is 5-1/4" long by 2" wide by 1-1/4" thick at the swivel joint. Hand size is 3" long by 2" wide by 5/8" thick.

WARRANTY ... MICROFLAME, INC., Division of PRINTED CIRCUITS, INC., warrants each new MICROFLAME TORCH and all parts thereof manufactured by it or included with it, to be free from defects in material and workmanship under normal use and service, its obligation under this warranty being limited to making good at its factory all parts thereof which shall within 90 days after delivery to the original purchaser, be returned to it.

MICROFLAME, INC., may, if it wishes, elect to supply a replacement unit in place of repairing or replacing any or all defective parts. This warranty is in lieu of all other warranties, expressed or implied, and all other obligations or liability on its part, and neither assumes nor authorizes any other person to assume for it any other liability in connection with the sale of the MICROFLAME TORCH. Under no circumstances shall MICROFLAME, INC. have any responsibility or be subjected to any liability by reason of warranty or otherwise with respect to any MICROFLAME TORCH which shall have been repaired or altered outside of our factory, or which has been subject to misuse, negligence, or accident.



PACKAGING ... The Microflame Torch and three flame tips are packaged in a convenient plastic tray-box container ... handy for storage when the torch is not in use.

MICROFLAME INC.

MIC 2



Available in 7 lb. reel & 1 lb. dispenser carton

NEW! EASY DISPENSER PAK



ERSIN Multicore 5-CORE SOLDER WORLD'S FINEST

TECHNICAL ADVANTAGES

Ersin Flux is exclusive to Multicore and will not be found in any other solder. It is a high-grade, water white resin, homogeneously activated.

Ersin Flux has a vigorous fluxing action and possesses the non-corrosive and protective features of the original resin. Soldered joints made with Ersin Flux do not corrode, even after prolonged exposure to any degree of humidity. It has been tested under climatic conditions ranging from the Arctic to the tropics.

Ersin Flux reduces the surface tension of molten solder causing it to wet metals rapidly, increasing speed of operation with resultant production economies.

Free from objectionable odors. Non-toxic in use.

Leaves nothing but pure resin on the work after soldering and may be used whenever plain resin is specified.

Complies with all pertinent federal specifications.

Multicore construction. 5 separate cores of flux eliminate possibility of no flux in a portion of the wire, which may occur in single cored solder.

Guaranteed continuity of the flux stream prevents dry joints, i.e., those having high electrical resistance.

Although there are 5 cores of flux in Multicore, the total percentage of flux to solder is less than many single cored solders.

Very rapid melting results from the multiple core construction, which provides thinner walls of solder, than are found in same gauge single cored solder.

Multicore's unique properties make perfect joints possible on difficult metals and alloys, even if oxidized.

Ability to tin rapidly produces perfect joints with less solder. Greater coverage per pound.

Ersin Multicore Solder is non-toxic in use. Cadmium is completely eliminated. The quantity of antimony is less than government standards allow. There is no danger of harmful effects caused by such impurities.

Every package of Ersin Multicore is labelled with the exact tin/lead content. This precise labelling results from Multicore's precise manufacturing methods.

SPECIAL ALLOYS

ONLY from ERSIN Multicore — For IMMEDIATE OFF-THE-SHELF DELIVERY*

ALLOY	S.W.G.	CHARACTERISTICS
COMSOL	16-18	High Melting Point—565°F
L.M.P.	16-18-22	Low Melting Point—354°F
63/37	16-18-20	Eutectic—361°F
SAVBIT	14-16-18-20-22	Copper-Loaded—419°F

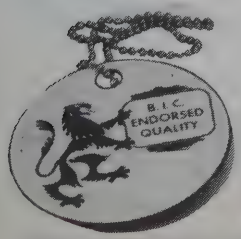
NOTE: Bit of soldering iron used should always be 108°F above melting point of alloy.

*ERSIN Multicore's national network of industrial distributors—in 50 states—facilitates prompt off-the-shelf delivery at factory-low prices.

STANDARD GAUGES TIN/LEAD ALLOYS

For the finest wire cored solder— SPECIFY ERSIN MULTICORE 5-CORE

ALLOY	14	16	18	20	21	22	S.W.G.
60/40	●	●	●	●	●	●	
50/50	●	●	●				
45/55	●	●	●				
40/60	●	●	●				



MULTICORE tin/lead alloys conform to latest Federal Specification QQ-S-571

COPPER-LOADED SAVBIT ALLOY

Multicore's SAVBIT Alloy is entirely new and different—it is patented.

Copper-loaded **SAVBIT** stops the wear and erosion of copper soldering iron tips . . . increases tip life by 1,000%.

Characteristics and specifications:

Savbit Alloy is available in Ersin Multicore 5-Core Solder containing non-corrosive extra fast Ersin flux in 14, 16, 18, 20 and 22 gauge.

Melting point: Virtually the same as standard tin/lead alloys.

Excellent conductivity, tensile and shear strength.



Available in 7 lb. reel & 1 lb. dispenser carton

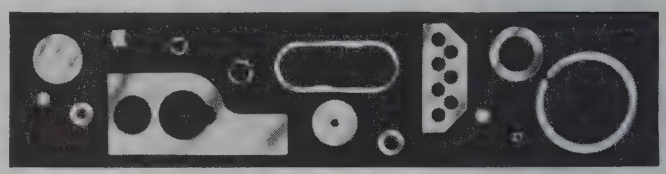
MULTICORE SALES CORPORATION

84%

of the electronic design engineers prefer Kester Solder products

Kester is the outstanding leader in solder and flux products, as proved by a recent survey. Kester products meet precise technical, mechanical, and application requirements. Hundreds of types are available to meet every possible combination of metals, temperature, and application requirements. Kester helps you select the exact type for your application. Is it any wonder that 84% of the electronic and electrical design engineers prefer Kester Solder products?

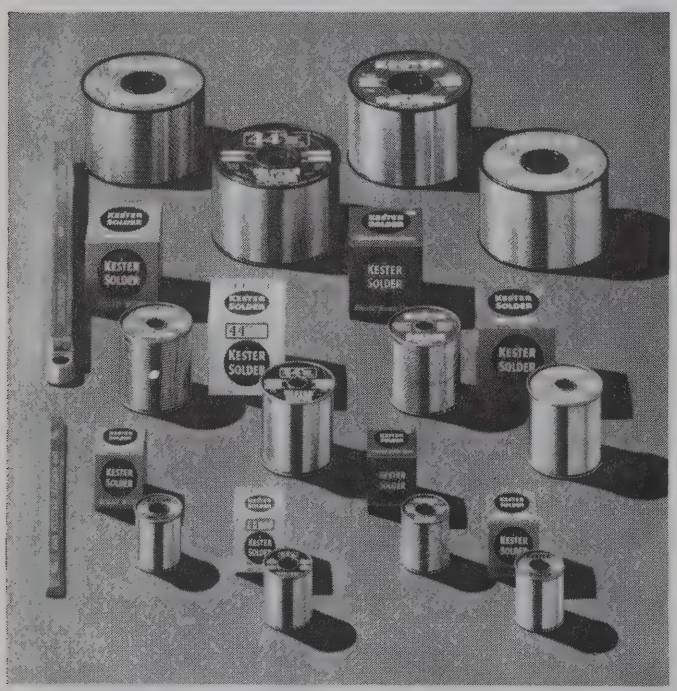
Kester provides unsurpassed quality, assures customer satisfaction. Kester is always pioneering for the best, never copying the rest. So—avail yourself of Kester's 66 years of experience—Kester know-how. Check with us about your solder and flux requirements. We'll be glad to help.



For production soldering and where top performance and reliability of the solder joint are of prime importance, Kester "Solderforms" are the answer. They provide a pre-determined volume of solder and flux exactly where needed. You save time and money in assembly—eliminate solder waste. Kester "Solderforms" are available in any size, shape, alloy and quantity.



This 20-page book provides you with complete information on Kester "Solderforms," plus important engineering data on solder. Write for your free copy today.



Kester offers a complete line of solder to meet every soldering need. And it's backed by remarkable quality. Kester Solder is made only from virgin metals... manufactured to precise specifications.



Successful soldering depends upon using the right kind of flux, carefully formulated to the particular application. Kester offers over 160 types, provides the exact formula for your specific requirements.

KESTER SOLDER

KESTER SOLDER
KESTER SOLDER COMPANY

MOST VERSATILE SOLDERING IRON EVER INVENTED



IMPERIAL® Ungar®

COOL, LIGHTWEIGHT, EASY-HANDLING

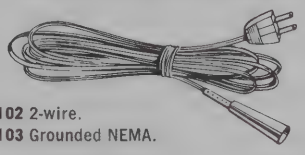
Ungar...developers of the industry's first miniature, low wattage, high temperature, pencil type iron...now brings you the ultimate in time-saving, money-saving soldering irons.

PERMA COOL COLORED HANDLES



#6100 Turquoise, Beige, Ivory*

INTERCHANGEABLE CORD SETS
2-wire or grounded 3-wire



#6102 2-wire.
#6103 Grounded NEMA.

*NOTE: Designate color for handles and cord sets by adding suffix (-1 for Turquoise; -2 for Beige; -3 for Ivory).

NEW 60 WATT



"Long Life" Interchangeable Heat Cartridges.

#6203 60 Watt (850-1050°F temperature range)
#6200 40 Watt (750-950°F temperature range)
#6201 30 Watt (650-850°F temperature range)
#6202 25 Watt (600-800°F temperature range)
#6206 15 Watt (700-750°F temperature range)

IMPERIAL MINI-TIP®

Thread-on soldering tips

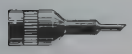
All easy-thread tips are completely interchangeable.



#6304 Micro-Chisel, Iron Clad, Gold Plated (24 kt.) 3/64 x ½



#6305 Micro-Spade, Iron Clad, Gold Plated (24 kt.) 3/64 x ½



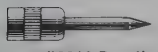
#6482 Micro-Spade, Stepped, Iron Clad, Gold Plated (24 kt.) 3/64 x ½



#6481 Tapered Screwdriver, Iron Clad, Gold Plated (24 kt.) ¾ x 3/32.



#6312 Pencil, Rugged Copper Alloy, ⅛ x ¾



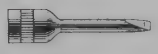
#6313 Pencil, Iron Clad, Gold Plated (24 kt.) ⅛ x ¾



#6316 Pencil, Offset, Iron Clad, Gold Plated (24 kt.)



#6318 Long Taper Chisel, Rugged Copper Alloy, ⅛ x ¾



#6319 Long Taper Chisel, Iron Clad, Gold Plated (24 kt.) ⅛ x ¾



#6324 Long Taper Pyramid, Rugged Copper Alloy, ⅛ x ¾



#6325 Long Taper Pyramid, Iron Clad, Gold Plated (24 kt.) ⅛ x ¾



#6331 Screwdriver, Iron Clad, Gold Plated (24 kt.) ⅛ x ¾



#6333 Needle, Iron Clad, Gold Plated (24 kt.) ⅛ x ¾



#6336 Spade, Iron Clad, Gold Plated (24 kt.) ⅛ x ¾



#6366 Long Taper Chisel, Iron Clad, Gold Plated (24 kt.) 3/16 x ¾



#6368 Long Taper Pyramid, Rugged Copper Alloy, 3/16 x ¾



#6372 Screwdriver, Iron Clad, Gold Plated (24 kt.) 3/16 x ¾



#6373 Slotted Tip, Rugged Copper Alloy, 3/16 x ¾



#6390 Screwdriver, Iron Clad, Gold Plated (24 kt.) 3/16 x 1½



#6424 Long Taper Chisel, Iron Clad, Gold Plated (24 kt.) ¼ x ¾



#6473 Long Taper Chisel, Rugged Copper Alloy, ⅜ x ¾



#6474 Long Taper Chisel, Iron Clad, Gold Plated (24 kt.) ⅜ x ¾



COIL-A-CORD

#7625. Eliminates tangled and twisted cords...Automatically keeps cord coiled and out of the way. Use it with either the standard or grounded Imperial Cord sets ...Slips on Easily...Can also be used on many electrical hand tools and appliance cords.

NEW MICRO-TIPS

Thread-on soldering tips

For use with Imperial 15 watt cartridges only.



#6550 Tapered Screwdriver, Iron Clad, Gold Plated (24 kt.) .040 x .40



#6551 Stepped Spade, Iron Clad, Gold Plated (24 kt.) .050 x .40



#6553 Stepped Chisel, Iron Clad, Gold Plated (24 kt.) .050 x .40



#6554 Stepped Pencil, Iron Clad, Gold Plated (25 kt.) .050 x .40

Specially Designed IMPERIAL HOLDER

Rugged holder, built especially for the IMPERIAL, protects iron, keeps it safely out of the way. Black with gold cage guard and heat sink. **#6800.**



© U.C.P., Inc.

Ungar® STANDARD LINE SOLDERING IRON

New UNGAR HEATING UNITS AND THREAD-ON TIPS for Hi-Speed Repeat Soldering

Ungar's exclusive development provides these advantages:
- Thread-on tips, iron clad, silver plated or plain copper.
- 4 times greater heat transfer.
- Positive seal between heating unit and tip.

Tips and heating units shown are rated at 110V. If used at 120V, ratings will be slightly higher as shown.

110 Volts ac/dc	120 Volts ac/dc
23½ watts	27 watts
37½ watts	44 watts
47½ watts	56½ watts



#537 Hi-Speed Heating Unit — 600° to 650°F — 23½ Watts

#1237 Hi-Speed Heating Unit — 750°-800°F. 37½ Watts

#4037 Hi-Speed Heating Unit — 850°-900°F. 47½ Watts.



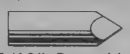
#PL 111 PENCIL TIP. ⅛" x ¾" iron clad, Silver Plated.
#111 Plain Copper



#PL 113 CHISEL TIP. ⅛" x ¾" iron clad, Silver Plated.
#113 Plain Copper.

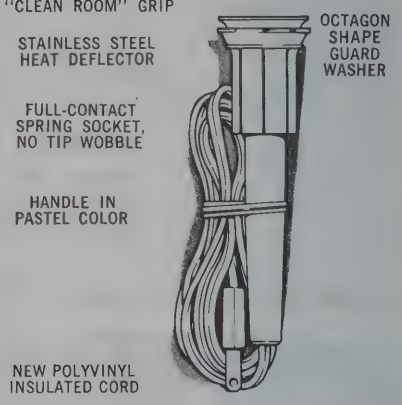


#PL 114 Stepped Micro-Spade, Iron Clad, Silver Plated

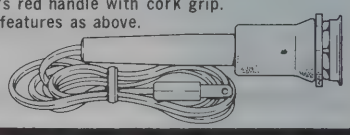


#116 5/16" Pyramid, Rugged Copper Alloy
#PL 116 5/16" Pyramid, Iron Clad, Silver Plated

NEW #777 "CLEAN ROOM" Soldering Handle



#776 SOLDERING HANDLE
Ungar's red handle with cork grip. Same features as above.



UNGAR fast, safe De-Soldering Tips

Helps remove components 70% faster. Melts solder on all terminals at once. For use with **#4045** Heating Unit.



#270 UNGAR De-Soldering Kit. Complete, 7 pieces including handle, Heating Unit **#4045** and five De-Soldering Tips in metal case.



#856 5/8" Cup Tip



#855 3/4" Cup Tip



#854 1" Cup Tip



#858 Bar Tip



New **#862** Offset Slotted Tip



#857 Slotted Tip



New **#863** Cube Tip



New **#861** Triangle Tip

UNGAR TIPLET Soldering Tips

for Heating Units shown below



#PL 340 Micro-Needle. ¾4"x¾", for microscopic soldering, iron clad, Silver Plated—Actual size.

UNGAR TIPLET Soldering Tips

for Heating Units shown below



#PL 331 Pencil Tip. ⅛" x 1", iron clad, Silver Plated.
#331 Plain Copper.



#PL 332 Pencil Offset. ⅛" x 1", iron clad, Silver Plated.
#332 Plain Copper.



#PL 333 Chisel, Long Taper. ⅛" x 1", iron clad, Silver Plated.
#333 Plain Copper.



#PL 338 Tapered Needle. 1/16" x 1¾", iron clad. Silver Plated.



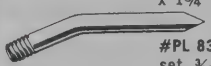
#7154 Stepped Pencil, 1/16" pencil tip. Iron clad, silver plated. Fits #535, 1235 and 4035.



#7155 Stepped Chisel, 1/16" chisel tip. Iron clad, silver plated. Fits #535, 1235 and 4035.



#PL 833 Chisel, Long Taper. 3/16" x 1¾", iron clad. Silver Plated.



#PL 834 Chisel, Long Taper, Offset. 3/16" x 1¾", iron clad, Silver Plated.



#PL 823 Pyramid, 3/16" x 1", iron clad, Silver Plated.
#823 Plain Copper.

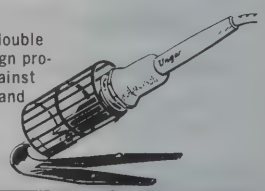


#PL 824 Chisel, Long Taper. 3/16" x 1", iron clad. Silver Plated.
#824 Plain Copper.

800 Series TIPLETS fits Ungar **#4045** heating unit only.

#8000 Soldering Iron Holder

Exclusive Ungar double safety guard design protects operator against accidental burns and 2) protects iron against breakage. Individually boxed



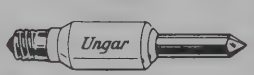
#8001 ANTI-SEIZE. 2 oz. can
New Ungar Anti-Seize guards against "freezing."



KLEEN-TIP SPONGE
Removes oxidation, doubles life of tips. **#400** with tray.
#455 refill sponges



Ungar Interchangeable Tips... the right tip at the right temperature.

TIP TEMPERATURES	CHISEL TIP LONG TAPER 	PYRAMID TIP 	CHISEL TIP SHORT TAPER 	THREAD-IN HEATING UNITS 
850° to 1000° F. #4000 Super Hi-Heat Series 47-1/2 Watt	**#4033** Tip 1-5/8" long, 1/4" wide. New copper alloy, iron clad, silver plated.	**#4036** Tip 1-1/8" long, 3/8" diameter. Copper, iron clad, silver plated.	**#4039** Tip 1-1/8" long, 3/8" diameter. Copper, iron clad, silver plated.	**#4035** Steel body, nickel plated. For use with 300 Series Tiplets. **#4045.** For use with 800 Series Tiplets.
750° to 800° F. #1200 Hi-Heat Series 37-1/2 Watt	**#1233** Tip 1-5/8" long, 1/4" wide. Copper, unplated.	**#1236** Tip 1-1/8" long, 5/16" diameter. Pure solid Armco iron, silver plated.	**#1239** Tip 1-1/8" long, 3/8" diameter. Pure solid Armco iron, silver plated.	**#1235** 37½ watt. Hi-Temperature steel body specially treated for corrosion resistance.
650° to 750° F. #500 Standard Series 23-1/2 Watt	**#533** Tip 1-5/8" long, 3/16" wide. Copper, unplated.	**#536** Tip 1-1/8" long, 5/16" diameter. Copper, unplated.	**#539** Tip 1-1/8" long, 5/16" diameter. Copper, unplated.	**#535** 23½ watt. Hi-Temperature steel body specially treated for corrosion resistance.

UNGAR ELECTRIC TOOLS

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Weller DUAL HEAT Soldering Guns

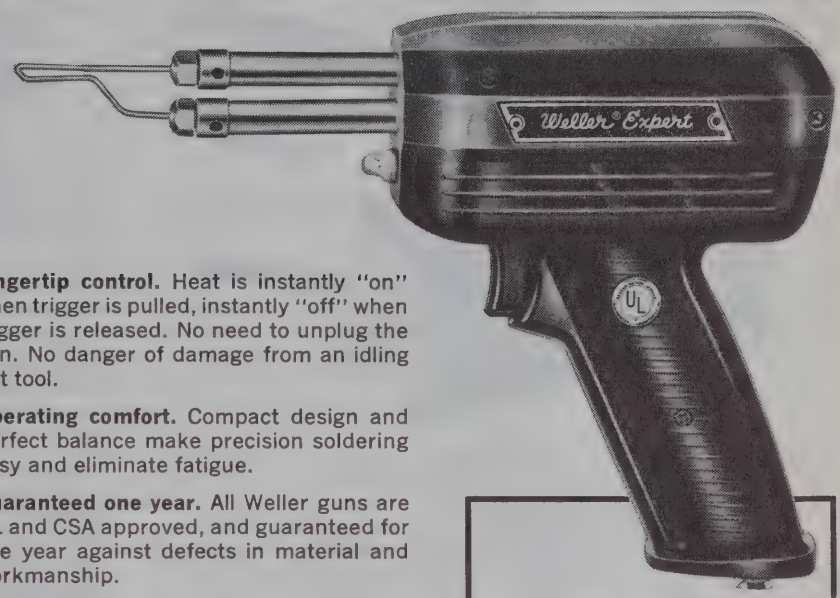
Dual heat. All Weller guns offer Dual Heat, an original Weller feature that provides two tip temperatures from the same gun. Two trigger positions permit instant switching to high or low heat, whichever is best suited for the job. The use of low heat prevents damage when soldering near heat-sensitive components and prolongs tip life. High heat is instantly available when needed.

Instant heat. Solders in seconds. No waiting for the tip to heat. No wasted current.

High-Efficiency Tip. Made of copper for superior heat transfer and optimum soldering results. Slips easily into difficult places.

Exclusive Tip Grip. Wiping action of tip fastening nuts eliminates contact resistance and oxidation. This assures full, constant heat.

Spotlight. Illuminates the work and eliminates shadows.



Fingertip control. Heat is instantly "on" when trigger is pulled, instantly "off" when trigger is released. No need to unplug the gun. No danger of damage from an idling hot tool.

Operating comfort. Compact design and perfect balance make precision soldering easy and eliminate fatigue.

Guaranteed one year. All Weller guns are UL and CSA approved, and guaranteed for one year against defects in material and workmanship.

3 Dual Heat Models

MODEL 8200—100/140 watts
MODEL D-440—145/210 watts
MODEL D-550—240/325 watts

KITS WITH ACCESSORIES

MODEL 8200PK—Dual heat 100/140 watt gun, 3 soldering tips, tip-changing wrench, flux brush, soldering aid, solder, plastic case.

MODEL D-550PK—Heavy-duty 240/325 watt dual heat gun; soldering, cutting and smoothing tips; tip-changing wrench; solder; plastic case.

Accessory and Replacement Tips for Weller Dual Heat Guns



SOLDERING
For gun model 8200—Tip 7135N
For gun model D-440—Tip 7135N
For gun model D-550—Tip 7250N



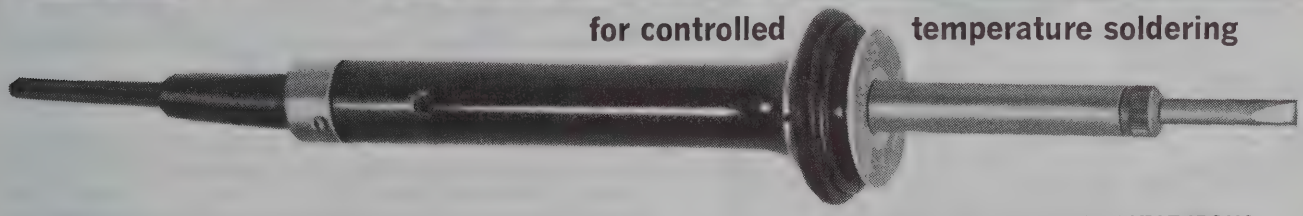
SMOOTHING
For gun models D-440 and 8200—Tip 6120
For gun model D-550—Tip 6140



CUTTING
For gun models D-440 and 8200—Tip 6110
For gun model D-550—Tip 6130

Weller MAGNASTAT® Soldering Irons

for controlled temperature soldering



Only Weller brings you soldering irons with temperature control in the tip. One Magnastat iron with 3 different controlled temperature tips does the work of 3 different irons. And it maintains proper temperature for secure, reliable soldered connections.

- Tip temperature will not vary more than ±3% when idling.
- A Magnastat iron provides efficient soldering temperature under load and excellent recovery.
- Your choice of 3 different controlled temperatures by interchanging Magnastat tips.
- Weller Magnastat irons do the work of uncontrolled irons that require much higher wattage and weigh twice as much.
- The light weight of a Weller Magnastat iron reduces operator fatigue. Handle remains cool.

Over 90 Magnastat Wellertips are available. Tips come in 3 controlled temperature ranges—600°F, 700°F and 750°F—and in many different shapes.

STANDARD WELLER MAGNASTAT IRONS

MODEL NO.	WATTS	TIP
TC552 STD	55	5-CIN—750°F
TC602 STD	75	6-EIN—750°F
TC1202 STD	120	12-G4N—750°F

Furnished with standard two-wire cord and tip number designated.

OTHER COMBINATIONS AND SPECIFICATIONS

MODEL NO.	COMBINATION	WATTS	NET WEIGHT
TC552	No cord	55	3 oz.
TC552-2	2-wire cord	55	6¾ oz.
TC552-3	3-wire cord	55	7½ oz.
TC552-TL3	Twist-lock cord	55	9½ oz.
TC602	No cord	75	3½ oz.
TC602-2	2-wire cord	75	7¼ oz.
TC602-3	3-wire cord	75	8⅛ oz.
TC602-TL3	Twist-lock cord	75	10⅛ oz.
TC1202	No cord	120	6 oz.
TC1202-2	2-wire cord	120	9¾ oz.
TC1202-3	3-wire cord	120	10½ oz.
TC1202-TL3	Twist-lock cord	120	12½ oz.

WELLER ELECTRIC CORP.

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Weller® PENCIL Soldering Irons



Temperature Controlled "Low Voltage" Soldering Pencil with 3/16" 700°F tip and power unit—**MODEL W-TCP**

SPECIFICATIONS

Wattage	Voltage	Weight with Tip, Less Power Unit and Cord	Overall Length of Iron with Tip	Tip Retainer O. D.
60	120 V.* 50/60 Cycles	1¼ oz.	7½"	5/16"

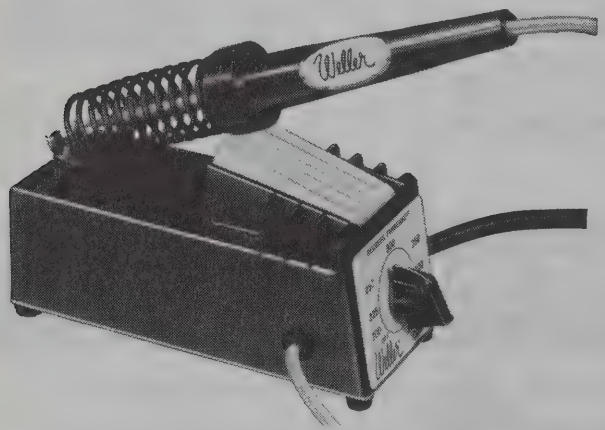
*220 V., 50/60 Cycles available upon request at same price.

Temperature Controlled "Low Voltage" Soldering Pencil

For production line and research laboratory use where accurate control of tip temperature is essential to meet rigid soldering specifications. Choice of 4 different tip temperatures from one soldering pencil merely by interchanging 4 different controlled temperature tips.

- Temperature control is in the tip. Choice of 500°F, 600°F, 700°F and 800°F tip temperatures.
- Extremely small and light in weight. Easy to control.
- Suitable for miniature or general soldering.
- High efficiency and rapid recovery. Packed with plenty of reserve power.
- Low 24 volt operation for component and user protection.
- Isolated for elimination of leakage current.
- Handle of high-impact plastic remains cool.
- Interchangeable tips are premium plated.
- Soldering iron stand and cleaning sponge on power unit.
- Power cord is silicon rubber covered, extremely flexible and easy to maneuver. Doesn't break or burn.

Interchangeable tips available: 1/32", 1/16", 3/32", 1/8" and 3/16" screwdriver with choice of 500°F, 600°F, 700°F and 800°F controlled temperatures.



Continuously Variable Temperature Controlled Soldering Pencil with 1/16" tip and power unit—**MODEL W-TCP-2**

SPECIFICATIONS

Wattage	Voltage	Weight with Tip, Less Power Unit and Cord	Overall Length of Iron with Tip	Tip Retainer O. D.
20	120 V.* 50/60 Cycles	1¼ oz.	7½"	5/16"

*220 V., 50/60 Cycles available on request at same price.

Continuously Variable Temperature Controlled Soldering Pencil with SCR and Thermistor Control Circuit

Has exclusive features found in no other soldering iron. Offers a wide range of controlled tip temperatures via Electronics SCR and Thermistor circuitry, and is designed for low temperature, miniature soldering applications.

- Continuously variable temperature controlled at the tip from 200°F to 450°F.
- Dial the tip temperature that's best suited for the job.
- Extremely small and light in weight.
- Operates at 24 volts from an isolated secondary winding for complete operator and equipment safety.
- Handle of impact resistant plastic remains cool.
- Interchangeable tips are premium plated.
- Soldering iron stand and cleaning sponge on power unit.
- Power cord is silicon rubber covered, extremely flexible and easy to maneuver. Doesn't break or burn.

Interchangeable tips: 1/16" screwdriver and 1/32" conical flat. Others available on special request.



"Industrial Rated" Pencil Soldering Iron

- Low cost 115 volt iron has tip temperature of 860°F with 25 watt input. Ideal for miniature type soldering.
- High efficiency and rapid recovery.
- Does the work of irons that require much higher wattage.
- Lightweight design reduces operator fatigue, provides accurate control.
- Rugged heating element designed for durability, long service.
- Readily replaceable parts. Change your own heating element or cord set.

Interchangeable tips available: 1/16", 3/32" and 1/8" screwdriver. Premium plated for long life.

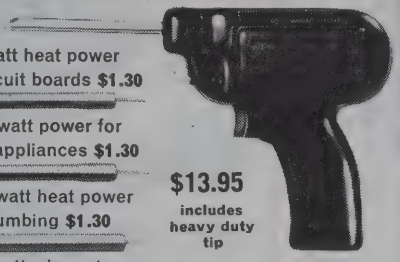
WELLER ELECTRIC CORP

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NATIONALLY ADVERTISED WEN HAND POWER TOOLS

SOLDERING all GUN MODEL 450 NEW

Long reach, single post, long life rigid copper tip; Instant heat, fast cooling; lightweight, perfect balance; pre-focused spotlight.



No. 45F7 25-100 watt heat power for printed circuit boards **$1.30**

No. 45M7 100-200 watt power for home wiring, appliances **$1.30**

No. 45A7 200-450 watt heat power for gutters, plumbing **$1.30**

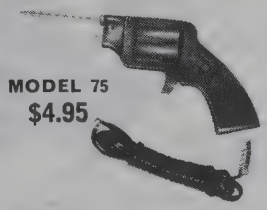
$13.95 includes heavy duty tip

No. 45P7 Flat iron attachment removes wood dents, seals plastic bags **$.60**

No. 45S7 Plastic cutting attachment cuts plastic, tile **$.60**

The new Wen "All" Gun does any soldering job you can think of from delicate kit work and printed circuits to appliance repair to heavy jobs formerly requiring an industrial type soldering iron. Convenient trigger on/off switch, shock resistant black case. A full range of heat power . . . just select the proper tip.

SOLDERING PISTOL WITH ATR



MODEL 75 $4.95

Perfectly sized and balanced for work normally done by a soldering "pencil" yet with plenty of capacity for heavy jobs. Use of a new space-age metal produces heat of 100 watt device from a peak surge rating of 50 watts and a normal draw of only 30 watts. Heavy copper tip permits repeated dressing down for long life. Convenient trigger switch, spotlight, pistol grip with perfect balance. Operates on 110-120 volts, 60 AC.

MODEL 100 SOLDERING GUN KIT $7.95



All the plus features of the 100 watt Model 100 Soldering Gun in a convenient, colorful book-fold carton. An extra plastic tile cutting tip and rosin solder included.

HEAVY DUTY 200 W. SOLDERING GUN



MODEL 288 $9.95

Has modern long-nose, long life tip. Melts solder in less than 5 seconds. Perfect balance. Spotlight and shatter proof case. Transfers more heat volume, yet weighs less than other comparable guns.

$9.95 MODEL 199K HOME UTILITY KIT



Includes Model 199 Soldering Gun with long-life, long nosed Soldering tip; plastic tile cutting and putty removing tip; flat iron tip for removing dents from wood and sealing plastic bags.

HOT ROD SOLDERING GUN



MODEL 222 $7.95

Space Age ATR (Automatic Thermal Regulation) permits heat-power adjustment to correct level for job being done. Adjustable heat-power up to 200 W. Economy performance — more heat-power, less current draw.

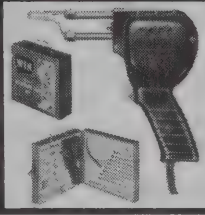
MODEL 222 K-5 UTILITY KIT



$11.95

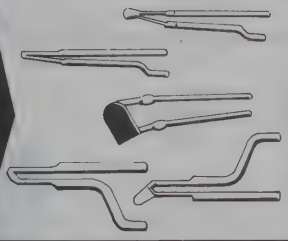
Rugged custom fitted case contains MODEL 222 HOT ROD SOLDERING GUN, flat iron and plastic cutting attachments, and fine soldering tip for delicate jobs. Attachments perform dozens of accessory jobs.

MODEL 250K KIT $15.95



Includes the famous heavy duty "quick hot" 250 watt soldering gun with feroloy tip for heavy soldering, a plastic cutting tip, a flat iron tip for furniture dent removal.

EXTRA TIPS FOR WEN SOLDERING GUNS



UNIVERSAL TIPS FOR MODELS 100, 288 AND 250 SOLDERING GUNS

No. U4—Universal Tip complete with adapters for light duty **$.70**

EXTRA TIPS FOR MODEL 75 PISTOL
No. 75A7 Standard Soldering Tip Assembly **$1.00**
No. 75B7 Fine Point Tip Assembly **$1.00**

EXTRA TIPS FOR 100 AND 199 GUNS
No. 19B4 Soldering Tip **$.50**
No. 19C1 Plastic Tile Cutting Tip **$.60**
No. 19F33 Flat Iron Tip (dent removing) **$.60**

EXTRA TIPS FOR 288 GUN
No. 28C4 Soldering Tip **$.60**
No. 28C1 Plastic Tile Cutting Tip **$.60**
No. 19F33 Flat Iron Tip (dent removing) **$.60**

EXTRA TIPS FOR 250 GUN
No. 25A4 Soldering Tip **$.25**
No. 25X20 "Feroloy" long-life soldering Tip **$.50**
No. 25C1 Plastic Tile Cutting Tip **$.50**
No. 25F33 Flat Iron Tip (dent removing) **$.60**

MULTI-SPEED ALL-DRILL

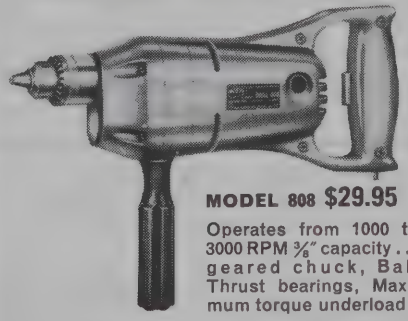


MODEL 950 $44.95

Light weight, easy to handle Brite Finish aluminum die castings; perfect balance heavy duty auxiliary handle. Built for heavy duty continuous operation.

This four-speed range, (plus reversible) drill assures perfect workability in any material—alloy and cold rolled steel, cast iron, brass aluminum, bronze, plastics and masonry. Two-gear reduction speed positions, with lever action gear shift; two-electronic reduced speeds in each gear position; ½" geared Jacobs chuck; tremendous torque, without heat, in low gear position; ample torque in high gear position; 6 amp. ½ HP motor, welded burnout proof armature; safety switch motor reverse; rugged needle and ball thrust spindle bearings; heavy duty gear train; locking trigger switch.

2-SPEED POWER DRILL



MODEL 808 $29.95

Operates from 1000 to 3000 RPM ⅜" capacity . . . geared chuck, Ball Thrust bearings, Maximum torque underload.

Drill in steel, masonry . . . sand, polish, drill. Here's the double duty drill that solves all drilling problems for home and professional craftsmen. It has two power takeoffs to handle both heavy duty and light precision jobs. Simply change speeds . . . 3000 RPM for boring into steel, brass, copper, aluminum—even masonry and concrete. Wen accessories come with it . . . allowing you to wax, buff, polish, mix paint—even sharpen knives and tools. Finest stressproof steel cut gears, ⅜" Jacobs geared chuck, on-off switch and lock button, lightweight cast aluminum housing.

TOTER DRILL ACCESSORY KIT



MODEL 80 K 35 $9.95

The perfect supplement to your drill: every attachment operates at the correct speed. It buffs, polishes, scratch-brushes, sands, drills, grinds, sharpens, stirs paint—has literally a hundred other uses. Drill holder, included, allows you to have both hands free. A whole workshop in one kit! Components include paint mixer, 3" wire brush, 3" buffing wheel, 3x¾" grinding wheel, 9 drills (1/16 to ¼") in plastic case, 15-5" sandpaper discs, and other extras.

BEST BUY WEN FOR YOUR MONEY

PRODUCTS INC.

ALL TOOLS U.L. AND C.S.A. LISTED.

Trade Discount Applies To List Prices Only

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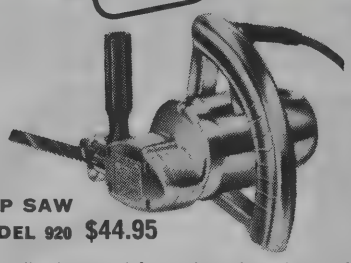
NATIONALLY ADVERTISED WEN HAND POWER TOOLS



ALL PURPOSE SAW
MODEL 505 $26.95

Cuts wood, plastics, metals, composition board, hard rubber and leather. Sawdust-free due to a motor fan air stream blower. Powered by a 115 volt A.C. 1.8 amp motor which delivers 2650 5/8" strokes per minute under load. Saw is 7¼" long, 5" high.

ALL PURPOSE SAW KIT—includes 505 saw rip guide with circle cutter, 5 extra blades and metal carrying case. **$29.95**



ZIPP SAW
MODEL 920 $44.95

Specially designed for awkward angles and hard-to-reach cutting jobs. Cuts flush to corner . . . to floor. Tremendously versatile, it comes with seven blade attachments that cut everything from delicate scrollwork to plastics, metals, and 6" logs. 3200 one-inch strokes per minute, 3-wire cord.



ALL-SAW
MODEL 909 $44.95

Heavy duty, precision designed to do the job of several saws. With seven blade attachments, the All-Saw does fancy scrollwork on wood, cuts metal (up to 2" pipe), bakelite, tile, wallboard, asphalt—6-inch logs, you name it. Starts inside cut. 3400 1-inch strokes per minute.

EXTRA SAW BLADE ITEMS

EXTRA BLADES FOR 505 SAW

	List Price	Three or More
No. 50A34—Blade package containing one each 7-10-18 teeth per inch (for coarse medium and fine cutting).	$1.20	$ .84
No. 50A35—Blade package containing three blades, all with 7 teeth per inch (coarse).	1.00	.70
No. 50A36—Blade package containing three blades, all with 10 teeth per inch (medium).	1.00	.70
No. 50A37—Blade package containing three blades, all with 18 teeth per inch. (For high speed metal cutting).	1.80	1.26
No. 50K5—Blade package containing one each 7-10-14-18-32 teeth per inch.	2.10	1.47

Extra Blades for the 909 and 920 Saws.

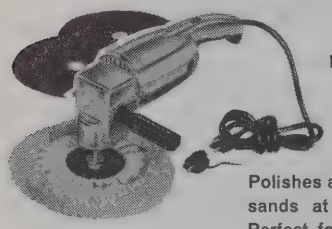
	List Price	Three or More
No. 900—Blade package containing one each—Nos. 91, 92, 93, 94, 95, 96, 97.	$3.40	$2.38
No. 901—Blade package containing three blades all with 3 teeth per inch (very fast rough cuts).	1.80	1.26
No. 902—Blade package containing three blades all with 5 teeth per inch (fast rough cuts).	1.50	1.05
No. 903—Blade package containing three blades all with 8 teeth per inch (medium cuts).	1.20	.84
No. 904—Blade package containing three blades all with 14 teeth per inch (fine scroll work).	1.20	.84
No. 905—Blade package containing three No. 95 Knife Blades	1.20	.84
No. 906—Blade package containing three No. 96 Blades — 14 teeth per inch (high speed steel).	1.80	1.26

	List Price	Three or More
No. 907—Blade package containing three No. 97 blades — 24 teeth per inch (high speed steel — extra fine cuts).	$1.80	$1.26

Extra Blades for the 5T1 Saw Table

No. 50T70—Package of five blades—one of each 5 blades described below.	1.80	1.26
No. 50T71 — Package of three blades—14 teeth per inch	1.00	.70
No. 50T72 — Package of three blades—10 teeth per inch	1.00	.70
No. 50T73 — Package of three blades — 8 teeth per inch	1.00	.70
No. 50T74 — Package of three knife blades	1.00	.70
No. 50T75 — Package of three blades — 32 teeth per inch — metal.	1.80	1.26

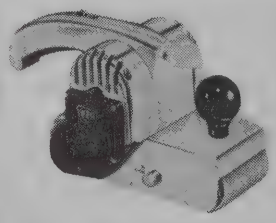
2-SPEED 7" SANDER/POLISHER



MODEL 940
$44.95

Polishes at 1800 RPM; sands at 3400 RPM. Perfect for any material. Metal, wood, plastic, fibreglass are no strangers to this remarkable tool. Sands cars, boats, floors, walls, etc. Buffs car, floor, furniture finishes to perfection. Heavy duty construction.

3" BELT SANDER



MODEL 910
$44.95

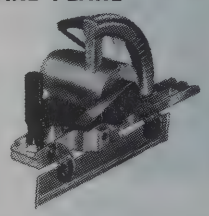
Extra-power ⅓ HP Motor, with oversize needle and oilite bearings, fingertip slide switch, and adjustable knobs.

Tough sanding jobs are now easy with this heavy duty belt sander. Removes paint, finishes rough and worn floors, smooths walls. Ideal for rough and finish work on furniture, framing, boats, metal. Sealed, permanently lubricated gear train.

ELECTRIC HAND PLANE

MODEL 930
$44.95

A fully integrated tool, not an attachment.



Ruggedly built for years of precision work. Big 16" shoe eliminates rounding over. Convenient saw grip. Powerful ½ HP burnout-proof motor runs cool for hours. Cutting width 2⅛"; depth adjustable from 0 to 1/16". Exclusive air stream chip ejector. Ideal for surface and flush planing, precise edging and beveling.

SANDER, SANDING BELT AND SANDER/POLISHER ACCESSORIES

Model 940 Sander / Polisher Paper Back Sanding Discs—Aluminum Oxide Open Coat 7" x ⅞" Hole.

Part No.		Grit	Packed to Box	LIST Price per Box
94A57	Extra Fine	120	25	$ 3.75
94A44	Fine	80	25	5.00
94A43	Medium	50	25	6.50

Fibre Back — Heavy Duty Sanding Discs Aluminum Oxide, Rosin 7" x ⅞" Hole.

94A64	Fine	80	25	$15.00
94A63	Medium	50	25	18.50
94A62	Coarse	36	25	17.50
94A65	Extra Coarse	24	25	17.65

WOOL POLISHING BONNETS

Part No.		LIST
94A29	7" Washable Bonnet with draw strings, ea.	$1.60
94A67	⅝" adapter for automotive back plates	$1.00

Sanding Belts—Paper Back, Garnet 3" x 18".

Part No.		Grit	Packed to Box	LIST Price per Box
913	Extra Fine	120	10	$ 4.80
912	Fine	80	10	4.80

Sanding Belts—Cloth Back, Heavy Duty, Aluminum Oxide.

915	Fine	80	10	$ 6.20
911	Medium-Fine	60	10	6.20
914	Medium	50	10	6.20

Model 202 Sander

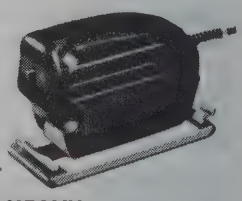
Part No.		LIST Price For Ass't
20G78	Sander Package (2 sheets each 6/0—3/0—1/0) Garnet Finishing Paper	$ .20
30G82	Sandpaper Package (2 sheets each 6/0—3/0—1/0) Aluminum Oxide Paper	.20
20G80	Felt Polishing Cloth	.15

Model 303 Sander

40G78	Sandpaper Package (5 sheets each 6/0—3/0—1/0) Aluminum Oxide Paper	.60
40G80	Felt Polishing Cloth	.20

ECONOMY SUPER SANDER/POLISHER

MODEL 202
$13.95



Straight line action gets into corners, leaves no scratches. 14,400 strokes per minute, with approximately 1/16" throw.

MODEL 404 $19.95 —HEAVY DUTY ELECTRIC POWER SANDER KIT
Amazing power development drives big sanding pad 3¼" x 6⅛"—20 sq. inches of working area.

MODEL 303 $16.95
SUPER POWER ELECTRIC SANDER KIT
2½" x 5½" Sanding pad. Unbelievable concentration of power. Covered with unbreakable plastic case, 12 sheets of sandpaper and 2 polishing cloths.

BEST BUY WEN FOR YOUR MONEY

PRODUCTS INC.

ALL TOOLS U.L. AND C.S.A. LISTED

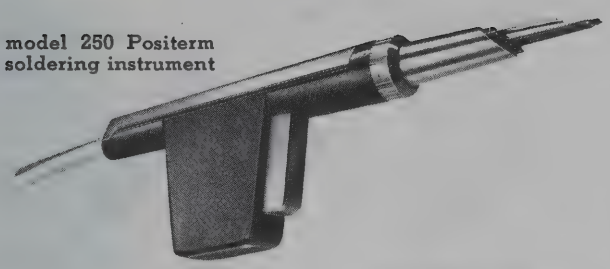
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Positerm® soldering instrument
model 250

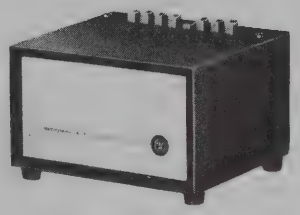
20-200 watts input
120 volts • 60 cycle

price list

94-520



model 250 Positerm soldering instrument



power supply

The Westinghouse Positerm soldering instrument applies electrical energy to the piece to be soldered. Unique Positerm soldering tips cause this electrical energy to be converted to heat right on the workpiece surface. The tips remain cool because they are good conductors for carrying electricity to the workpiece while being poor conductors for carrying heat from the workpiece. The blade edges of the tips cut through oxides and films so that good electrical contact can be easily established, and the "V" formed by the two tips provides a self-locating action with the workpiece.

specifications

The model 250 Positerm soldering instrument consists of:

1. **working head**
   - designed to be used either as a gun or as a pencil
   - precise, sensitive, adjustable solder-feed mechanism
   - two ounce spool of solder . . . about two days supply for most production-line work stations
   - simple-to-use provisions for adjusting the tips and solder nozzle.
2. **power supply**
   - six different heating rates; the proper one for each application available at the push of a button
   - separate circuit with a variety of voltages for accessories such as a thermal stripping attachment (available at extra cost)
   - designed for safety so that the operator cannot be exposed to a hazardous electrical potential
   - operates from a standard 115 to 120 volt, 60-cycle, line.

ratings	tiny work	average work			large work	
heating rate number	1	2	3	4	5	6
power delivered to workpiece, watts	13	21	31	42	55	62
input (approx.) of equivalent conduction soldering iron, watts	20	45	67	120	180	200
open circuit potential, volts	0.97	1.25	1.50	1.80	2.10	2.40
current during soldering, amps.	40	53	67	75	84	100
voltage available for accessories, volts	2.6	3.3	4.1	4.9	5.7	6.5

solder size: 0.025″ to 0.063″ diameter

solder type: 60 tin/40 lead, #66 rosin core provided with gun. Any alloy can be used.

weight of gun in normal use position with full spool of solder: 10 ounces

shipping weight of gun and power supply: 9 pounds

design features

one hand operation: solder fed from spool in gun.

time saving: 38% average reduction in soldering time . . . as much as 65% reduction in some applications.

improved reliability: "cold" joints virtually impossible. Human elements involving skill and judgment factors reduced.

wide application: six heating rates cover range of applications where irons from 20 to 200 watts are normally used.

operation ease: POSITERM tool, with its lightweight human-engineered handpiece, is overwhelmingly preferred.

no insulation damage: cool tips can't burn insulation.

long life: year-long production-line tests show no tip wear and no maintenance.

lower equipment costs: add up total annual soldering equipment costs . . . then compare.

versatile: use the POSITERM tool for all electronic connections except p-c boards and hair-size wire. Accessory tips available for relay-leaf soldering.

plus: many other advantages such as no operator burns, reduced solder use, less work space needed, lower power consumption, more uniform joints and less operator training required. These advantages mean better solder joints at lower cost.

Ⓣ Positerm is a Westinghouse trademark for the positive termination soldering instrument. Patents applied for.

net prices

description	quantity and net prices, each				
	1-9	10-24	25-49	50-99	100 or more
model 250 Positerm soldering instrument, complete with power supply	**$73.50**	**$69.82**	**$66.15**	**$62.47**	**$58.80**

terms: 30 days net. Minimum order **$25** net. Prices, ratings and specifications subject to change without notice (see selling policy 94-000).

shipment: Lightweight shipments are made by parcel post or United parcel post or United Parcel Service, and heavier shipments are made by truck or railway express, unless otherwise specified. Shipping charges are prepaid by Westinghouse and invoiced to the purchaser unless otherwise specified.

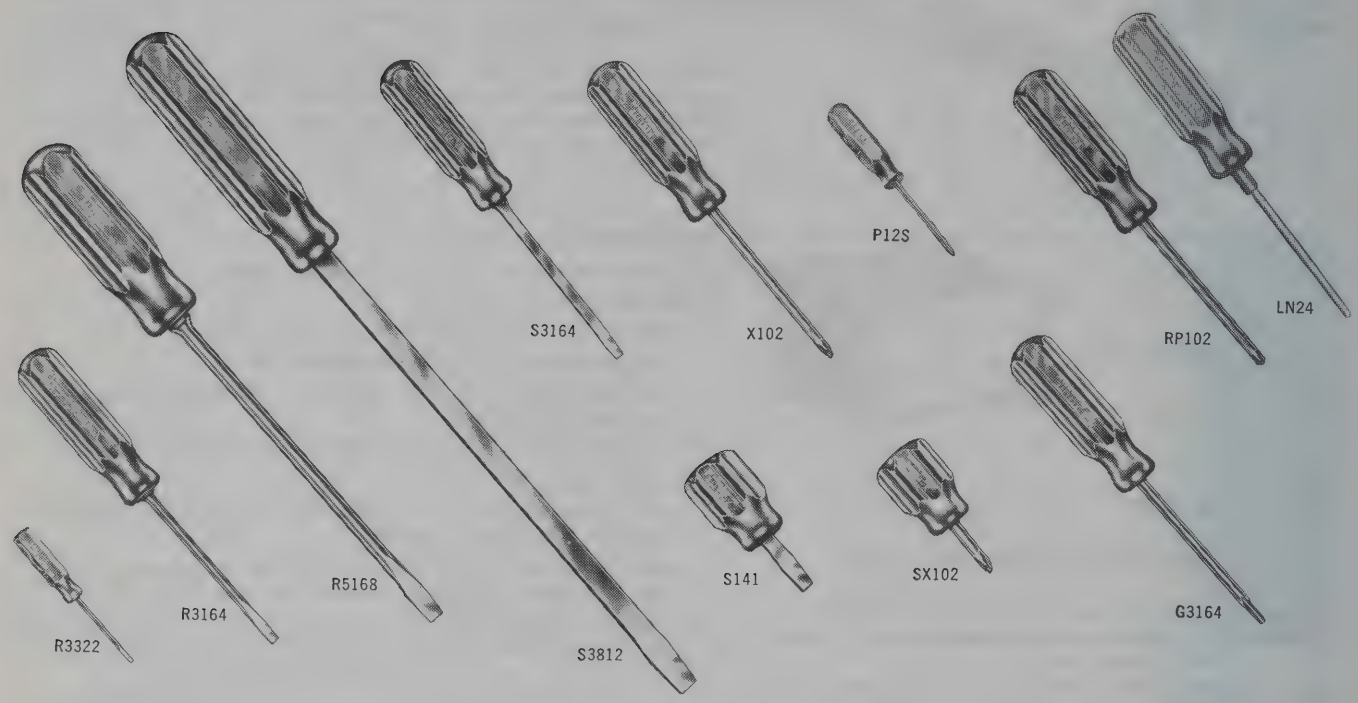
Resale prices are suggested only.

481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351

XCELITE® QUALITY PROFESSIONAL TOOLS

SCREWDRIVERS

SAE 6150 chrome vanadium steel blades. Shockproof, breakproof, plastic (UL) handles.



ROUND BLADE

Number	Size Blade	Net
	Regular	
R182	1/8″ x 2″	$ .37
R184	1/8″ x 4″	.46
R186	1/8″ x 6″	.50
R188	1/8″ x 8″	.60
R1810	1/8″ x 10″	.69
R5323	5/32″ x 3″	.50
R5324	5/32″ x 4″	.50
R5325	5/32″ x 5″	.50
R5328	5/32″ x 8″	.67
R3163	3/16″ x 3″	.66
R3164	3/16″ x 4″	.73
R3166	3/16″ x 6″	.83
R3168	3/16″ x 8″	.93
R31610	3/16″ x 10″	1.00
R142	1/4″ x 8″	.77
R144	1/4″ x 4″	.92
R146	1/4″ x 6″	.99
R148	1/4″ x 8″	1.07
R1410	1/4″ x 10″	1.12
R5164	5/16″ x 4″	1.07
R5166	5/16″ x 6″	1.16
R5168	5/16″ x 8″	1.25
	Pocket Clip Style	
R3322	3/32″ x 2″	.30
R3323	3/32″ x 3″	.33
R3324	3/32″ x 4″	.33
R181	1/8″ x 2″	.30
R183	1/8″ x 3″	.33
R184½	1/8″ x 4″	.33

SQUARE BLADE

Number	Size Blade	Net
	Regular	
S3163	3/16″ x 3″	$ .73
S3164	3/16″ x 4″	.77
S3166	3/16″ x 6″	.90
S3168	3/16″ x 8″	1.00
S31610	3/16″ x 10″	1.16
S142	1/4″ x 2″	.83
S144	1/4″ x 4″	.99
S146	1/4″ x 6″	1.07
S148	1/4″ x 8″	1.16
S5162	5/16″ x 2″	.90
S5164	5/16″ x 4″	1.10
S5166	5/16″ x 6″	1.22
S5168	5/16″ x 8″	1.32
S51610	5/16″ x 10″	1.49
S51612	5/16″ x 12″	1.68
S388	3/8″ x 8″	1.58
S3812	3/8″ x 12″	2.48
S3818	3/8″ x 18″	2.64
S7166	7/16″ x 6″	1.98
S71612	7/16″ x 12″	2.48
S71618	7/16″ x 18″	2.64
S1424	1/4″ x 24″	2.15
	Stubby	
S3161	3/16″ x 1″	.50
S141	1/4″ x 1″	.57
S5161	5/16″ x 1″	.57

PHILLIPS

Number	Point Size	Size Blade	Net
		Extra Long	
X1010	1	3/16″ x 10″	$1.19
X1020	2	1/4″ x 10″	1.32
		Regular	
X100	0	1/8″ x 2″	.53
X101	1	3/16″ x 3″	.79
X108	1	3/16″ x 6″	.89
X102	2	1/4″ x 4″	.99
X103	3	5/16″ x 6″	1.32
X104	4	3/8″ x 8″	1.65
		Stubby	
SX101	1	3/16″ x 1 7/16″	.73
SX102	2	1/4″ x 1 5/16″	.79
		Pocket Clip Style	
P12S	0	1/8″ x 2″	.43

ALLEN TYPE

Number	Hex Size	Blade Length	Net
LN20	.050″	4″	$ .76
LN21	1/16″	4″	.76
LN22	5/64″	4″	.76
LN23	3/32″	4″	.76
LN764	7/64″	4″	.73
LN24	1/8″	4″	.83
LN964	9/64″	4″	.83
LN25	5/32″	6″	.83
LN26	3/16″	6″	.83
LN27	7/32″	6″	.92
LN28	1/4″	6″	.96

REED & PRINCE

Number	Point Size	Size Blade	Net
RP101	1	3/16″ x 3″	$ .83
RP102	2	1/4″ x 4″	.99
RP103	3	5/16″ x 6″	1.32
RP104	4	3/8″ x 8″	1.65

CLUTCH HEAD

Type G No.	Tip Size	Size Blade	Net
G3324	3/32″	1/8″ x 4″	$ .83
G183	1/8″	3/16″ x 3″	.83
G5324	5/32″	3/16″ x 4″	.96
G3164	3/16″	1/4″ x 4″	.96
G146	1/4″	5/32″ x 6″	1.22
G5166	5/16″	3/8″ x 6″	1.49

BERYLLIUM-COPPER

Non-sparking. Non-magnetic.
Higher fatigue resistance than steel.

Number	Size Blade Regular	Net
BR186	1/8″ x 6″	$ .83
BR1810	1/8″ x 10″	.90
BR3168	3/16″ x 8″	1.47
BR146	1/4″ x 6″	1.83
BR148	1/4″ x 8″	1.97
	Pocket-Clip Style	
BR181	1/8″ x 2″	.33

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XCELITE® QUALITY PROFESSIONAL TOOLS

COMBINATION-REVERSIBLE SCREWDRIVERS

SAE 6150 chrome vanadium steel blades. Shockproof, breakproof, plastic (UL) handles.
Patented spring holds blades securely. 7/16" hex opening doubles as a nutdriver.

COMPLETE UNITS

Regular Type	Net
CR1—No. 25 handle & RB1 blade	$1.53
CR2—No. 25 handle & RB2 blade	1.53
CR3—No. 25 handle & RB3 blade	1.53
Stubby Type	
CS1—No. 26 handle & SB1 blade	1.37
CS2—No. 26 handle & SB2 blade	1.37

HANDLES ONLY

25—Regular	.66
26—Stubby	.59

BLADES ONLY

Regular Type	
RB1—No. 1 Phillips & 3/16" Slotted	.87
RB2—No. 2 Phillips & 1/4" Slotted	.87
RB3—No. 3 Phillips & 5/16" Slotted	.87
RB12—No. 1 & No. 2 Phillips	1.02
GB1—3/16"G & 5/32"G Clutch	1.02
GB2—5/16"G & 1/4"G Clutch	1.02
Stubby Type	
SB1—No. 1 Phillips & 3/16" Slotted	$ .83
SB2—No. 2 Phillips & 1/4" Slotted	.83
GS1—3/16"G & 5/32"G Clutch	.89

POCKET ROLL KITS

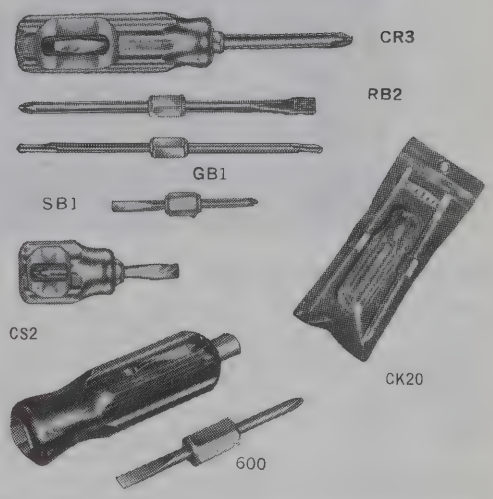
CK2 — Contains RB1, RB2 blades and No. 25 handle $3.00
CK3 — Same as CK2, plus RB3 blade.. 3.87
CK5 — Same as CK2, plus RB3, GB1, and GB2 blades 5.87

PLASTIC VIEW KITS

SK20 — Contains SB1, SB2 blades and No. 26 handle $2.57
CK20 — Contains RB1, RB2 blades and No. 25 handle 3.10
CK23—Same as CK20, plus RB3 blade 3.90

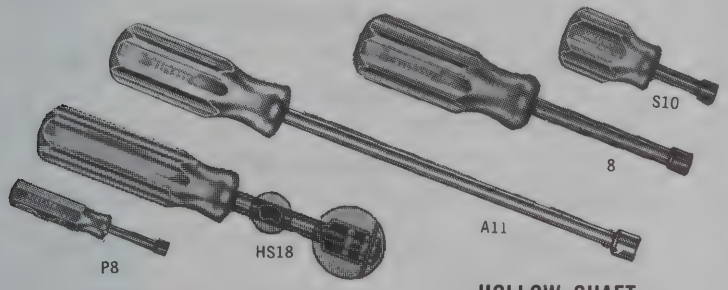
COMBINATION SCREW AND NUTDRIVER TOOL

600—Handy 4-way tool with pocket clip. 1/4" and 7/16" hex openings. Reversible SB1 blade ..... Net $1.52



NUTDRIVERS (Color-Coded Handles)

Polished-plated, High Carbon Steel shafts. Shockproof, breakproof, plastic (UL) handles. Precision, cold drawn, case hardened sockets.



REGULAR (6" Overall Length)

Number	Handle Color	Hex Opening	Net
5	Amber	5/32"	$ .83
6	Black	3/16"	.83
7	Brown	7/32"	.83
8	Red	1/4"	.83
9	Orange	9/32"	.83
10	Amber	5/16"	.83
11	Green	11/32"	.83
12	Blue	3/8"	.83
14	Brown	7/16"	1.07
16	Red	1/2"	1.07

EXTRA LONG (9" Overall Length)

A6	Black	3/16"	$1.07
A7	Brown	7/32"	1.07
A8	Red	1/4"	1.07
A9	Orange	9/32"	1.07
A10	Amber	5/16"	1.07
A11	Green	11/32"	1.07
A12	Blue	3/8"	1.07

STUBBY (3 1/4" Overall Length)

S6	Black	3/16"	$ .70
S8	Red	1/4"	.70
S10	Amber	5/16"	.70
S11	Green	11/32"	.70
S12	Blue	3/8"	.70

HOLLOW SHAFT

Number	Handle Color	Hex Opening	Net
HS6	Black	3/16"	$1.03
HS7	Brown	7/32"	1.03
HS8	Red	1/4"	1.03
HS9	Orange	9/32"	1.03
HS10	Amber	5/16"	1.03
HS11	Green	11/32"	1.03
HS12	Blue	3/8"	1.03
HS13	Amber	13/32"	1.17
HS14	Brown	7/16"	1.17
HS15	Amber	15/32"	1.20
HS16	Red	1/2"	1.20
HS17	Amber	17/32"	1.27
HS18	Orange	9/16"	1.27
HS19	Amber	19/32"	1.40
HS20	Amber	5/8"	1.40
HS22	Amber	11/16"	1.77
HS24	Amber	3/4"	1.77

POCKET CLIP STYLE (3 1/2" Overall Length)

P3	Amber	3/32"	$ .53
P4	Red	1/8"	.53
P5	Amber	5/32"	.53
P6	Black	3/16"	.53
P7	Brown	7/32"	.53
P8	Red	1/4"	.53
P9	Orange	9/32"	.53
P10	Amber	5/16"	.53
P11	Green	11/32"	.53
P12	Blue	3/8"	.53

NUTDRIVER SETS

Choice of heavy gage steel stands and racks with large readable size indexes, or pebble-grain carrying case for bench or wall. Color-coded, shockproof, breakproof, plastic (UL) handles. Polished-plated shafts.

No. 17 BENCH STAND TYPE **Net $6.45**
Contains Nos. 6, 7, 8, 9, 10, 11, and 12 nutdrivers.

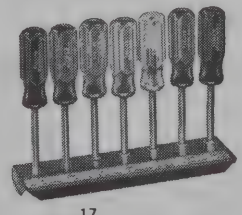
No. 77 CARRYING CASE **Net $6.45**
Contains Nos. 6, 7, 8, 9, 10, 11, and 12 nutdrivers.

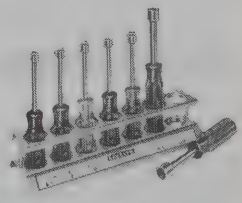
No. 137 BENCH STAND TYPE **Net $7.35**
Contains Nos. 6, 8, 10, 11, 12, HS16, and HS18 nutdrivers.

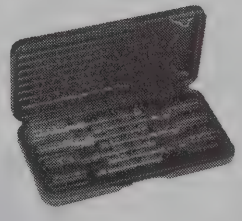
No. 127 LOCKABLE WALL RACK TYPE **Net $6.60**
Contains Nos. 6, 7, 8, 9, 10, 11, and 12 nutdrivers.

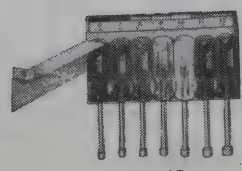
No. 147 BENCH STAND TYPE (Hollow Shaft) **Net $8.70**
Contains Nos. HS8, HS9, HS10, HS11, HS12, HS14, and HS16 hollow shaft nutdrivers.

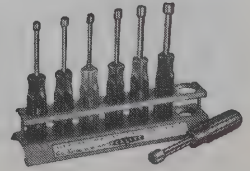
No. HS6-18 CARRYING CASE (Hollow Shaft) **Net $11.10**
Contains Nos. HS6, HS7, HS8, HS9, HS10, HS11, HS12, HS14, HS16, and HS18 hollow nutdrivers.


17


137


77

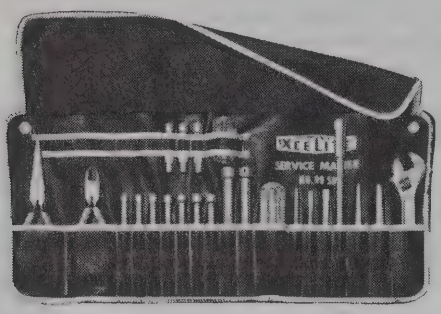

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147

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XCELITE® QUALITY PROFESSIONAL TOOLS

SERIES "99" SERVICE KITS, BLADES, AND HANDLES



Net 99SM SERVICE MASTER — Net $23.63

Contains 52CG long nose cushion grip plier, 55CG 5″ diagonal cushion grip plier, 99-3 handle (Stubby) with three nutdrivers (¼″, 5⁄16″, ⅜″), 46C adjustable wrench, 99-1 handle (Regular) with nine interchangeable nutdrivers (99-6 thru 99-16), one Phillips and two slotted screwdrivers, 99-X10 extension shaft, and two chrome-plated reamers.

99SMK, Kit only ..... **Net $1.92**

No. 99PR ROLL KIT — Net $8.97

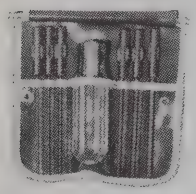
Contains nine nutdrivers (99-6 thru 99-16), 99-81 (Slotted) and 99-82 (Phillips) reversible screwdriver blades, 99-1 handle (Regular).

99K, Kit only ..... **Net $ .96**

No. 99JR ROLL KIT — Net $7.88

Contains seven nutdrivers (99-6 thru 99-12) four screwdriver blades 99-811 and 99-812 (Slotted), and 99-821 and 99-822 (Phillips), 99-2 handle (Junior).

99KJR, Kit only ..... **Net $.96**



No. 99LN ROLL KIT — Net $4.47

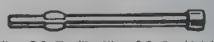
Contains six Allen type screwdriver blades (99-21 thru 99-26) and 99-1 handle (Regular).

No. 99-30 CLEAR PLASTIC POUCH — Net $3.24

Heat sealed plastic snap case with size numbers on pockets for convenient selecting and storing. Contains six Allen type screwdriver blades (99-21 thru 99-26).



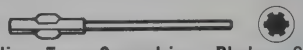
	Net
99-1 (1 1⁄16″ x 4⅛″) Regular Handle (for all blades, single-end and reversible)	$ .77
99-2 (1″ x 3⅛″) Junior Handle (for single-end blades only)	.69
99-3 (⅞″ x 2″) Stubby Handle (for single-end blades only)	.66



Nutdriver Blades: 99-6 (3⁄16″), 99-7 (7⁄32″), 99-8 (¼″), 99-9 (9⁄32″), 99-10 (5⁄16″), 99-11 (11⁄32″), 99-12 (⅜″) ..... .63
99-14 (7⁄16″), 99-16 (½″) ..... .83



Allen Type Screwdriver Blades: 99-20 (.050″), 99-21 (1⁄16″), 99-22 (5⁄64″), 99-23 (3⁄32″), 99-764 (7⁄64″), 99-24 (⅛″), 99-964 (9⁄64″), 99-25 (5⁄32″), 99-26 (3⁄16″) ..... .60



Bristol Multiple-Spline Type Screwdriver Blades: 99-61 (.048″, 4-flute), 99-62, (.060″, 6-flute), 99-63 (.069″, 4-flute), 99-64 (.072″, 6-flute), 99-65 (.076″, 4-flute), 99-66 (.096″, 6-flute), 99-67 (.111″, 6-flute), 99-68 (.145″, 6-flute), 99-69 (.183″, 6-flute) ..... $ .60



99-81 Slotted Screwdriver Reversible Blade (3⁄16″ & 5⁄32″) 1.07



99-82 Phillips Screwdriver Reversible Blade (#1 & #2) 1.07
99-83 Reed & Prince Screwdriver Reversible Blade (3⁄16″ & 5⁄32″) 1.07



99-84 Clutch "G" Screwdriver Reversible Blade (3⁄16″ & 5⁄32″) 1.07



Slotted Screwdriver Blades: 99-811 (3⁄16″), 99-812 (5⁄32″) ..... .63



Phillips Screwdriver Blades: 99-821 (#1), 99-822 (#2) ..... .63



Reamers: 99-38 (⅛″-⅜″) 1.47
99-39 (¼″-½″) 1.83



99-X5 Extension Shaft. Adds 4″ reach to single-end blades ..... .97
99-X10 Extension Shaft. Adds 7″ reach to single-end blades ..... .97



Stubby Nutdriver Blades: 99-S8, 99-S10, 99-S12 ..... .53

COMPACT SETS

Series "99" Sets

No. 99PS-40 ALLEN HEX TYPE SCREWDRIVER SET
Includes nine Allen Hex type screwdriver blades (.050″ thru 3⁄16″) 99-X5 extension blade, 99-1 handle, and see-thru case. **Net $6.75**

No. 99PS-50 NUTDRIVER/SCREWDRIVER SET
Includes seven regular nutdriver blades (3⁄16″ thru ⅜″), two slot tip screwdriver blades (3⁄16″ and 5⁄32″), two Phillips screwdriver blades (#1 and #2), 99-X5 extension blade, 99-1 handle, and see-thru case. **Net $8.25**

No. 99PS-60 BRISTOL MULTIPLE-SPLINE TYPE SCREWDRIVER SET

Includes nine Bristol Multiple-Spline type screwdriver blades (.048″ thru .183″), 99-X5 extension blade, 99-1 handle, and see-thru case. **Net $6.75**



99PS-40

Convertible Nutdriver and Screwdriver Sets

Black plastic torque amplifier handle (1″ x 3⅛″) slips over handles of pocket size (3½″) nutdrivers and screwdrivers . . . provides larger grip, extends reach and increases driving power to that of standard size tools. See-through plastic case fits pocket, stands upright on bench.

No. PS88 SCREWDRIVER SET
Contains 5 slot tip screwdrivers (3⁄32″, ⅛″, 5⁄32″, 3⁄16″, ¼″), 3 Phillips screwdrivers (#0, #1, #2), hollow handle, and case. **Net $3.93**

No. PS44 SCRULOX SCREWDRIVER SET
Includes five Scrulox screwdrivers (#1 thru #14), one nutdriver (¼″), hollow handle, and case. **Net $3.45**

No. PS7 NUTDRIVER/SCREWDRIVER SET
Contains 2 nutdrivers (¼″ and 5⁄16″), 2 slot tip screwdrivers (3⁄16″ and 5⁄32″), 2 Phillips screwdrivers (#0 and #1), hollow handle, and case. **Net $3.45**

No. PS120 NUTDRIVER SET
Contains ten color coded nutdrivers (3⁄32″ thru ⅜″), hollow handle, and case. **Net $5.25**

PS44



PS120



SUBJECT TO CHANGE WITHOUT NOTICE

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BPC

CV Transformers

AUTOMATIC, INSTANTANEOUS VOLTAGE REGULATION FOR A WIDE VARIETY OF ELECTRIC AND ELECTRONIC DEVICES

Constant-voltage Sola transformers provide a stabilized output voltage even though the input voltage varies over a considerable range. Their applications are numerous and varied. CV's are especially ideal for high-accuracy requirements such as in computers and data-processing equipment.

Another advantage in CV transformers is their ability to prolong the life of electronic components by eliminating injurious over- and under-voltages. The Sola transformer's current-limiting factor protects semiconductors and other components from excessive inrush and fault currents.

Sola Sinusoidal Type (CVS) *LESS THAN 3% HARMONIC CONTENT*

ELECTRICAL SPECIFICATIONS • 60 CYCLE SINGLE PHASE — **MECHANICAL SPECIFICATIONS**

Voltage Rating				Price Ind'l & Govt. Users	Nominal Dimensions		Approximate Shipping Weight Lbs.	* Structure Code
Regulated Output	Input Range	VA	Catalog Number		Outline	Mounting		
118	95-130	30	23-13-030(a)	$25.00	6⅛ x 4 x 5⅜	3 x 3½	9	W
	190-260X 380-520	30	23-23-030(a)	27.00	6⅛ x 4 x 5⅜	3 x 3½	9	W
	95-130	60	23-13-060(a)	30.00	6 13/16 x 4 x 5⅜	3 x 3½	10	W
	190-260X 380-520	60	23-23-060(a)	32.00	6 13/16 x 4 x 5⅜	3 x 3½	10	W
	95-130X 190-260	120	23-22-112(a)	38.00	8 x 4 x 5⅜	3 x 3½	14	W
	190-260X 380-520	120	23-23-112(a)	41.00	8 x 4 x 5⅜	3 x 3½	14	W
	95-130X 190-260	250	23-22-125(b)	52.00	9⅝ x 5⅜ x 7 1/16	4⅛ x 4¾	28	W
	190-260X 380-520	250	23-23-125(b)	56.00	10 x 5⅜ x 7 1/16	4⅛ x 4¾	28	W
	95-130X 190-260	500	23-22-150(c)	81.00	12 7/16 x 9 x 6 7/16	5⅝ x 8⅛	47	W
118 x 236	190-260X 380-520 95-130X 175-235X	500	23-26-150(c)	86.00	12 7/16 x 9 x 6 7/16	5⅝ x 8⅛	47	W
	190-260	1000	23-25-210(c)	135.00	17 13/16 x 9 x 6 7/16	5⅝ x 8⅛	80	W
	190-260X 380-520	1000	23-26-210(c)	135.00	17 13/16 x 9 x 6 7/16	5⅝ x 8⅛	80	W
	95-130X 175-235X 190-260	2000	23-25-220	245.00	19 13/16 x 12¾ x 10 11/16	4½ x 11¾	145	W
	190-260X 380-520	2000	23-26-220	245.00	19 13/16 x 12¾ x 10 11/16	4½ x 11¾	145	W
	95-130X 175-235X 190-260	3000	23-25-230-3	330.00	21 7/8 x 12¾ x 10 11/16	6 7/16 x 11¾	192	W
	190-260X 380-520	3000	23-26-230	330.00	21 7/8 x 12¾ x 10 11/16	6 7/16 x 11¾	192	W
	95-130X 175-235X 190-260	5000	23-25-250	515.00	20 5/16 x 25 13/16 x 10 11/16	5 7/16 x 24 13/16	475	Y
	190-260X 380-520	5000	23-26-250	515.00	20 7/8 x 25 13/16 x 10 11/16	5 7/16 x 24 13/16	475	Y
	190-260X 380-520	7500	23-28-275	765.00	20 5/16 x 38¼ x 11 1/16	5 7/16 x 37¼	710	Z

An adjustable CVS, the ac Solavolt is available with output range from 0-130 v. 500 va. Write for Solavolt bulletin.

Normal Harmonic Type (CVN)

ELECTRICAL SPECIFICATIONS • 60 CYCLE SINGLE PHASE — **MECHANICAL SPECIFICATIONS**

Voltage Rating		Output Capacity in VA	Catalog Numbers	Approx. Net Price Each to Industrial, Commercial or Govt. Users	Nominal Dimensions (Inches)		Approx. Ship. Wt. in Lbs.	* Structure Code
Regulated Output	Input Range				Outline	Mounting		
118	95-130	15	20-10-015	$15.00	5 5/16 x 2⅝ x 3½	5 1/16 x 1⅛	4	D
			20-11-015	20.00	5¼ x 3½ x 2¼	3 x 1½	4	S
			20-14-015	14.00	4 5/16 x 2⅜ x 2 1/16	1¾ x 1⅞	3	E
		30	20-14-030	16.00	4 5/16 x 2⅜ x 3 5/16	1⅞ x 2⅝	5	E
			20-13-030(a)	20.00	6 x 4 x 5 3/16	3 x 3½	7	W
		60	20-13-060(a)	25.00	6 13/16 x 4 x 5⅜	3 x 3½	10	W
			20-14-060	21.00	4 13/16 x 3⅛ x 3⅞	2½ x 3⅞	8	E
118	95-130	120	20-14-112	29.00	4 13/16 x 3⅛ x 4 13/16	2½ x 3⅞	11	E
			20-13-112(a)	33.00	7⅜ x 4 x 5 3/16	3 x 3½	13	W
236	190-260	120	20-21-112(a)	33.00	7⅞ x 4 x 5 3/16	3 x 3½	13	W
118	95-130	150	20-13-115(b)	40.00	8⅞ x 5⅜ x 7 1/16	4⅛ x 4¾	22	W
	190-260x 380-520	250	20-13-125(c)	49.00	11⅛ x 6 15/16 x 6 7/16	4⅝ x 6⅛	25	W
			20-23-125(c)	49.00	11⅛ x 6 15/16 x 6 7/16	4⅝ x 6⅛	25	W
	95-130	500	20-13-150(c)	77.00	12⅝ x 6 15/16 x 6 7/16	4⅝ x 6⅛	36	W
	190-260x 380-520		20-23-150(c)	77.00				
236			20-24-150(c)	77.00	12½ x 6 15/16 x 6 7/16			
118	95-130	1000	20-13-210	128.00	15⅛ x 6 15/16 x 6 7/16	4⅝ x 6⅛	54	W
	190-260		20-20-210	128.00				
118x 236	95-130x 175-235x 190-260	2000	20-25-220	232.00	20 x 10½ x 10 11/16	4 9/16 x 9½	166	W
		3000	20-25-230	315.00	22 x 10½ x 10 11/16	6 7/16 x 9½	230	W
	190-260x 380-520	5000	20-27-250	490.00	21 x 14½ x 14⅜	7 x 13	279	W
		10000	20-26-310	925.00	21 x 29 7/16 x 14⅜	7 x 27 13/16	590	Y

Letter following a catalog number designates units which may be converted to cord input and receptacle output. See Adapter Kit table on page 3.

Outline dimensions are the overall outside dimensions of the unit, not including separate capacitor where employed. Dimensions are subject to manufacturing tolerances of ±1/32 to ±1/8 inch.

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SECTION 5600

Electronic-Power Types

± 1% REGULATION FOR FILAMENT TYPE,
± 3% FOR PLATE-FILAMENT TYPE

The electronic-power type of Sola transformer is designed as a component for simple assembly into many kinds of electronic equipment. The filament type (CVF) provides 6.0 or 6.3 volts of output regulated within ± 1% over line variations of ± 15%; the combination plate-and-filament type (CVE) regulates within ± 3%.

for filament service (Type CVF)

ELECTRICAL SPECIFICATIONS • 60 CYCLE SINGLE PHASE — **MECHANICAL SPECIFICATIONS**

Voltage Rating		Output Capacity in Amps.	Catalog Number	Approx. Net Price Each to Industrial Users	Nominal Dimensions (Inches)		Approx. Ship. Wt. in Lbs.	* Structure Code
Regulated ±1% Output	Input Range				Outline	Mounting		
6.0	95-130	2.50	20-01-015	$15.00	5⅝ x 2⅝ x 3½	5⅛ x 1⅛	6	D
			20-06-015	14.00	4⅛ x 2⅜ x 2⅞	1¾ x 1⅞	4	E
6.3	95-130	2.38	20-02-015	15.00	5⅝ x 2⅝ x 3½	5⅛ x 1⅛	6	D
			20-03-015	20.00	4⅛ x 2⅜ x 2⅞	1¾ x 1⅞	4	S
			20-04-015	14.00	4⅛ x 2⅜ x 2⅞	1¾ x 1⅞	4	E
	95-130X 190-260	5.0	20-04-030	16.00	4¹³⁄₁₄ x 3⅛ x 3⅛	2½ x 2⅛	6	E
		10.0	20-04-065	20.00	4¹³⁄₁₆ x 3⅛ x 3¾	2½ x 2¹⁵⁄₁₆	7	E
		15.0	20-04-095	24.00	4¹³⁄₁₆ x 3⅛ x 4¹⁵⁄₁₆	2½ x 3⅝	11	E
		25.0	20-04-116	35.00	7 x 4½ x 5¹⁵⁄₁₆	3⅝ x 4⅛	23	E

for plate filament service (Type CVE)

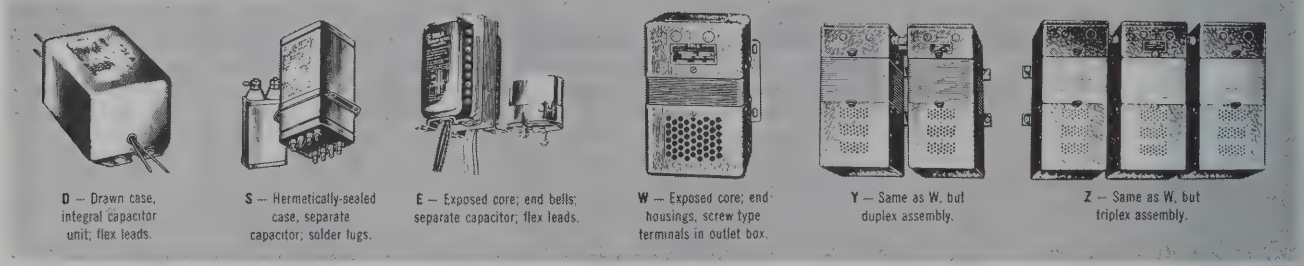
ELECTRICAL SPECIFICATIONS • 60 CYCLE SINGLE PHASE — **MECHANICAL SPECIFICATIONS**
Input range, 100-130 volts

Typical Rectifier Tube	Average D.C. Input Volts to Filter*	Filament Windings		Catalog Number	Approx. Net Price Each to Industrial Users	Nominal Dimensions (Inches)		Approx. Ship. Wt. in Lbs.	* Structure Code
		6.3 Volts	5.0 Volts			Outline	Mounting		
5Y3	275v D.C. @ 50 M.A.	2.5 amps C.T.	2.0 amps	7104	$12.00	4¹³⁄₁₆ x 3⅛ x 3⅜	2½ x 2⅛	6	E
5Y3	385v D.C. @ 110 M.A.	3.0 amps C.T.	2.0 amps	7106	15.00	4¹³⁄₁₆ x 3⅛ x 3¹³⁄₁₆	2½ x 2⅞	8	E
5U4	380v D.C. @ 250 M.A.	No. 1: 4.0 amps No. 2: 8.0 amps unregulated	3.0 amps	7107	27.00	7 x 4½ x 4⅞	3⅝ x 3⅜	19	E

**Voltage values are taken at output of 5Y3GT rectifier for No. 7104 and No. 7106 transformers and at output of 5U4GA-GB for No. 7107. Guaranteed regulation of ±3% on plate voltage output is contingent on the use of Sola-regulated 5.0v filament supply winding for the rectifier tube.*

*Mechanical Structures

"STRUCTURE CODE" LETTER REFERS TO ONE OF THESE GENERAL TYPES OF MECHANICAL ASSEMBLIES:



D — Drawn case, integral capacitor unit; flex leads.

S — Hermetically-sealed case, separate capacitor; solder lugs.

E — Exposed core; end bells; separate capacitor; flex leads.

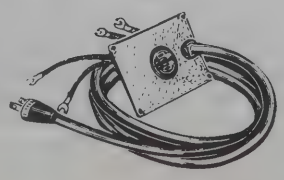
W — Exposed core; end housings, screw type terminals in outlet box.

Y — Same as W, but duplex assembly.

Z — Same as W, but triplex assembly.

Cord/Receptacle Adapter Kits

Adapter kits may be used when the convenience of input plug and output receptacle is preferred to the standard arrangement of terminals in the transformer housing. See accompanying chart.



Code	Adapter Kit Catalog No.	Input Cord	Output-Connections	Net price each to industrial users
(a)	999-004 999-018	2-wire 3-wire	2-wire receptacle 3-wire receptacle	$1.75 2.50
(b)	999-005 999-019	2-wire 3-wire	2-wire receptacle 3-wire receptacle	1.75 2.50
(c)	999-009 999-020	2-wire 3-wire	2-wire receptacle 3-wire receptacle	2.00 2.50

The transformers described in this folder are manufactured under one or more of the following United States Patents: Nos. 2,694,177; 2,753,513; 2,806,199, and patents pending.

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STANCOR

transformers

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4FH-63	31e	16.80
4FH-65	31e	17.42
4FH-610	31e	19.35
4FH-620	31e	24.30
4FMS-63	31d	18.48
4FMS-65	31d	19.35
4FMS-122	31d	19.00
4FMS-610	31d	21.92
4FMS-620	31d	33.67
4FMS-1208	31d	16.24
4FMS-2415	31d	17.45
41MS-40	32e	18.07
41MS-160	32e	18.50
4PHC-55	32b	23.00
4PHC-70	32b	26.85
4PHC-120	32b	32.90
4PHC-165	32b	55.50
4PHC-200A	32b	54.50
4PHR-300	32b	79.50
4PMS-40	32a	36.79
4PMS-55	32a	31.03
4PMS-70	32a	30.20
4PMS-85	32a	31.25
4PMS-105	32a	33.65
4PMS-120	32a	36.95
4PMS-150	32a	58.54
4PMS-165	32a	57.00
4PMS-200A	32a	55.75
4PMS-300	32a	78.50
4RH-255	32d	8.45
4RH-270	32d	8.07
4RH-2120	32d	8.40
4RH-2165	32d	8.42
4RH-2200	32d	10.35
4RH-2300	32d	14.60
4RMS-240	32c	10.15
4RMS-255	32c	9.95
4RMS-270	32c	16.84
4RMS-285	32c	12.21
4RMS-2105	32c	9.70
4RMS-2120	32c	11.30
4RMS-2150	32c	10.40
4RMS-2165	32c	10.45
4RMS-2200	32c	13.68
4RMS-2300	32c	18.17
4RMS-3120	32c	11.40
A-52C	9f	2.41
A-53	9e	2.12
A-53C	9f	2.53
A-62C	9f	2.50
A-63C	9f	2.89
A-64C	9f	2.60
A-73C	9f	3.37
A-2203	6a	2.59
A-2312	6d	3.05
A-2313	6b	2.69
A-2855	7a	4.03
A-3250	6bd	4.49
A-3303	6d	6.87
A-3304	6c	6.76
A-3307	6c	8.31
A-3309	6a	1.86
A-3310	6a	6.00
A-3311	6c	7.26
A-3315	6bd	9.01
A-3327	6b	1.93
A-3328	6a	1.45
A-3329	6b	1.45
A-3330	6a	2.12
A-3332	6a	1.46
A-3335	6d	3.31
A-3336	6a	2.13
A-3337	6a	2.45
A-3496	6d	2.84
A-3800	6c	7.23
A-3801	6c	9.18
A-3802	6c	12.61
A-3808	10e	16.18
A-3812	10e	2.60
A-3817	8f	3.21
A-3818	8d	5.27
A-3820	8d	11.49
A-3822	7a	2.09
A-3823	7a	3.61
A-3824	7a	3.54
A-3825	7a	2.82
A-3829	10e	18.00
A-3830	7a	4.82
A-3831	6c	2.84
A-3833	8f	3.07
A-3836	8f	3.00
A-3837	8d	4.29
A-3838	8e	5.68
A-3839	6d	5.09
A-3841	6b	5.35
A-3842	6d	6.10
A-3845	10e	6.25
A-3848	7a	2.79
A-3849	7a	3.61
A-3850	7a	3.56
A-3851	6c	7.78
A-3852	7e	4.36
A-3856	7a	3.11
A-3857	6d	2.53
A-3870	7a	4.44
A-3871	10e	4.74
A-3872	6c	4.90
A-3876	6a	1.56
A-3877	6a	1.56
A-3878	6b	1.60
A-3879	6b	1.56
A-3880	7a	4.70
A-3881	6b	1.72
A-3882	8d	9.11
A-3883	8d	3.70
A-3885	6c	9.11
A-3890	7a	5.81
A-3891	10f	10.28
A-3892	10f	13.01
A-3893	10f	14.09
A-3894	10f	17.74
A-3898	10f	104.49
A-3899	10f	127.55
A-4208	10ad	6.07
A-4210	10c	5.31
A-4212	10d	5.57
A-4292	10c	2.43
A-4350	8e	4.64
A-4351	9a	4.96
A-4352	9a	5.14
A-4407	8e	9.62
A-4420	9f	2.15
A-4431	6a	1.97
A-4432	6c	2.59
A-4701	10d	6.85
A-4702	10c	5.25
A-4705	8g	3.18
A-4706	8g	2.33
A-4708	8g	3.14
A-4709	9a	5.57
A-4711	10a	3.37
A-4713	10c	2.27
A-4719	9f	5.31
A-4722	10c	4.64
A-4723	10c	2.30
A-4742	8g	3.35
A-4744	8f	2.17
A-4745	9f	6.06
A-4747	8g	3.37
A-4748	8f	3.21
A-4749	8f	5.19
A-4752	10c	3.14
A-4761	10d	11.88
A-4762	10d	11.20
A-4765	10d	12.31
A-4770	6b	5.63
A-4773	10b	5.57
A-4774	10b	3.48
A-4778	9a	4.25
A-4779	9a	2.47
A-4780	9a	4.31
A-7947	8d	3.14
A-7949	8d	3.68
A-8050	7b	14.32
A-8051	7b	14.32
A-8052	7b	14.32
A-8053	7b	14.32
A-8054	7b	14.32
A-8056	7b	14.32
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A-8062	7b	14.32
A-8063	7b	14.32
A-8064	7b	14.32
A-8066	7b	14.32
•A-8070	6a	1.59
A-8072	7b	17.85
A-8080	8b	3.12
A-8081	8b	3.39
A-8082	8b	3.92
A-8083	8b	2.68
•A-8084	8b	2.91
A-8087	8a	2.68
•A-8088	8a	2.91
A-8090	8f	1.90
A-8091	8f	2.25
A-8092	6a	2.25
A-8093	6d	2.28
A-8094	6c	4.28
A-8095	8a	2.88
A-8096	8a	3.86
A-8097	8a	4.63
A-8098	6c	8.54
A-8099	8a	2.68
A-8101	8d	1.90
A-8102	8b	3.75
A-8103	8b	5.30
A-8104	8d	4.36
A-8105	8b	3.04
A-8106	8c	3.21
A-8107	8c	5.08
A-8108	8c	2.91
A-8109	8b	2.68
A-8111/ VB0-194	36f	3.54
A-8112/ V0-83	36a	5.35
A-8113/ V0-84	36a	5.62
A-8114	6b	1.86
A-8115/ V0-85	36a	9.55
A-8119/ HO-155	33	12.50
A-8121/ VB0-195	36f	4.71
A-8122/ VB0-196	36f	6.97
A-8123/ V0-87	36a	5.30
A-8125/ VB0-198	36f	3.48
A-8126/ VB0-199	36f	3.54
A-8127/ HO-156	33	12.50
A-8128/ HO-157	33	12.50
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A-8130/ HO-159	33	15.00
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A-8134/ HO-163	33	18.50
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A-8139/ HO-168	33	12.60
A-8140/ V0-88	36a	9.53
A-8141/ V0-89	36a	7.60
A-8142/ V0-90	36a	9.16
A-8143/ V0-91	36a	6.14
A-8144/ V0-92	36a	5.69
A-8145/ V0-93	36b	7.65
A-8146/ V0-94	36b	5.41
A-8147/ V0-95	36b	5.25
A-8148/ V0-96	36b	6.14
A-8149/ V0-97	36b	4.88
A-8150/ V0-98	36b	7.39
A-8151/ V0-99	36b	6.42
A-8220/ HO-169	33	14.40
A-8221/ HO-170	33	13.50
A-8222/ HO-171	33	13.50
A-8223/ HO-172	33	12.60
A-8224/ HO-173	33	16.60
A-8225/ HO-174	33	16.60
A-8226/ HO-175	33	16.60
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A-8231/ HO-180	33	15.00
A-8232/ HO-181	33	15.00
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A-8299/ HO-249	33	15.00
AMS-1	26a	24.32
AM-2	26a	16.05
AMS-3	26a	18.65
AMS-4	26a	18.22
AMS-5	26a	15.33
AMS-6	26a	14.21
AMS-7	26a	14.49
AMS-8	26a	15.05

• New Part Number.

Prices subject to change without notice. Contact your STANCOR Distributor for quantity discount schedule.

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transformers

PART NUMBER INDEX

Stancor No.	Page	Price	Stancor No.	Page	Price	Stancor No.	Page	Price	Stancor No.	Page	Price	Stancor No.	Page	Price	Stancor No.	Page	Price
AMS-9	26a	14.80	C-2343	20a	1.63	F-1	18a	18.88	HO-280	33	17.30	HO-370	33	15.00	P-6012	14d	8.74
BD-1	10e	33.00	C-2344	19a	1.17	F-2	18b	16.11	HO-281	33	17.50	HO-371	33	15.00	P-6013	14e	9.45
BD-2	10e	36.56	C-2345	19a	3.28	F-3	18b	19.21	HO-282	33	16.50	HO-372	33	15.00	P-6014	15b	10.09
BI-1	9b	31.63	C-2346	19a	1.84	F-4	18b	22.09	HO-283	33	11.80	HO-373	33	15.00	P-6119		6.89
BI-2	9b	38.88	C-2347	20a	2.86	F-5	18b	23.64	HO-284	33	12.90	HO-374	33	15.00	P-6123	24e	99.12
BI-3	9b	35.92	C-2685	20c	3.74	F-6	18e	19.44	HO-285	33	11.00	HO-375	33	15.00	P-6124	24a	44.20
BI-4	9b	31.16	C-2686	20c	6.37	F-7	18f	21.79	HO-286	33	15.60	HO-376	33	15.00	P-6125	24e	71.19
BI-5	9b	62.33	C-2687	20c	8.37	F-8	18d	26.89	HO-287	33	13.00	HO-377	33	15.00	P-6131	37c	7.86
BI-6	9b	31.29	C-2688	20c	9.63	F-25	17a	14.34	HO-288	33	9.40	HO-378	33	16.00	P-6133	17a	3.99
BI-7	9b	33.15	C-2689	20c	14.13	F-54	17a	7.61	HO-289	33	15.00	HO-379	33	15.00	P-6134	17b	2.19
BIH-1	28b	28.55	C-2690	20c	8.42	F-58	17a	15.79	HO-290	33	13.50	•HO-380	33	18.00	P-6135	17a	5.87
BIH-4	28b	28.80	C-2691	20c	10.73	F-63	17b	7.35	HO-291	33	12.90	•HO-381	33	13.00	P-6137	17b	9.46
BIH-6	28b	33.09	C-2704	19b	3.23	F-65	17c	13.10	HO-292	33	11.00	•HO-382	33	12.40	P-6138	17c	7.65
BIH-7	28b	30.16	C-2705	19c	7.61	F-104	17c	12.96	HO-293	33	16.00	•HO-383	33	13.00	P-6139	17d	7.88
BIH-8	28b	24.64	C-2706	20a	6.38	F-106	17d	11.39	HO-294	33	11.90	•HO-384	33	13.00	P-6141	24a	19.02
BIH-10	28b	20.00	C-2707	19a	1.61	F-210	17a	11.39	HO-295	33	14.20	•HO-385	33	13.00	P-6143	15e	11.84
BM-1	10f	59.44	C-2708	20a	3.07	F-210H	17a	13.84	HO-296	33	13.70	•HO-386	33	14.20	P-6144	18a	8.19
BO-1	7c	16.65	C-2709	20a	4.81	F-215H	17a	28.09	HO-297	33	13.70	•HO-387	33	14.20	P-6146	13b	8.38
BO-2	7c	20.12	CIC-1	9a	17.55	F-510H	17b	28.02	HO-298	33	12.20	•HO-388	33	14.20	P-6160	24e	15.22
BO-5	7c	23.83	CIC-2	9a	7.80	F-516	17b	19.95	HO-299	33	15.00	•HO-600C	33	20.00	P-6161	24e	22.49
BO-6	7c	30.89	CIH-1	28c	21.98	F-520HB	17b	19.79	HO-300	33	12.00	•HO-601C	33	20.00	P-6166	22d	12.70
BO-9	7c	32.30	CIH-2	28c	11.45	F-530	17b	25.59	HO-301	33	13.50	HP3-140	32f	43.71	P-6287	24a	6.81
BO-10	7c	36.65	CIS-1	9a	21.35	F-530BX	17b	43.70	HO-302	33	12.90	HRP-400	29e	29.73	P-6298	24e	45.27
BO-11	7c	42.35	CIS-2	9a	11.27	F-610	17c	17.63	HO-303	33	12.00	HRP-600	29e	29.64	P-6299	24h	13.34
BO-12	7c	36.22	COC-1	6a	8.87	F-615	17b	12.53	HO-304	33	15.00	HRP-800	29e	29.64	P-6302	17b	34.98
BO-13	7c	31.13	COC-2	6b	10.63	F-712	17c	21.58	HO-305	33	16.00	HRP-1600	29e	29.64	P-6305	17b	32.49
BO-14	7c	47.70	COH-1	28d	14.93	F-725	17c	28.31	HO-306	33	20.00	HRP-2000	29e	28.64	P-6308	17c	6.90
BO-15	7c	28.68	COH-2	28d	16.56	F-751	17c	54.55	HO-307	33	14.35	HRP-2500	29e	28.73	P-6309	17c	10.73
BOH-1	28a	16.82	COS-1	6a	14.42	F-1010	17d	17.17	HO-308	33	16.00	IS-50	24d	11.99	P-6315	15b	14.65
BOH-2	28a	19.38	COS-2	6b	13.13	FH-25	31b	15.38	HO-309	33	11.62	IS-100	24d	15.72	P-6317	16c	12.04
BOH-4	28a	25.04	DCT-1	22b	15.43	FH-54	31b	16.92	HO-310	33	12.00	IS-150	24d	18.50	P-6318	16c	14.32
BOH-5	28a	26.30	DCT-2	22b	17.48	FH-58	31b	18.76	HO-311	33	10.25	IS-250	24d	25.08	P-6333	18d	9.89
BOH-9	28a	34.98	DEC-100	37	13.65	FH-63	31b	14.81	HO-312	33	9.90	LPF-1	10g	33.45	P-6338	18a	8.28
BR-1	10f	83.52	DY-1A	35a	13.50	FH-65	31b	19.83	HO-313	33	9.90	LPF-2	30c	36.87	P-6348	13d	5.85
C-1001	19b	3.75	DY-2A	35a	15.00	FH-104	31b	16.60	HO-314	33	9.90	NCF-1550	25a	8.06	P-6358	14b	6.25
C-1002	19b	3.04	DY-8A	35a	15.00	FH-210	31b	16.51	HO-315	33	15.00	NCF-1650	25a	7.35	P-6371	24e	20.31
C-1003	19a	2.28	DY-9A	35a	15.50	FH-210H	31b	26.91	HO-316	33	11.00	NCF-2425	25a	6.66	P-6375	25d	3.66
C-1080	19a	1.77	DY-10A	35a	16.50	FH-215H	31b	30.91	HO-318	33	12.50	NCF-2450	25a	7.35	P-6376	25d	3.97
C-1215	19a	1.71	DY-11A	35a	16.50	FH-510H	31b	25.22	HO-317	33	11.00	NCF-2475	25a	8.76	P-6377	25d	5.02
C-1227	19a	1.93	DY-12A	35a	15.00	FH-520HB	31b	36.11	HO-319	33	12.50	NCF-24100	25a	10.86	P-6378	25d	8.11
C-1277	19a	1.93	DY-13A	35b	•17.30	FH-610	31b	17.18	HO-320	33	13.50	NCF-24150	25a	14.36	P-6379	25d	13.99
C-1279	19a	1.77	DY-14A	35b	15.50	FH-615	31b	14.31	HO-321	33	13.40	NCF-3250	25a	7.35	P-6383	24f	15.37
C-1325	19a	1.77	DY-15A	35b	15.50	FMS-1	31c	19.45	HO-322	33	13.50	NCF-3275	25a	8.76	P-6385	24f	25.04
C-1333	19a	1.77	DY-16A	35b	18.00	FMS-2	31c	19.42	HO-323	33	15.00	NCF-32150	25a	14.36	P-6387	24g	56.76
C-1355	19b	2.78	DY-17A	35b	13.50	FMS-3	31c	25.49	HO-324	33	13.50	P-45	23a	27.96	P-6389	24f	67.27
C-1400	20b	4.98	DY-18A	35b	13.50	FMS-4	31c	28.62	HO-325	33	11.50	P-67	23a	28.06	P-6390	24f	82.22
C-1401	20b	6.25	DY-19A	35b	13.50	FMS-5	31c	30.36	HO-326	33	11.00	P-1240	23b	43.45	P-6410	24e	8.32
C-1402	20b	7.32	DY-20A	35c	13.50	FMS-6	31c	23.16	HO-327	33	13.40	P-1512	23b	111.11	P-6515	24g	24.68
C-1403	20b	12.28	DY-21A	35c	15.50	FMS-7	31c	26.04	HO-328	33	12.80	P-1843-3	18g	10.61	P-6425	16f	3.75
C-1404	20b	16.00	DY-22A	35c	15.50	FMS-8	31c	37.85	HO-329	33	13.50	P-2126	23c	186.38	P-6426	16f	1.79
C-1405	20b	42.80	DY-23A	35c	18.00	FMS-23	26c	15.18	HO-330	33	12.00	P-2520	23c	133.37	P-6428	18e	6.64
C-1410	19c	4.76	DY-24A	35c	11.83	FMS-53	26c	13.36	HO-331	33	16.00	P-3020	17d	10.46	P-6429	18f	8.83
C-1411	19c	5.95	DY-25A	35c	13.50	FMS-62	26c	13.71	HO-332	33	13.50	P-3024	17a	5.25	P-6430	18e	5.78
C-1412	20a	7.32	DY-26A	35c	19.00	FMS-65	26c	15.60	HO-333	33	13.00	P-3026	17a	5.25	P-6431	18f	8.75
C-1413	20a	12.04	DY-27A	35c	19.00	FMS-210	26c	15.22	HO-334	33	11.00	P-3060	17c	7.06	P-6432	17b	8.76
C-1414	20a	16.48	DY-28A	35d	13.50	FMS-210H	26c	23.51	HO-335	33	15.00	P-3064	17c	5.68	P-6433	17b	7.52
C-1415	20a	50.81	DY-29A	35d	11.83	FMS-510	26c	18.22	HO-336	33	15.00	P-3062	17a	5.39	P-6454	17a	4.21
C-1420	19b	4.87	DY-30A	35d	13.50	FMS-510H	26c	26.76	HO-337	33	9.90	P-4004	15d	15.25	P-6455	17a	4.55
C-1421	19c	4.87	DY-31A	35d	17.00	FMS-610	26c	19.31	HO-338	33	17.50	P-4019	17c	5.30	P-6456	17c	4.01
C-1515	19a	2.26	DY-32A	35d	18.00	FMS-620	26c	24.31	HO-339	33	17.50	P-4022	18c	8.80	P-6457	17c	13.35
C-1645	20b	6.91	DY-33A	35d	13.50	HO-250	33	11.80	HO-340	33	16.50	P-4026	17a	2.90	P-6458	17d	4.94
C-1646	19c	7.14	DY-34A	35d	17.00	HO-251	33	12.00	HO-341	33	6.40	P-4062	37c	5.83	P-6459	16e	5.84
C-1702	20b	7.11	DY-35A	35e	12.50	HO-252	33	12.00	HO-342	33	12.50	P-4063	37c	7.13	P-6461	17d	9.22
C-1703	20a	6.52	DY-36A	35e	18.00	HO-253	33	11.80	HO-343	33	15.00	P-4082	17a	5.08	P-6462	17c	5.87
C-1706	19a	1.34	DY-37A	35e	16.50	HO-254	33	13.50	HO-344	33	13.50	P-4083	17a	5.33	P-6463	18d	8.25
C-1707	19a	1.47	DY-38A	35e	16.50	HO-255	33	13.50	HO-345	33	13.50	P-4086	17b	24.02	P-6464	17c	7.28
C-1708	19b	2.53	DY-39A	35e	16.50	HO-256	33	13.50	HO-346	33	13.50	P-4088	17a	4.45	P-6465	17b	2.09
C-1709	19b	2.53	DY-40A	35e	18.00	HO-257	33	18.75	HO-347	33	15.00	P-4089	17c	6.94	P-6466	17c	3.56
C-1710	19c	3.78	DY-41A	35e	17.00	HO-258	33	12.00	HO-348	33	15.00	P-4091	17c	7.04	P-6467	17a	3.37
C-1718	20b	4.66	DY-42A	35e	18.00	HO-259	33	13.50	HO-349	33	15.00	P-4096	17d	7.59	P-6468	17b	13.43
C-1720	20b	11.56	DY-43A	35f	20.00	HO-260	33	15.00	HO-350	33	15.00	P-4097	17d	8.21	P-6469	17d	3.42
C-1721	19c	7.88	DY-45A	35f	18.00	HO-261	33	9.90	HO-351	33	15.00	P-4353	23c	382.21	P-6471	37a	5.78
C-1722	20a	11.60	DY-45A	35f	22.00	HO-262	33	14.00	HO-352	33	15.00	P-5000	17a	6.09	P-6476	37a	6.16
C-1723	19a	1.48	DY-46A	35f	20.00	HO-263	33	10.50	HO-353	33	15.00	P-5002	17d	26.09	P-6477	37a	3.32
C-2303	19b	2.35	DY-47A	35f	13.60	HO-264	33	12.50	HO-354	33	15.00	P-5008	18c	8.23	P-6478	37a	3.78
C-2304	19c	2.35	DY-48A	35f	10.00	HO-265	33	10.50	HO-355	33	15.00	P-5009	18c	9.36	P-6480	37a	4.18
C-2305	19b	3.62	DY-49A	35f	16.50	HO-266	33	10.00	HO-356	33	15.25	P-5014	17c	4.90	P-6481	37a	4.82
C-2307	20b	12.01	DY-50A	35f	18.50	HO-267	33	13.00	HO-357	33	15.00	P-5015	17c	4.98	P-6482	37b	9.11
C-2308	20a	11.60	DY-51A	35g	22.00	HO-268	33	11.00	HO-358	33	13.40	P-5016	17d	6.37	P-6489	37b	4.44
C-2309	19c	2.71	DY-52A	35g	20.25	HO-269	33	10.50	HO-359	33	15.00	P-5059	14d	13.98	P-6490	37a	3.56
C-2317	10g	5.85	DY-53A	35g	22.00	HO-270	33	13.00	HO-360	33	16.00	P-5062	24a	8.32	P-6491	37c	4.27
C-2318	19e	1.93	DY-54A	35g	22.00	HO-271	33	12.50	HO-361	33	15.00	P-5063	24a	8.83	P-6492	17b	11.49
C-2325	19c	3.00	DY-55A	35g	20.00	HO-272	33	12.00	HO-362	33	15.00	P-5064	24a	10.41	P-6493	37b	4.42
C-2326	20a	3.05	DY-56A	35g	18.00	HO-273	33	11.50	HO-363	33	15.00	P-5065	24a	14.46	P-6494	37b	3.98
C-2327	19c	1.88	•DY-57AT	35h	25.00	HO-274	33	13.50	HO-364	33	15.00				P-6495	37b	4.58
C-2328	20a	3.78	•DY-58AT	35h	25.00	HO-275	33	12.90	HO-365	33	13.50	P-6001		7.14	P-6496	22d	11.26
C-2332-1	7d	11.30	•DY-59AT	35h	20.00	HO-276	33	19.60	HO-366	33	15.00	P-6007	15d	11.94	P-6497	37b	3.92
C-2334	20a	3.71	•DY-60AT	35h	25.00	HO-277	33	18.50	HO-367	33	15.00	P-6008	15c	12.70	P-6499	37a	8.30
C-2335	19c	5.25	•DY-61AT	35h	20.00	HO-278	33	12.90	HO-368	33	15.50	P-6010	14c	6.98	P-8025	23b	94.02
C-2340	10h	35.91	DY-90AC	35h	39.60	HO-279	33	11.10	HO-369	33	16.50	P-6011	14d	7.59	P-8026	23b	77.56

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RH-1585	31a	9.76
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RH-8150	31a	13.00
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RS-1585	19b	9.30
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RS-8150	19c	13.29
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STANCOR OUTPUT TRANSFORMER CHART

output transformers

A simplified selection of the proper transformer for use as a replacement in radio receivers or in the construction of audio amplifiers. **To use this chart,** check the first column for the tube being used, then read across for the applicable operating characteristics and correct Stancor transformer. In most cases, two Stancor part numbers are indicated in order to give a choice of Mounting styles.

Tube	Use	Class	Watts	Load Res. in Ohms	Stancor Part No.	Universal Type
1A5-GT	S.	A	.10	25K	A-3327	
1AC5	S.	A	.05	25K	A-3327	
1AG4	S.	A	.035	12K	A-3879	A-3822
1B8-GT	S.	A	.21	14K	A-3881	A-3848
1C5-GT	S.	A	.24	8K	A-3329	A-3848
1D8-GT	S.	A	.20	12K	A-3879	A-3822
1E7-G (GT)	S.	A	.29	16K	A-3881	A-3848
	P.P.	A	.575	24K	A-3857	
1F4	S.	A	.31	16K	A-3881	A-3848
1F5-G	S.	A	.31	16K	A-3881	A-3848
1G5-G	S.	A	.55	9K	A-3879	A-3822
1G6-GT	P.P.	B	.675	12K	A-3831	A-3856
1J5-G	S.	A	.45	13.5K	A-3881	A-3848
1J6-G (GT) (GX)	P.P.	B	2.1	10K	A-3831	A-3856
1LA4	S.	A	.1	25K	A-3327	
1LB4	S.	A	.2	12K	A-3879	A-3822
1N6-G (GT)	S.	A	.1	25K	A-3327	
1Q5-GT	S.	A	.27	8K	A-3329	A-3848
1S4	S.	A	.27	8K	A-3329	A-3848
1T5-GT	S.	A	.17	14K	A-3881	A-3848
1V5	S.	A	.05	25K	A-3327	
1W4	S.	A	.2	12K	A-3879	A-3822
2A3	S.	A	3.5	2.5K	A-3876	A-3825
	P.P.	AB1	15	3K	A-3301	A-3830
2A5	S.	A	4.8	7K	A-3878	A-3850
	P.P.	AB2	18.5	10K	A-3311	A-3830
2E24	S.	A	3.9	6K	A-3878	A-3848
2E26	S.	A	4.0	5.5K	A-3877	A-3849
2E30	S.	A	4.5	4.5K	A-3877	A-3849
3A4	S.	A	.7	8K	A-8114	A-3822
3B5-GT	S.	A	.2	5K	A-3878	A-3856
3B7/1291	P.P.	AB2	1.5	16K	A-2312	A-3880
3C5-GT	S.	A	.2	8K	A-3329	A-3848
	S.	A	.26	10K	A-3879	A-3848
3D6	S.	A	.6	14K	A-3881	A-3848
3E5	S.	A	.25	8K	A-3329	A-3848
3LE4	S.	A	.325	6K	A-3878	A-3848
3LF4	S.	A	.4	8K	A-3329	A-3848
3Q4	S.	A	.27	10K	A-3879	A-3822
3Q5-GT	S.	A	.4	8K	A-3329	A-3822
3S4	S.	A	.18	5K	A-3877	A-3856
	S.	A	.27	8K	A-3329	A-3848
3V4	S.	A	.27	10K	A-3879	A-3822
3W4	S.	A	0.25	11K	A-3879	A-3822
4A6-G	P.P.	B	1.0	8K		A-3856
5AQ5	S.	A	2.0	5.5K	A-3877	A-3849
	S.	A	4.5	5K	A-3877	A-3849
5CM6	S.	A	4.5	5K	A-3877	A-3856
	P.P.	AB1	10.	10K	A-3335	A-3823
5CZ5	S.	A	5.4	5K	A-3877	A-3849
	P.P.	AB1	21.5	7.5K		A-3830
5V6 (GT)	S.	A	5.5	5K	A-3877	A-3823
	P.P.	AB1	10.	10K	A-3311	A-3880
6A3	S.	A	3.2	2.5K	A-3876	A-3825
	P.P.	AB1	15	3K	A-3301	A-3830
6A4/LA	S.	A	1.4	8K	A-8114	A-3822
6A5-G	S.	A	3.75	2.5K	A-3876	A-3825
	P.P.	A	15	3K	A-3301	A-3830
6A6	P.P.	B	10	8K	A-3329	A-3822
6AB8	S.	A	1.4	11K	A-3879	
6AC5-GT	P.P.	B	8	10K	A-3335	A-3823
6AC6-GT	S.	A	3.6	3.5K	A-2203	A-3825
6AD7-G	S.	A	3.2	7K	A-2313	A-3822
6AE7-GT	P.P.		9.5	10K	A-2312	A-3880
6AG6-G	S.	A	3.8	8.4K	A-3329	A-3822
6AG7	S.	A	3	10K	A-3879	A-3822
6AH5-G	S.	A	10.8	4.2K	A-3337	A-3849
6AJ5	P.P.	AB1	1.0	28K	A-3857	
6AK6	S.	A	1.1	10K	A-3879	A-3822
6AK7	S.	A	3	10K	A-3879	A-3822
6AL6-G	S.	A	6.5	2.5K	A-3876	A-3825
6AL11	S.	A1	4	5K	A-3877	A-3856
6AM5	S.	A	1.4	16K	A-3881	A-3848
	P.P.	AB1	4.8	20K	A-3857	A-3856
6AN5	S.	A	1.3	2.5K	A-3332	A-3825
6AQ5A/W	S.	A	4.5	5K	A-3877	A-3849
6AQ5A/W	P.P.	AB1	10	10K	A-3335	A-3852
6AR5	S.	A	3.4	7.6K	A-8114	A-3822
6AS5	S.	A	2.2	4.5K	A-3877	A-3849
6B4-G	S.	A	3.2	2.5K	A-3876	A-3825
	P.P.	AB	15	3K	A-3301	A-3830
6B5	S.	A	4	7K	A-2313	A-3823
6BF5	S.	A	1.9	2.5K	A-3332	A-3825
6BF6	S.	A	0.3	10K	A-3879	A-3822
6BJ5	S.	A	4.0	7K	A-3878	A-3849
6BK5	S.	A	3.5	6.5K	A-3878	A-3849
6BM5	S.	A	3.5	7K	A-3878	A-3849
6BM8	S.	A	3.5	5.6K	A-3877	A-3822
6BQ5	S.	A	5.7	4.5K	A-8092	A-3849
	P.P.	AB1	11.0	8K	A-3335	A-3849
6BS5	S.	A	4.5	5K	A-3877	A-3849
6BU6	S.	A	0.3	10K	A-3879	A-3822
6BW6	S.	A	4.5	5K	A-3877	A-3823
	S.	A	5.5	8.5K	A-3879	A-3849
6CA5	S.	A1	1.5	4.5K	A-3877	A-3856
6CA7	S.	A	11.0	2K		A-3849
6CL6	S.	A	2.8	7.5K	A-3329	A-3822
6CM6	S.	A	4.5	5K	A-3877	A-3823
	P.P.	AB1	10.	10K	A-3335	A-3849
6CS5	S.	A	3.8	4K	A-3877	A-3856
6CU5	S.	A	2.3	2.5K	A-3332	A-3825
6CZ5	S.	A	5.4	5K	A-8092	A-3823
	P.P.	AB1	21.5	7.5K		A-3830
6D5G	S.	A	1.4	7.2K	A-3878	A-3856
6DB5	S.	A	3.8	4K	A-3877	A-3856
6DG6-GT	S.	A	3.8	4K	A-3877	A-3856
6DS5	S.	A	3.6	8K	A-8114	A-3822
6DZ8	S.	A	2.0	2.5K	A-3822	A-3825
6E8	P.P.	A	1.6	14K	A-3496	A-3856
6EH5	S.	A	1.4	3K	A-3328	A-3825
	P.P.	A	3.8	6K		A-3822
6F6(GT)	S.	A	4.8	7K	A-3878	A-3822
	P.P.	AB	18.5	10K	A-3311	A-3870
6FE5	S.	A1	4	1K	A-8070	
	P.P.	A1	8	1.6K		
6G6-G	S.	A	1.1	10K	A-3879	A-3822
6GC5	S.	A1	2	2K	A-3876	A-3856
	S.	A1	4	4K	A-2203	A-3856
6GK6	S.	A1	5.7	5.2K	A-3877	A-3823
	P.P.	AB1	17	8K		A-3852
6HG5	S.	A1	4.5	5K	A-8092	A-3823
6K6-GT	S.	A	4.5	9K	A-3879	A-3822
	P.P.	A	10.5	12K	A-2312	A-3880
6J10	S.	A1	4.2	5K	A-8092	A-3823
6L6(G)(GA)	S.	A	6.5	2.5K	A-3876	A-3825
	S.	A	10.8	4.2K	A-2203	A-3849
	P.P.	A	17.5	5K	A-3872	A-3830
	P.P.	AB1	26.5	6.6K	A-3801	A-3830
	P.P.	AB1	18	3.8K	A-3802	A-3830
	P.P.	AB2	31	6K	A-3307	
	P.P.	AB2	47	3.8K	A-3802	
6M5	S.	A	3.9	7K	A-3878	A-3824
	P.P.	AB1	9.4	7K	A-3801	A-3880
6N6-G	S.	A	4	7K	A-3878	A-3824
6N7	P.P.	B	10	8K		A-3880
6R8	S.	A	0.3	10K	A-3879	A-3856
6SR7	S.	A	0.3	10K	A-3879	A-3856
6U6-GT	S.	A	5.5	3K		A-3849
6V5-GT	S.	A	4.5	5K	A-3877	A-3824
	P.P.	AB1	10	10K	A-3311	A-3880
6V6(GT)	S.	A	5.5	5K	A-3877	A-3823
	P.P.	AB1	10	10K	A-3311	A-3880
6V7-G	S.	A	0.35	20K	A-3327	
6W6-GT	S.	A	3.8	5K	A-3877	A-3849
6Y6-G(GT)	S.	A	6.0	2.6K	A-3876	A-3825
6Y7-G	P.P.	B	8.0	14K	A-2312	A-3823
6Z7-G	P.P.	B	4.2	12K	A-3831	A-3823
7A5	S.	A	1.5	2.5K	A-3332	A-3849
7B5	S.	A	4.5	9K	A-3879	A-3822
	P.P.	AB2	19	10K	A-2312	A-3880
7C5	S.	A	5.5	8.5K	A-3879	A-3822
	P.P.	A	8	10K	A-3335	A-3823
8BQ5	S.	A	5.7	4.5K	A-8092	A-3849
	P.P.	AB1	11.0	8K	A-3335	A-3849
9DZ8	S.	A	2.0	2.5K	A-3332	A-3825
10AL11	S.	A1	4	5K	A-3877	A-3856
11C5	S.	A	1.5	2.5K	A-3332	A-3825
12A5	S.	A	3.4	3.3K	A-2203	A-3825
12A6(GT)	S.	A	3.4	7.5K	A-8114	A-3822
12A7	S.	A	5	13.5K	A-3881	A-3848
12AB5	S.	A	4.5	5K	A-3877	A-3823
	P.P.	AB1	10.0	10K	A-3335	A-3849
12AL8	S.	A	0.02	.8K	TA-9	
12AL11	S.	A1	4	5K	A-3877	A-3856
12AQ5	S.	A	4.5	5K	A-3877	A-3823
	P.P.	AB1	10.0	10K	A-3335	A-3849
12BF6	S.	A	0.3	10K	A-3879	A-3856
12BK5	S.	A	3.5	6.5K	A-3878	A-3849
12BU6	S.	A	0.3	10K	A-3879	A-3856
12C5	S.	A	2.3	2.5K	A-3332	A-3825
12CA5	S.	A	1.5	4.5K	A-3877	A-3856
12CM6	S.	A1	2.0	5.5K	A-3877	A-3849
	S.	A1	5.5	8.5K		A-3849
12CS5	S.	A	3.8	4K	A-3877	A-3856
12CU5	S.	A	2.3	2.5K	A-3332	A-3825
12DB5	S.	A	3.8	4K	A-3877	A-3856
12DL8	S.	A	0.04	.8K	TA-9	
12DM5	S.	A	1.9	2.5K	A-3332	A-3825
12DU7	S.	A	0.025	2.7K	TA-29	
12DV8	S.	A	0.005	1.25K	TA-26	
12DZ8	S.	A	2.0	2.5K	A-3332	A-3825
12ED5	S.	A	1.5	4.5K	A-3328	A-3825
12EH5	S.	A	1.4	3K	A-3328	A-3825
	P.P.	AB1	3.8	6K		A-3822
12EM6	S.	A	0.01	3.5K	TA-45	
12FX5	S.	A1	1.3	3K	A-3336	A-3856
12J8	S.	A	0.02	2.7K	TA-29	
12K5	S.	A	0.04	.8K	TA-25	
12L6-GT	S.	A	3.8	4K	A-3877	A-3856
12L8-GT	S.	A	1.0	10K	A-3879	A-3848
12V6-GT	S.	A	4.5	5K	A-3877	A-3823
	P.P.	AB1	10.0	10K	A-8093	A-3880
12W6-GT	S.	A	3.8	4K	A-3877	A-3856
13J10	S.	A1	4.2	5K	A-8092	A-3823
14A5	S.	A	2.8	7.5K	A-8114	A-3822
14C5	S.	A	5.5	8.5K	A-2313	A-3849
	P.P.	AB	14	8K		A-3880
17C5	S.	A	2.3	2.5K	A-3332	A-3825
17CA5	S.	A	1.5	4.5K	A-3877	A-3856
17CU5	S.	A	2.3	2.5K	A-3332	A-3825
17L6-GT	S.	A	3.8	4K	A-3877	A-3856
19	P.P.	B	2.1	10K	A-3335	A-3880
19AQ5	S.	A	4.5	5K	A-3877	A-3849
25A6(GT)	S.	A	2.2	5K	A-3877	A-3849
25A7-GT	S.	A	.77	4.5K	A-3877	A-3825
25AC5-GT	P.P.	B	6	4.8K	A-3872	A-3823
	S.	A	2	2K	A-3332	A-3825
25B5	S.	A	3.3	4K	A-2203	A-382_5
25B6-G	S.	A	7.1	2.5K	A-3876	A-3849
25BK5	S.	A	3.5	6.5K	A-3878	A-3849
25C5	S.	A1	2	2.5K	A-3332	A-385_6
25C6-G	S.	A	6.0	2.6K	A-3876	A-384_9
25CA5	S.	A	1.5	4.5K	A-3328	A-382_5
25EH5	S.	A	1.4	3K	A-3328	A-382_5
	P.P.	AB1	3.8	6K		A-382_2
25F5	S.	A	1.2	2.5K	A-3332	A-3825
	P.P.	A	2.9	4.5K	A-3872	A-3823
25L6(GT)	S.	A	2.1	2K	A-3876	A-3849
	S	A	4.3	3K		A-3823
	S.	A	3.8	4K	A-2203	A-3823
25N6-G	S.	A	3.8	4K	A-2203	A-3822
25W6	S.	A	3.8	4K	A-3877	A-3856
26A7-GT	S.	A	.18	1.5K	A-3332	A-3825
26E6-G	S.	A	6.0	2.6K		A-3825
28D7	S.	A	.1	4K	A-3328	A-3848
32ET5	S.	A	1.2	2.8K	A-3328	A-3825
32L7-GT	S.	A	1	2.6K	A-3332	A-3822
34GD5A	S.	A	1.4	2.5K	A-3332	A-3856
35A5	S.	A	1.5	2.5K	A-3332	A-3856
	S.	A	3	5K	A-3877	A-3849
35B5	S.	A	1.5	2.5K	A-3332	A-3856
35C5	S.	A	1.5	2.5K	A-3332	A-3849
35DZ8	S.	A	2.0	2.5K	A-3332	A-3825
35EH5	S.	A1	1.2	3K	A-3336	A-3856
35L6-GT	S.	A	1.5	2.5K	A-3332	A-3856
	S.	A	3	5K	A-3877	A-3849
42	S.	A	4.8	7K	A-3878	A-3849
	P.P.	A	18.5	10K	A-3311	A-3830
50A5	S'	A	2.1	2K	A-3876	A-3856
	S.	A	3.8	4K	A-2203	A-3825
50B5	S.	A	1.9	2.5K	A-3332	A-3825
50BK5	S.	A	3.5	6.5K	A-3878	A-3856
50C5	S.	A	1.9	2.5K	A-3332	A-3825
50C6-G	S.	A	3.6	2K	A-3876	A-3825
50CA5	S.	A	1.1	3.5K	A-3328	A-3825
50EH5	S.	A	1.4	3K	A-3328	A-3825
	P.P.	A	3.8	6K		A-3822
50FE5	S.	A1	4	1K	A-8070	
	P.P.	A1	8	1.6K		
50FK5	S.	A1	1.2	3K	A-3336	A-3856
50L6-GT	S.	A	2.1	2K	A-3876	A-3856
	S.	A	3.8	4K	A-2203	A-3825
60FX5	S.	A1	1.3	3K	A-3336	A-3856
70A7-GT	S.	A	1.5	2.5K	A-3332	A-3825
70L7-GT	S.	A	1.8	2K	A-3332	A-3825
117L7/M7-GT	S.	A	.85	4K	A-2203	A-3825
117N7-GT	S.	A	1.2	3K	A-3332	A-3825
117P7-GT	S.	A	.85	4K	A-2203	A-3825
1631	P.P.	AB1	26.5	6.6K	A-3801	
1632	S.	A	2.1	2K	A-3332	A-3825
1644	P.P.	A	1.0	10K	A-3831	A-3856
5640	S.	A	1.25	3K	A-3332	A-3825
5670	P.P.	AB1	1.0	27K	A-3857	
5672	S.	A	.065	20K	A-3327	
5686	S.	A	2.7	9K	A-3879	A-3822
5812	S.	A	4.3	1.7K	A-3876	A-3825
5824	S.	A	4.3	1.7K	A-3876	A-3825
5871	S.	A	5.5	8.5K	A-3879	A-3822
5902	S.	A	1	3K	A-3328	A-3825
6005	S.	A	2.0	5.5K	A-4431	A-3856
6095	P.P.	AB1	10.0	10K	A-3335	A-3849
6216	S.	A	3.8	4.5K	A-3877	A-3856
6287	S.	A	4.5	6K	A-4431	A-3823
6360	P.P.	AB1	9.3	8K	A-3335	A-3849
6516	S.	A	1.4	16K	A-3881	A-3856
6526	S.	A	0.375	10K	A-3879	A-3856
6669	S.	A	4.5	5K	A-3877	A-3823
	P.P.	AB1	10.0	10K	A-8093	A-3880
6677	S.	A	2.8	7.5K	A-8114	A-3822
6945	S.	A	0.8	3K	A-3328	A-3825
6973	P.P.	AB1	15	5.5K	A-3307	A-3880
	P.P.	AB1	20	7.5K	A-3885	A-3830
7061	S.	A	3.0	5K	A-3877	A-3856

High Fidelity Applications

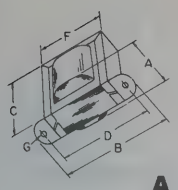
Tube	Use	Class	Watts	Load Res. in Ohms	Stancor Part No.
807/W	P.P.	A*	8.0	10K	A-8054
	P.P.	A#	25.0	7.6K	A-8072
	P.P.	AB1	15.0	3K	A-8052
	P.P.	AB2	55.0	3.2K	A-8052
1614	P.P.	A*	10.0	10K	BO-12
	P.P.	AB1	26.5	6.6K	A-8056
5881	P.P.	A*	8.0	10K	BO-12
	P.P.	A#	25.0	7.6K	A-8072
	P.P.	AB1	26.5	6.6K	A-8056
6146	P.P.	A*	18.0	10K	BO-13
6550	P.P.	A	55.0	3.5K	A-8052
	P.P.	AB1#	60.0	4.3K	BO-15
	P.P.	AB1#•	100.0	5K	BO-14
7027	P.P.	AB1	31.5	4.5K	A-8053
	P.P.	AB1	34.0	6.6K	A-8056
	P.P.	AB1	50.0	6K	A-8056
	P.P.	AB	24.0	8K	A-8072
7189	P.P.	AB1	24.0	8K	A-8072
	P.P.	AB1	16.5	11K	BO-13
7212	P.P.	TR1	22.0	8K	A-8072
	P.P.	AB1	37.0	6.6K	A-8056
7408	S.	A1	4.5	5K	A-8092
7868	S.	A1	11	3K	A-3830
	P.P.	AB1	30	6.6K	A-8056
EL-34	P.P.	AB1	37.0	6.6K	A-8056
(6CA7)	P.P.	AB1#	60.0	4.3K	BO-15
EL-37	P.P.	AB1	69.0	3.25K	BO-15
EL-84	S.	A	5.7	5.2K	A-8053
(6BQ5)	P.P.	AB1	17.0	8K	A-8072
KT-66	P.P.	A*	10.0	10K	A-8054
	P.P.	AB1#	20.0	10K	BO-13
	P.P.	AB1#	25.0	7.6K	A-8072
KT-88	P.P.	AB1#	60.0	4.3K	BO-15
	P.P.	AB1#•	100.0	5K	BO-14

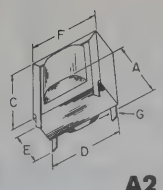
K is symbol for 1,000: 25K=25,000 2.5K=2,500 .25K=250

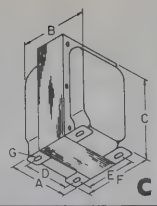
*Triode Connected (Williamson Circuit). #Ultra Linear (Williamson Circuit).

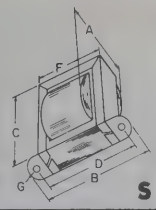
•Pentode Operation. Write for "Hi-Fi Library" showing complete construction details for amplifiers from 8 watts to 100 watts

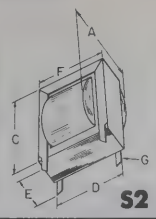
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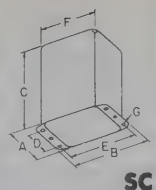












STANCOR
COMMERCIAL
audio transformers

OUTPUT: SINGLE PLATE TO VOICE COIL AND/OR LINE

	Catalog No.	Impedance in Ohms Primary	Impedance in Ohms Secondary	Max Pri DCMA	Audio Watts	Termination Pri	Termination Sec	Style	Dimensions A	B	C	D	E	F	G	WT. Lbs.
a	• A-8070	1000	4.0	90	4	Leads	Leads	A	1 1/2	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	A-3332	2000	3.2	50	3	Leads	Leads	A	1 1/4	2 1/8	1 1/4	1 3/4	—	1 1/2	3/16	0.4
	A-3330	2000 a	3.5	60	5	Leads	Leads	A	1 1/2	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	A-3876	2000	4.0	60	5	Leads	Leads	A	1 3/8	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	A-3336	2500 b	3.5	50	5	Leads	Leads	A	1 5/8	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	A-3328	4000	3.5	10	3	Leads	Leads	A	1 1/8	2 1/8	1 1/4	1 3/4	—	1 1/2	3/16	0.4
	A-2203	4000	8.0	40	5	Leads	Leads	A	1 1/2	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	A-3877	5000	4.0	40	5	Leads	Leads	A	1 3/8	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	A-3309	5000	3-4	35	3	Leads	Leads	A	1 3/8	2 1/8	1 1/4	1 3/4	—	1 1/2	3/16	0.4
	A-8092	5000	3-4	50	8	Leads	Leads	A	1 1/2	2 7/8	1 5/8	2 3/8	—	2	3/16	0.5
	A-3337	5000	6-8	40	10	Leads	Leads	S	1 3/4	2 7/8	2 3/8	2 3/8	—	2	3/16	1.0
	A-3310	5000	500/15/8/4	55	20	Leads	Leads	C	2 1/2	2 3/4	3 1/8	2	1 3/4	2 3/8	3/16 x 3/8	2.5
	COC-1	5000	600/150/16/8/4	55	5	Leads	Leads	SC	2 1/2	3	3 1/16	1 3/4	2 11/16	2 3/8	3/16	2.25
	COS-1	5000	600/150/16/8/4	55	5	Lugs	Lugs	SC	2 1/2	3	3 1/16	1 3/4	2 11/16	2 3/8	3/16	2.25
	A-4431	6000	3-4	35	5	Leads	Leads	A2	1 1/2		1 5/8	1 3/4	1 1/16	2	5/32	0.8
b	A-3878	7000	4.0	30	5	Leads	Leads	A	1 1/4	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	A-2313	7000	8.0	40	10	Leads	Leads	A	2	3 1/4	2	2 13/16	—	2 3/8	3/16	1.0
	A-3841	7000/6000/5000 4000/2500	500	60	10	Lugs	Lugs	S	2	3 1/8	2 3/4	2 13/16	—	2 1/4	3/16	1.5
	A-4770	7000/6000/5000 4000/2500	500	60	20	Leads	Lugs	S	2 1/8	3 5/8	3 1/8	3 1/8	—	2 5/8	3/16	2.4
	A-8114	7600	3.2	32	5	Leads	Leads	A	1 3/8	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	A-3329	8000	3.5	10	3	Leads	Leads	A	1 1/8	2 1/8	1 1/4	1 3/4	—	1 1/2	3/16	0.4
	COC-2	8000	600/150/16/8/4	55	5	Leads	Leads	SC	2 1/2	3	3 1/16	1 3/4	2 11/16	2 3/8	3/16	2.25
	COS-2	8000	600/150/16/8/4	55	5	Lugs	Lugs	SC	2 1/2	3	3 1/16	1 3/4	2 11/16	2 3/8	3/16	2.25
	A-3879	10000	4.0	30	5	Leads	Leads	A	1 3/8	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	A-3881	15000	4.0	10	5	Leads	Leads	A	1 3/8	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	A-3250	20000/10000 5000	500/333/200 125/50	15	5	Lugs	Lugs	A	1 7/8	3 1/4	2	2 13/16	—	2 3/8	3/16	1.0
	A-3315	20000/10000 5000	500/333/200 125/50	35	20	Lugs	Lugs	C	2 1/2	2 3/4	3 1/8	2	1 3/4	2 3/8	3/16 x 3/8	2.7
	A-3327	25000	4.0	5	5	Leads	Leads	A	1 3/8	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4

OUTPUT: PUSH-PULL PLATES TO VOICE COIL AND/OR LINE

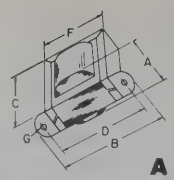
c	A-8098	2000 C.T.	32/16/8	140	15	Leads	Leads	C	2 1/2	3 1/4	3 1/8	2	2 1/4	2 7/8	3/16 x 3/8	3.3
	A-3802	3800/3300 C.T.	500/250/8/4	125	75	Leads	Leads	C	3 3/4	4	4 11/16	3	2 13/16	3 5/8	3/16 x 3/8	7.9
	A-8094	4000 C.T.	32/16/8	80	7.5	Leads	Leads	A	2 1/4	3 3/4	2 3/8	3 1/8	—	2 3/4	3/16	1.5
	A-3851	4400 C.T. c	500/250/15/8/4	70	30	Leads	Leads	C	2 13/16	3 1/4	3 1/2	2 1/4	2	2 3/4	3/16 x 3/8	3.6
	A-3872	5000 C.T.	15/8/4	75	18	Leads	Leads	SC	2 1/4	2 3/4	2 11/16	1 1/2	2 3/8	2	3/16	1.7
	A-3800	5000 C.T.	500/250/15/8/4	80	30	Leads	Leads	C	2 13/16	3 1/4	3 1/2	2 1/4	2	2 3/4	3/16 x 3/8	3.7
	A-3307	6000 C.T.	500/15/8/4	100	30	Leads	Leads	C	2 13/16	3 1/4	3 1/2	2 1/4	2	2 3/4	3/16 x 3/8	3.5
	PCO-200	6000 C.T. c	600/150/16/8/4	250	30	Leads	Leads	SC	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	7/32	9.0
	PSO-200	6000 C.T. c	600/150/16/8/4	250	30	Lugs	Lugs	SC	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	7/32	9.0
	A-3801	6600 C.T.	500/250/15/8/4	150	35	Leads	Leads	C	3 1/8	3 1/2	3 7/8	2 1/2	2 3/16	3 1/16	3/16 x 3/8	4.8
	A-3885	9000 C.T.	500/250/15/8/4	150	35	Leads	Leads	C	3 1/8	3 3/8	3 7/8	2 1/2	2 3/16	3 1/16	3/16 x 3/8	4.8
	A-4432	10000 C.T.	4.0	50	10	Leads	Leads	S2	1 5/8		2 3/8	1 7/8	1 1/16	2	5/32	1.0
	A-3304	10000/7000 C.T.	500/15/8/4	60	25	Leads	Leads	C	2 1/2	2 3/4	3 1/8	2	1 3/4	2 3/8	3/16 x 3/8	2.7
	A-3311	10000 C.T.	500/15/8/4	70	25	Leads	Leads	C	2 13/16	3 1/4	3 1/2	2 1/4	2	2 3/4	3/16 x 3/8	3.5
	A-3831	10000 C.T.	8/4/2	40	5	Leads	Leads	A	1 3/4	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
d	A-8093	10000 C.T.	3-4	40	10	Leads	Leads	A	1 1/2	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	A-3335	10000 C.T.	6-8/3.2-4	40	10	Leads	Leads	S	2	2 7/8	2 3/8	2 3/8	—	2	3/16	1.0
	PCO-150	10000 C.T. c	600/150/16/8/4	200	15	Leads	Leads	SC	3 1/4	4	4 1/4	2 1/4	3 1/2	2 15/16	7/32	5.0
	PSO-150	10000 C.T. c	600/150/16/8/4	200	15	Lugs	Lugs	SC	3 1/4	4	4 1/4	2 1/4	3 1/2	2 15/16	7/32	5.0
	A-3839	10000 C.T.	2000 and 15/8/4	30	10	Leads	Leads	SC	2 1/4	2 3/4	2 11/16	1 1/2	2 3/8	2	3/16	1.3
	PCO-150A	12000 C.T.	600/150/16/8/4	200	15	Leads	Leads	SC	3 1/4	4	4 1/4	2 1/4	3 1/2	2 15/16	7/32	5.0
	A-2312	14000 C.T.	4.0	40	10	Leads	Leads	A	1 7/8	2 7/8	1 5/8	2 3/8	—	2	3/16	1.0
	A-3496	14000 C.T.	4.0	25	5	Leads	Leads	A	1 3/8	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	A-3303	14000 C.T.	500/15/8/4	55	20	Leads	Leads	C	2 1/2	2 5/8	3 1/8	2	1 11/16	2 5/16	3/16 x 3/8	2.7
	A-3842	14000/12000 10000/8000 C.T.	500	55	10	Lugs	Lugs	S	2	3 1/8	2 3/4	2 13/16	—	2 1/4	3/16	1.7
	A-3250	20000 C.T.	500/333/200 125/50	15	5	Lugs	Lugs	A	1 7/8	3 1/4	2	2 13/16	—	2 3/8	3/16	1.0
	A-3315	20000 C.T.	500/333/200 125/50	35	20	Lugs	Lugs	C	2 1/2	2 3/4	3 1/8	2	1 11/16	2 1/2	3/16 x 3/8	2.7
	A-3857	25000 C.T.	4.0	10	5	Leads	Leads	A	1 1/2	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4

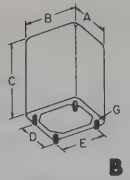
a Has 4.5% primary Tap.
b Has 3% and 6% primary Taps.
c. Has Tertiary Winding to provide 10% inverse feedback.
•New Part Number.

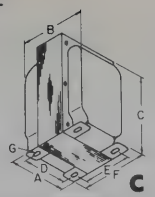
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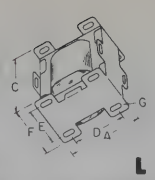
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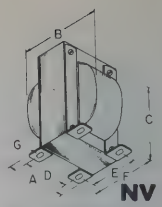
STANCOR COMMERCIAL audio transformers


A


B


C


L


NV

UNIVERSAL OUTPUT

	Catalog No.	Impedance in Ohms Primary	Impedance in Ohms Secondary	Max Pri DCMA	Audio Watts	Termination Pri	Termination Sec	Style	Dimensions A	B	C	D	E	F	G	WT. Lbs.
a	A-3856	S. or P.P. Plates 4000 to 14000	.05 to 122	35	4	Leads	Lugs	A	1 1/2	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	A-3822	S. Plate 7000 to 10000	.7 to 4	35	4	Leads	Lugs	A	1 3/8	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	A-3848	S. Plate 7000 to 16000	.4 to 4	10	5	Leads	Lugs	A	1 3/8	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	A-3823	S or P.P. Plates 4000 to 14000	.05 to 122	40	8	Leads	Lugs	A	1 5/8	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	A-3850	S or P.P. Plates 4000 to 14000	.05 to 122	40	8	Leads	Lugs	S	1 5/8	2 3/8	2	2	—	1 5/8	3/16	0.7
	A-3825	S. Plate 1500 to 4500	.3 to 4	75	8	Leads	Lugs	A	1 3/4	3 1/4	2	2 13/16	—	2 3/8	3/16	0.9
	A-3824	S. or P.P. Plates 6000 to 10000	.6 to 4	75	8	Leads	Lugs	A	2	3 1/4	2	2 13/16	—	2 3/8	3/16	1.4
	A-3849	S. Plate 1500 to 10000	.02 to 21	55	10	Lugs	Lugs	A	1 1/2	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	A-3880	P.P. Plates 4000 to 14000	.05 to 122	40	15	Lugs	Lugs	A	2 1/8	3 3/4	2 3/8	3 1/8	—	2 3/4	3/16	1.7
	A-2855	P.P. Plates 4000 to 14000	.05 to 122	50	15	Lugs	Lugs	L	2 3/8		2	1 1/2	1 3/16	1 5/8	3/16 x 1/2	1.0
	A-3890	P.P. Plates 4000 to 14000	.05 to 122	50	15	Leads	Leads	SC	2 1/4	2 3/4	2 11/16	1 1/2	2 3/8	2	3/16	1.5
	A-3852	P.P. Plates 4000 to 14000	.05 to 122	40	18	Leads	Lugs	S	2	2 7/8	2 3/8	2 3/8	—	2	3/16	1.3
	A-3870	P.P. Plates 4000 to 14000	.05 to 122	50	18	Lugs	Lugs	A	2	3 1/4	2	2 13/16	—	2 3/8	3/16	1.3
	A-3830	P.P. Plates 3000 to 10000	.04 to 122	60	20	Leads	Lugs	S	2 1/8	3 1/8	2 3/4	2 13/16	—	2 1/4	3/16	1.8

OUTPUT: HIGH FIDELITY: FREQ. RESPONSE ±1 DB 20 TO 20,000 CYCLES

b	A-8050	1500 C.T.	16/8	200	50	Leads	Leads	C	3 7/16	4 1/4	4 1/4	2 3/4	3 1/16	3 7/8	3/16 x 3/8	6.5
	A-8060	1500 C.T.	500	200	50	Leads	Leads	C	3 7/16	4 1/4	4 1/4	2 3/4	3 1/16	3 7/8	3/16 x 3/8	6.5
	A-8051	2500 C.T.	16/8	150	50	Leads	Leads	C	3 7/16	4 1/4	4 1/4	2 3/4	3 1/16	3 7/8	3/16 x 3/8	6.5
	A-8061	2500 C.T.	500	150	50	Leads	Leads	C	3 7/16	4 1/4	4 1/4	2 3/4	3 1/16	3 7/8	3/16 x 3/8	6.5
	A-8052	3000 C.T.	16/8	175	50	Leads	Leads	C	3 7/16	4 1/4	4 1/4	2 3/4	3 1/16	3 7/8	3/16 x 3/8	6.5
	A-8062	3000 C.T.	500	175	50	Leads	Leads	C	3 7/16	4 1/4	4 1/4	2 3/4	3 1/16	3 7/8	3/16 x 3/8	6.5
	A-8053	5000 C.T.	16/8	150	50	Leads	Leads	C	3 7/16	4 1/4	4 1/4	2 3/4	3 1/16	3 7/8	3/16 x 3/8	6.5
	A-8063	5000 C.T.	500	150	50	Leads	Leads	C	3 7/16	4 1/4	4 1/4	2 3/4	3 1/16	3 7/8	3/16 x 3/8	6.5
	A-8056	6600 C.T.	16/8	125	50	Leads	Leads	C	3 7/16	4 1/4	4 1/4	2 3/4	3 1/16	3 7/8	3/16 x 3/8	6.5
	A-8066	6600 C.T.	500	125	50	Leads	Leads	C	3 7/16	4 1/4	4 1/4	2 3/4	3 1/16	3 7/8	3/16 x 3/8	6.5
	A-8072	7600 C.T. a	16/8/4	100	25	Leads	Leads	C	3 7/16	4 1/4	4 1/4	2 3/4	3 1/16	3 7/8	3/16 x 3/8	6.5
	A-8054	9000 C.T.	16/8	100	50	Leads	Leads	C	3 7/16	4 1/4	4 1/4	2 3/4	3 1/16	3 7/8	3/16 x 3/8	6.5
	A-8064	9000 C.T.	500	100	50	Leads	Leads	C	3 7/16	4 1/4	4 1/4	2 3/4	3 1/16	3 7/8	3/16 x 3/8	6.5

OUTPUT: HIGH FIDELITY: FREQ. RESPONSE ±1½ DB 30 TO 20,000 CYCLES

c	BO-1	15,000 b	600/150	10	.032	Lugs	Lugs	B	2 3/8	2 1/2	3 1/16	1 11/16	1 13/16	—	6-32	2.25
	BO-2	20,000 C.T.	600/150	10	1.0	Lugs	Lugs	B	2 11/16	2 7/8	3 1/2	1 7/8	2	—	8-32	3.0
	BO-5	10,000 C.T.	600/150/16/8/4	45	5.0	Lugs	Lugs	B	3	3 1/4	3 7/8	2 1/8	2 3/8	—	8-32	4.0
	BO-6	7500 C.T.	20/8	80	20	Lugs	Lugs	B	3 5/16	3 11/16	4 5/16	2 3/8	2 3/8	—	10-32	5.75
	BO-9	5000/3000 C.T.	600/150/16/8/4	75	15	Lugs	Lugs	B	3 5/16	3 11/16	4 5/16	2 3/8	2 3/8	—	10-32	6.0
	BO-10	20,000 C.T.	600/150	10	.032	Lugs	Lugs	B	2 1/8	2 1/4	2 11/16	1 3/8	1 1/16	—	6-32	1.5
	BO-11	3000/2500 C.T.	600/150/16/8/4	150	40	Lugs	Lugs	B	4 1/8	4 7/16	5 5/16	3 3/8	3 3/8	—	10-32	9.5
	BO-12	10,000 C.T.	600/16/8	100	10	Lugs	Lugs	B	4 1/8	4 7/16	5 5/16	3 3/8	3 3/8	—	10-32	9.0
	BO-13	10,000 C.T. a	16/8/4	100	20	Lugs	Lugs	B	3 5/16	3 11/16	4 11/16	2 3/8	2 3/8	—	10-32	7.0
	BO-14	5000 C.T. ac	16/8 and 70V.	150	100	Leads	Leads	SC	5 5/16	5 7/8	6 1/16	3 1/2	5 3/8	4 3/4	1/4	21.0
	BO-15	4300 C.T. ac	16/8	150	65	Leads	Leads	SC	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	7/32	12.0

TONE CONTROL CHOKE: WRITE FOR BULLETIN 456R

d	C-2332-1	1.6 hy	For use in Pre-amplifiers for Separate Tone Control	h=2 1/2, w=2, d=2 1/8,	1.3

a. Has Screen grid taps on primary. b. Has Tertiary Winding to provide 15% inverse feedback. c. Has cathode feedback Winding.

STANCOR-WILLIAMSON ULTRA-LINEAR HIGH FIDELITY AMPLIFIER

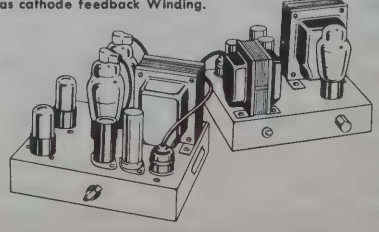
Has had wide acceptance due to its fine performance characteristics and ease of assembly.

Power output — 25 watts with less than 1% total Harmonic distortion and negligible intermodulation distortion. Frequency response — flat from 20 cycles to 40KC. Write for Bulletin 479 for complete Parts List, schematic and performance curves.

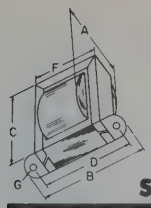
STANCOR PAGE 7

Parts Available from Stancor:

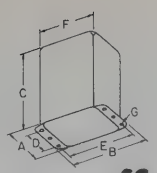
WM-8 Chassis set — Completely punched and finished
PC-8412 Power Transformer
C-1411 Choke
A-8072 Output Transformer
For Transformer ratings, refer to index.



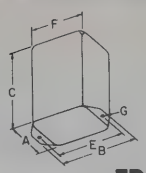
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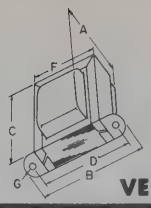
S



SC



TD



VE

STANCOR
COMMERCIAL
audio transformers

25 VOLT LINE TO VOICE COIL

	Catalog No.	Impedance in Ohms Primary	Impedance in Ohms Secondary	Audio Watts	Termination Pri	Termination Sec	Style	Dimensions A	B	C	D	E	F	G	WT Lbs.
a	A-8099	312/625/1250	8/4	2/1/.5	Lugs	Lugs	A	1 3/8	2 1/8	1 1/4	1 3/4	—	1 1/2	3/16	0.3
	A-8087	312/625/1250	8	2/1/.5	Leads	Leads	A	1 3/8	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	•A-8088	156/312/625/1250 2500/5000	8	4/2/1/.5 .25/.12	Leads	Leads	A	1 5/8	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	A-8095	125/250/500 1000/2000	8/4	5/2.5/1.25 .62/.31	Lugs	Lugs	A	1 1/2	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	A-8096	78/156/312/625 1250	16/8/4	8/4/2/1/.5	Lugs	Lugs	S	1 5/8	2 3/8	2	2	—	1 5/8	3/16	0.65
	A-8097	39/78/156/312 625/1250	16/8/4	16/8/4/2 1/.5	Lugs	Lugs	S	2 1/8	3 1/8	2 3/4	2 13/16	—	2 1/4	3/16	1.6

70.7 VOLT LINE TO VOICE COIL

	Catalog No.	Impedance in Ohms Primary	Impedance in Ohms Secondary	Audio Watts	Termination Pri	Termination Sec	Style	Dimensions A	B	C	D	E	F	G	WT Lbs.
b	A-8109	2500/5000/10000	8/4	2/1/.5	Lugs	Lugs	A	1 3/8	2 1/8	1 1/4	1 3/4	—	1 1/2	3/16	0.3
	A-8083	2500/5000/10000	8	2/1/.5	Leads	Leads	A	1 3/8	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	•A-8084	1250/2500/5000 10000/20000/40000	8	4/2/1/.5 .25/.12	Leads	Leads	A	1 5/8	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	A-8105	1000/2000/4000 8000/16000	8/4	5/2.5/1.25 .62/.31	Lugs	Lugs	A	1 1/2	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	A-8080	1000/1250/1667 2500/5000	16/8	5/4/3/2/1	Lugs	Lugs	A	1 1/2	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	A-8102	625/1250/2500 5000/10000	16/8/4	8/4/2/1/.5	Lugs	Lugs	S	1 1/2	2 3/8	2	2	—	1 5/8	3/16	0.7
	A-8081	500/555/625 715/833	16/8	10/9/8/7/6	Lugs	Lugs	S	1 5/8	2 3/8	2	2	—	1 5/8	3/16	0.7
	A-8082	333/357/384 417/455	16/8	15/14/13 12/11	Lugs	Lugs	S	1 3/4	2 7/8	2 3/8	2 3/8	—	2	3/16	1.2
	A-8103	312/625/1250 2500/5000/10000	16/8/4	16/8/4 2/1/.5	Lugs	Lugs	S	2 1/8	3 1/8	2 3/4	2 13/16	—	2 1/4	3/16	1.5

140 VOLT LINE TO VOICE COIL

	Catalog No.	Impedance in Ohms Primary	Impedance in Ohms Secondary	Audio Watts	Termination Pri	Termination Sec	Style	Dimensions A	B	C	D	E	F	G	WT Lbs.
c	A-8108	4000/8000 16000/32000	8/4	5/2.5/1.25 .62	Lugs	Lugs	A	1 1/2	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	A-8106	2500/5000 10000/20000	16/8/4	8/4/2/1	Lugs	Lugs	S	1 5/8	2 3/8	2	2	—	1 5/8	3/16	0.7
	A-8107	1250/2500/5000 10000/20000	16/8/4	16/8/4/2/1	Lugs	Lugs	S	2	3 1/8	2 3/4	2 13/16	—	2 1/4	3/16	1.8

LINE TO VOICE COIL

	Catalog No.	Impedance in Ohms Primary	Impedance in Ohms Secondary	Audio Watts	Termination Pri	Termination Sec	Style	Dimensions A	B	C	D	E	F	G	WT Lbs.
d	A-8101	500	6-8/3.2	5	Lugs	Leads	A	1 1/2	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	A-3883	500	15/8/6/4	25	Lugs	Lugs	S	1 3/4	2 7/8	2 3/8	2 3/8	—	2	3/16	1.1
	A-3882	500/333/250	15/8/4	25	Lugs	Lugs	C	2 1/2	2 3/4	3 1/8	2	1 3/4	2 3/8	3/16 x 3/8	2.4
	A-3818	1500/1000/500	15/8/4	25	Lugs	Lugs	S	2 1/8	3 5/8	3 1/8	3 1/8	—	2 5/8	3/16	2.2
	A-7947	2000/1500/1000 500	6-8/3.2	8	Lugs	Lugs	A	1 5/8	2 7/8	1 3/8	2 3/8	—	2	3/16	0.7
	A-7949	2000/1500/1000 500	6-8/3.2	12	Lugs	Lugs	S	1 3/4	2 7/8	2 3/8	2 3/8	—	2	3/16	1.1
	A-3820	2000/1500/1000 500	15/8/4	40	Lugs	Lugs	C	3 7/16	3 3/4	4 1/8	2 3/4	2 5/16	3 3/8	3/16 x 3/8	5.0
	A-8104	3000/2000/1500 1000/500	16/8/4	10	Lugs	Lugs	S	1 3/4	2 7/8	2 3/8	2 3/8	—	2	3/16	1.5
	A-3837	500	.06 to 48	15	Lugs	Lugs	S	2	2 7/8	2 3/8	2 3/8	—	2	3/16	1.4

LINE TO LINE

	Catalog No.	Impedance in Ohms Primary	Impedance in Ohms Secondary	Audio Watts	Termination Pri	Termination Sec	Style	Dimensions A	B	C	D	E	F	G	WT Lbs.
e	A-4350	500/333/200 125/50	500/333/200 125/50	10	Lugs	Lugs	A	1 7/8	3 1/4	2	2 13/16	—	2 3/8	3/16	1.0
	A-4407	500/333/200 125/50	500/333/200 125/50	20	Lugs	Lugs	C	2 1/2	2 3/4	3 1/8	2	1 3/4	2 3/8	3/16 x 3/8	2.4
	A-3838	500	250/166/125 100/84	30	Lugs	Lugs	NV	2 1/2	2 5/16	3 1/8	2	2	2 11/16	3/16 x 3/8	2.3

FOR INTERCOMS AND TRANSCEIVERS

	Catalog No.	Application	Impedance in Ohms Primary	Impedance in Ohms Sec.	Audio Watts	Termination Pri	Termination Sec	Style	Dimensions A	B	C	D	E	F	G	WT Lbs.
f	A-4744	Intercom Input	4	25,000	—	Leads	Leads	VE	1 1/2	2 3/8	1 3/8	2	—	1 3/4	3/16	0.5
	A-4748	Intercom Input	45 or 50	50,000	—	Leads	Leads	A	1 3/8	2 1/8	1 1/4	1 3/4	—	1 1/2	3/16	0.4
	A-8090	Line to Voice Coil	45 or 50	6-8/3-4	3	Lugs	Lugs	A	1 1/4	2 3/8	1 3/8	2	—	1 3/4	3/16	0.5
	A-8091	Line to Voice Coil	45 or 50	6-8/3-4	8	Lugs	Lugs	A	1 1/2	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	A-3817	Transceiver Modulation and Output	5000 @ 50 Madc	6750 @ 50 Madc and 4	10	Leads	Leads	S	2	2 3/8	2	2	—	1 5/8	3/16	0.7
	A-3833	Transceiver Input Mic. or Plate to Grid	5000/200	60,000	—	Leads	Leads	A	1 5/8	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	A-3836	Transceiver Output	10,000	2000/50	5	Leads	Leads	A	1 11/16	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	A-4749	Telephone patch Circuit	10,000	500	—	Leads	Leads	TD	1 1/2	2 1/4	1 15/16	—	1 15/16	1 1/2	3/16	1.0

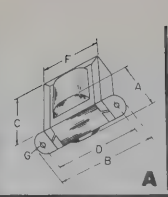
MICROPHONE, PICKUP OR LINE TO GRID

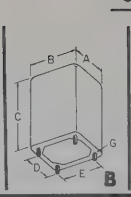
	Catalog No.	Application	Impedance in Ohms Primary	Impedance in Ohms Secondary	Ratio	Termination Pri	Termination Sec	Style	Dimensions A	B	C	D	E	F	G	WT. Lbs.
g	A-4705	S.B. Mic. to S. Grid	200/70	80,000	1:20	Leads	Leads	A	1 3/4	2 3/8	1 3/8	2	—	1 3/4	3/16	0.5
	A-4706	S.B. Mic. to S. Grid	100	60,000	1:24.5	Leads	Leads	A	1 1/2	2 3/8	1 3/8	2	—	1 3/4	3/16	0.5
	A-4708	D.B. Mic. to S. Grid	200 C.T.	57,000	1:17	Lugs	Lugs	S	1 1/2	2 3/8	2	2	—	1 5/8	3/16	0.7
	A-4742	S.B. Mic to P.P. Grids	100	400,000 C.T.	1:64	Leads	Leads	S	1 7/8	2 7/8	2 3/8	2 3/8	—	2	3/16	1.2
	A-4747	S.B. Mic. or Line to S. Grid	70	1,300,000	1:137	Leads	Leads	VE	1 1/4	1 13/16	1 7/16	1 1/2	—	1 1/4	3/16	0.5

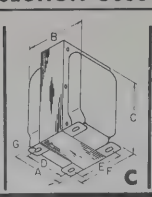
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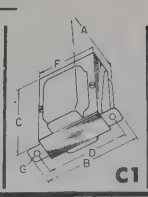
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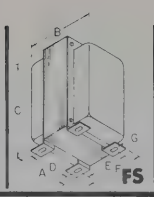
STANCOR COMMERCIAL audio transformers

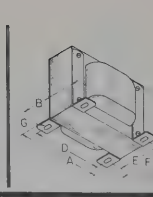


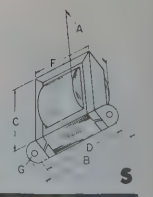












MICROPHONE, PICKUP OR LINE TO GRID

	Catalog No.	Application	Impedance in Ohms Primary	Impedance in Ohms Secondary	Ratio	Termination Pri	Termination Sec	Style	Dimensions A	B	C	D	E	F	G	WT. Lbs.
a	A-4351	Mic. or Line to S. Grid	500/333/200/125/50	89,000	1:13.3	Leads	Leads	SC	2 1/4	2 11/16	2 11/16	1 1/2	—	2	3/16	1.4
	A-4352	Mic or Line to P.P. Grids	500/333/200/125/50	89,000 C.T.	1:13.3	Lugs	Lugs	A	1 7/8	3 1/4	2	2 13/16	—	2 3/8	3/16	1.0
	A-4709	Dyn. mic or Pickup to S. Grid	30/15/8/4	106,000	1:60	Leads	Leads	SC	2 1/4	2 11/16	2 11/16	1 1/2	—	2	3/16	1.7
	A-4778	Line to S. Grid	600/500 C.T.	240,000	1:20	Leads	Leads	C1	1 13/16	2 7/8	2 1/4	2 3/8	—	2	3/16	1.0
	A-4779	Line to S. or P.P. Grids	600/500 C.T.	60,000 C.T.	1:10	Leads	Leads	A	1 3/8	2 3/8	1 3/8	2	—	1 3/4	3/16	0.5
	A-4780	Line to P.P. Grids	600/500 C.T.	240,000 C.T.	1:20	Leads	Leads	VE	1 11/16	3 1/4	2	2 13/16	—	2 3/8	3/16	1.0
	CIC-1	Line to P.P. Grids	600/150	100,000 C.T.	1:13	Leads	Leads	TD	1 1/2	2 1/4	2 1/8	—	1 15/16	1 1/2	3/16	0.75
	CIS-1	Line to P.P. Grids	600/150	100,000 C.T.	1:13	Lugs	Lugs	TD	1 1/2	2 1/4	2 1/8	—	1 15/16	1 1/2	3/16	0.75
	CIC-2	S.B. or D.B. Mic. to P.P. Grids	125/50	125,000	1:32	Leads	Leads	TD	1 1/2	2 1/4	2 1/8	—	1 15/16	1 1/2	3/16	0.75
	CIS-2	S.B. or D.B. Mic. to P.P. Grids	125/50	125,000	1:32	Lugs	Lugs	TD	1 1/2	2 1/4	2 1/8	—	1 15/16	1 1/2	3/16	0.75

INPUT: HIGH FIDELITY–SHIELDED–FREQ. RESPONSE ±1 DB 30 TO 15,000 CYCLES

b	BI-1	Line to S. or P.P. Grids	600/150 C.T.	50,000 C.T.	+15 dbm	Lugs	Lugs	B	2 1/8	2 1/4	2 11/16	1 3/8	1 5/16	—	6-32	1.5
	BI-2	Line to S. or P.P. Grids	600/150 C.T.	50,000 C.T.	+15 dbm	Lugs	Lugs	B a	2 1/8	2 1/4	2 11/16	1 3/8	1 5/16	—	6-32	1.5
	BI-3	Line Bridging to P.P. Grids	8000/6000 C.T.	50,000 C.T.	+15 dbm	Lugs	Lugs	B	2 1/8	2 1/4	2 11/16	1 3/8	1 5/16	—	6-32	1.5
	BI-4	Line to Line	600/150 C.T.	600/150 C.T.	+15 dbm	Lugs	Lugs	B	2 1/8	2 1/4	2 11/16	1 3/8	1 5/16	—	6-32	1.5
	BI-5	Line to Line	600/150 C.T.	600/150 C.T.	+30 dbm	Lugs	Lugs	B a	3	3 1/4	3 7/8	2 1/8	2 3/8	—	8-32	3.25
	BI-6	P.P. Plates to S. or P.P.Grids	20,000 C.T.	50,000 C.T.	+15 dbm	Lugs	Lugs	B	2 1/8	2 1/4	2 11/16	1 3/8	1 5/16	—	6-32	1.5
	BI-7	Mic., Pickup or Line to Grid	600/250/150/50	50,000 C.T.	+15 dbm	Lugs	Lugs	B	2 1/8	2 1/4	2 11/16	1 3/8	1 5/16	—	6-32	1.5

INPUT: WF SERIES–SHIELDED–FREQ. RESPONSE ±2 DB 30 TO 20,000 CYCLES

c	WF-20	Mic., pickup or Line to Grid	500-600/333/250/200/125-150/50	50,000 C.T.	+7 db	Lugs	Lugs	WF	1 1/2	1 1/2	2	1 5/16	1 5/32	—	4-40	0.6
	WF-21	Mic., pickup or Line to Grid	500/200/50	50,000 C.T.	+7 db	Lugs	Lugs	WF a	1 1/2	1 1/2	2	1 5/32	1 5/32	—	4-40	0.6
	WF-22	Mic., pickup or Line to Grid	500-600/333/250/200/125-150/50	80,000 C.T.	+7 db	Lugs	Lugs	WF	1 1/2	1 1/2	2	1 5/32	1 5/32	—	4-40	0.6
	WF-28	S. or P.P. Plates to S. or P.P. Grids	15,000 C.T.	80,000 C.T.	+7 db	Lugs	Lugs	WF	1 1/2	1 1/2	2	1 5/32	1 5/32	—	4-40	0.6
	WF-30	Mixer, Mic., pickup, or Line to Line	500-600/333/250/200/125-150/50	500-600/333/250/200/125-150/50	+7 db	Lugs	Lugs	WF	1 1/2	1 1/2	2	1 5/32	1 5/32	—	4-40	0.6
	WF-35	S. Plate to Line	15,000	500-600/333/250/200/125-150/50	+7 db	Lugs	Lugs	WF	1 1/2	1 1/2	2	1 5/32	1 5/32	—	4-40	0.6
	WF-36	PP. Plates tor Line	30,000 C.T.	500-600/333/250/200/125-150/50	+7 bd	Lugs	Lugs	WF	1 1/2	1 1/2	2	1 5/32	1 5/32	—	4-40	0.6

INPUT: MINIATURE FREQ. RESPONSE ±1 DB 30 TO 15,000 CYCLES

d	TT-11	Mic., pickup or Line to Grid	500-600/200-250/50	50,000	0db	Lugs	Lugs	TT	7/8	7/8	1 1/4	—	—	1 1/16	2-56	.08
	TT-12	Mic., pickup or Line to Grids	500-600/200-250/50	50,000 C.T.	0db	Lugs	Lugs	TT	7/8	7/8	1 1/4	—	—	1 1/16	2-56	.08
	TT-13	Dyn. mic, T. Grid	30/7.5	50,000	0db	Lugs	Lugs	TT	7/8	7/8	1 1/4	—	—	1 1/16	2-56	.08
	TT-14	S. Plate to Grid	15,000	60,000	0db	Lugs	Lugs	TT	7/8	7/8	1 1/4	—	—	1 1/16	2-56	.08

INTERSTAGE: SINGLE PLATE (7,000 TO 20,000 OHM) TO SINGLE GRID

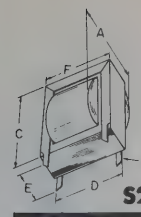
	Catalog No.	Ratio	Max. Pri DCMA	Termination Pri	Termination Sec	Style	Dimensions A	B	C	D	E	F	G	WT. Lbs.
e	A-53	1:3	10	Leads	Leads	A	1 3/8	2 3/8	1 3/8	2	—	1 3/4	3/16	0.5

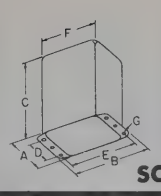
INTERSTAGE: SINGLE PLATE (7,000 TO 15,000 OHM) TO PUSH PULL GRIDS

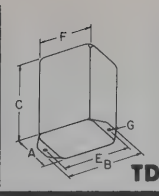
f	A-52C	1:2	10	Leads	Leads	A	1 1/2	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	A-62C	1:2	10	Leads	Leads	A	1 3/8	2 7/8	1 3/8	2 3/8	—	2	3/16	0.7
	A-4745	1:2	10	Leads	Leads	SC	2 1/4	2 11/16	2 11/16	1 1/2	2 3/8	2	3/16	1.7
	A-53C	1:3	10	Leads	Leads	A	1 3/8	2 3/8	1 3/8	2	—	1 3/4	3/16	0.5
	A-63C	1:3	10	Leads	Leads	A	1 1/2	2 7/8	1 3/8	2 3/8	—	2	3/16	0.7
	A-73C	1:3	10	Leads	Leads	A	1 3/4	3 1/4	2	2 13/16	—	2 3/8	3/16	1.0
	A-4719	1:3	10	Leads	Leads	SC	2 1/4	2 11/16	2 11/16	1 1/2	2 3/8	2	3/16	1.7
	A-64C	1:4	10	Leads	Leads	S	1 3/8	2 3/8	2	2	—	1 3/8	3/16	0.7
	A-4420	Replacement for Delco 6061		Leads	Leads	S2	1 1/4		1 3/8	1 3/16	3/8	1 3/8	1/8	0.5

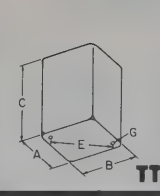
a. Has multiple internal magnetic shields.

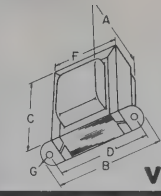
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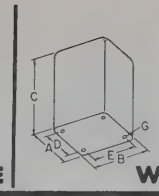












STANCOR
COMMERCIAL
audio transformers

INTERSTAGE: PUSH-PULL PLATES (7,000 TO 15,000 OHMS) TO PUSH-PULL GRIDS

	Catalog No.	Ratio	Max. Pri DCMA	Termination Pri	Termination Sec	Style	Dimensions A	B	C	D	E	F	G	WT. Lbs.
a	A-4711	1:1	10	Leads	Leads	A	1 5/8	2 7/8	1 5/8	2 3/8		2	3/16	0.7
	A-4208	1:1.4	15	Leads	Leads	C	2 1/2	2 3/4	3 1/8	2	1 3/4	2 3/8	3/16 x 3/8	2.5

INTERSTAGE: MULTI-PURPOSE (7,000 TO 15,000 OHM PLATES)

b	A-4774	1:3	10	Leads	Leads	S	1 3/4	2 7/8	2 3/8	2 3/8		2	3/16	1.2
	A-4773	1:3	10	Leads	Leads	SC	2 1/4	2 11/16	2 11/16	1 1/2	2 3/8	2	3/16	1.7
		Proper Connections will provide Ratios of 1:1, 1:3, or 1:6 May be Used for Single or Push-Pull Plates to Single or Push-Pull Grids												

DRIVER: SINGLE PLATE TO PUSH-PULL GRIDS

	Catalog No.	Pri. Impedance in Ohms	Max Pri DCMA	Ratio Pri: ½ Sec	Audio Watts	Termination Pri	Termination Sec	Style	Dimensions A	B	C	D	E	F	G	WT. Lbs.
c	A-4713	10,000	30	2:1	5	Leads	Leads	A	1 5/8	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	A-4752	10,000	40	2/1.5/1:1	10	Leads	Leads	A	1 3/4	3 1/4	2	2 13/16	—	2 3/8	3/16	1.2
	A-4722	10,000	30	2:1	10	Leads	Leads	SC	2 1/4	2 11/16	2 11/16	1 1/2	2 3/8	2	3/16	1.7
	A-4292	10,000	20	2.5:1	5	Leads	Leads	A	1 1/2	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	A-4723	10,000	30	3:1	5	Leads	Leads	A	1 5/8	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	A-4210	1500 to 5000	40	3:1	15	Leads	Leads	C	2 1/2	2 3/4	3 1/8	2	1 3/4	2 3/8	3/16 x 3/8	2.5
	A-4702	1500 to 5000	80	5:1	20	Leads	Leads	C	2 1/2	2 3/4	3 1/8	2	1 3/4	2 3/8	3/16 x 3/8	2.5

DRIVER: PUSH-PULL PLATES TO PUSH-PULL GRIDS

d	A-4208	10,000 to 30,000 C.T.	15	2.8:1	15	Leads	Leads	C	2 1/2	2 3/4	3 1/8	2	1 3/4	2 3/8	3/16 x 3/8	2.5
	A-4701	20,000 C.T.	25	3:1	15	Leads	Leads	C	2 1/2	2 3/8	3 1/8	2	1 3/4	2 3/8	3/16 x 3/8	2.5
	A-4212	1500 to 5000 C.T.	50	3.2:1	20	Leads	Leads	C	2 1/2	2 3/4	3 1/8	2	1 3/4	2 3/8	3/16 x 3/8	2.5

DRIVER: "POLY-PEDANCE"-MULTIPLE TAPS OFFER A WIDE RANGE OF RATIO SELECTION

d	A-4761	5000 to 15,000 C.T.	100	{2.4/2.2/2.1/1.8/ 1.6/1.4/1.25:1}	15	Leads	Leads Lugs	C	2 1/2	3 1/8	3 1/8	2	2 1/8	2 3/4	3/16 x 3/8	3.4
	A-4762	5000 to 15,000 C.T.	100	{5/4.5/4/3.4/3.2 3.1/2.6:1}	15	Leads	Leads Lugs	C	2 1/2	2 3/4	3 1/8	2	1 3/4	2 3/8	3/16 x 3/8	2.7
	A-4765	500	—	{1.33/1.2/1/.8/.7/ .5/.45/.4/.36 .32:1}	15	Leads	Leads Lugs	C	2 1/2	2 3/4	3 1/8	2	1 3/4	2 3/8	3/16 x 3/8	3.2

DRIVER: BROADCAST FREQ. RESPONSE ±1 DB 30 TO 15,000 CYCLES

e	BD-1	3000 C.T.	100	3.5:1	10	Terms	Terms	B	3 1/4	3 5/8	4 5/16	2 3/8	2 5/8	—	10-32	6.5
	BD-2	5000 c.T.	100	3:1	35	Terms	Terms	SC	5 5/16	5 7/8	6 1/16	3 1/2	5 3/8	4 3/4	1/4	12.3

MODULATION:

	Catalog No.	Impedance in Ohms Primary	Impedance in Ohms Secondary	Max. Sec DCMA	Audio Watts	Termination Pri	Termination Sec	Style	Dimensions A	B	C	D	E	F	G	WT. Lbs.
e	A-3812	10,000 C.T.	4000	50	5	Leads	Leads	A	1 5/8	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	A-3871	4500	8500	50	10	Leads	Leads	SC	2 1/4	2 11/16	2 11/16	1 1/2	2 3/8	2	3/16	1.4
	A-3845	10,000 C.T.	8000/6500/5000/3000	100	25	Leads	Leads	C	2 1/2	2 7/8	3 1/8	2	1 7/8	2 1/2	3/16 x 3/8	2.8
	A-3808	3800/3300 C.T.	{10 000/7500/5000/ 4000}	170	60	Lugs	Lugs	C	3 3/4	4	4 11/16	3	2 13/16	3 5/8	3/16 x 3/8	7.7
	A-3829	9000/6900 C.T.	6250/5000/4000/3300	300	175	Lugs	Lugs	C	3 3/4	5	4 11/16	3	3 13/16	4 5/8	3/16 x 3/8	11.4

MODULATION: "POLYPEDANCE" — MULTIPLE TAPS OFFER A WIDE RANGE OF IMPEDANCE MATCH

f	A-3891	2000 to 20,000	2000 to 20,000	100	15	Lugs	Lugs	C	2 1/2	2 3/4	3 1/8	2	1 3/4	2 3/8	3/16 x 3/8	2.5
	A-3892	2000 to 20,000	2000 to 20,000	150	30	Lugs	Lugs	C	3 1/4	3 1/2	3 7/8	2 1/2	2 3/16	3	3/16 x 3/8	4.3
	A-3893	2000 to 20,000	2000 to 20,000	180	60	Lugs	Lugs	C	3 1/8	4	3 7/8	2 1/2	2 11/16	3 1/2	3/16 x 3/8	6.2
	A-3894	2000 to 20,000	2000 to 20,000	225	125	Lugs	Lugs	C	3 3/4	4 1/2	4 11/16	3	3 5/16	4 1/8	3/16 x 3/8	9.4
	A-3898	2000 to 20,000	2000 to 20,000	260	300	Terms	Terms	FS	5 3/4	7 5/8	8 1/8	4 5/8	4 3/4	5 3/4	3/8 x 1/2	3 8
	A-3899	2000 to 20,000	2000 to 20,000	500	600	Terms	Terms	FS	7 1/4	10 1/4	9 1/8	6	5 5/8	6 7/8	7/16 x 5/8	7 0

MODULATION: BROADCAST FREQ. RESPONSE ±1 DB 30 TO 15,000 CYCLES

f	BM-1	7500 C.T.	5000	0	125	Terms	Terms	SC	6 1/8	6 1/2	7 1/16	4 1/4	6	5 1/4	1/4	25

MODULATION REACTOR:

	Catalog No.	Inductance in Henries	DCMA	Insul. Test RMS Volts	Termination	Style	Dimensions A	B	C	D	E	F	G	WT. Lbs.
f	BR-1	65	250	7500	Terms	SC	7 1/16	7 7/8	8 1/16	5	7	5 1/4	1/4	41

SPLATTER CHOKES: FOR HIGH LEVEL "CLIPPER" FILTERS

g	C-2317	.048 to 0.9	300	5000	Lugs	NH	3	3	2 3/8	2 1/2	2	2 3/4	3/16 x 5/16	2.3
	SR-300	.02 to 1.5	300	7500	Terms	SC	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	7/32	10
	SR-500	.02 to 1.5	500	10000	Terms	SC	5 5/16	5 7/8	6 1/16	3 1/2	5 3/8	4 13/16	1/4	14.5

LOW PASS FILTER: CUT OFF FREQ. 3,000 CYCLES

	Catalog No.	Impedance in Ohms Input	Impedance in Ohms Output	Audio Level	Termination Pri	Termination Sec	Style	Dimensions A	B	C	D	E	F	G	WT. Lbs.
g	LPF-1	15,000	500 or 100,000	10 V. output	Lugs	Lugs	SC	2 1/4	2 11/16	2 11/16	1 1/2	2 3/8	2	3/16	0.9

BAND PASS FILTER: 200 TO 3,000 CYCLES

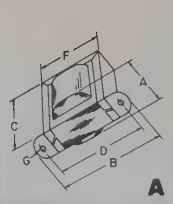
h	C-2340	10,000	500 or 100,000	10 V. output	Lugs	Lugs	SC	2 1/4	2 11/16	2 11/16	1 1/2	2 3/8	2	3/16	0.6

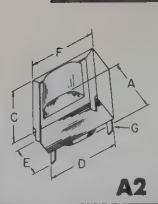
FOR TRANSISTOR MOBILE MODULATOR (WRITE FOR BULLETIN 545 FOR CIRCUIT)

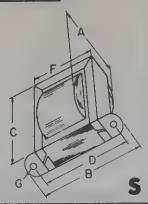
	Catalog No.	Application	Impedance in Ohms Pri	Impedance in Ohms Sec	Max Pri DCMA	Audio Watts	Termination Pri	Termination Sec	Style	Dimensions A	B	C	D	E	F	G	WT. Lbs.
j	TA-15	Input	50 to 100	10	50	.005	Leads	Leads	A	1	1 5/8	1 13/16	1 3/8	—	1 1/16	1/8	0.15
	TA-16	Driver	20	36 C.T.	400	1.0	Leads	Leads	A	1 1/8	2 1/8	1 1/4	1 3/4	—	1 1/2	3/16	0.20
	TA-17	Modulation	8 C.T.	{7500/5000} @ 120 Ma	—	35.0	Leads	Leads	C	2 1/2	3	3 1/8	2	2	2 5/8	3/16 x 3/8	3.0

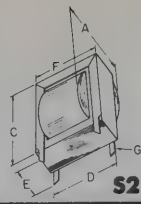
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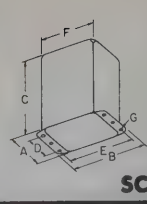
STANCOR COMMERCIAL transistor transformers

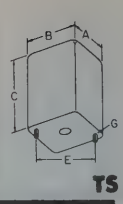












FOR AUDIO APPLICATIONS: ALL UNITS TERMINATE WITH LEADS

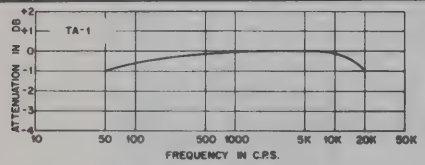
	Catalog No.	Application	Impedance in Ohms Pri.	Sec.	Max.Pri. DCMA	Audio Watts	D.C. Res. in Ohms Pri	Sec	Style	Dimensions A	B	C	D	E	F	G	WT Lbs.
a	TA-1	Input	600 C.T.	10	20	.05	42	0.8	A	1	1 5/8	13/16	1 3/8	—	1 1/16	1/8	.07
	TA-2	Interstage	100 C.T.	10 C.T.	100	.25	4.3	0.8	A	1 1/2	2 1/8	1 1/4	1 3/4	—	1 1/2	3/16	.25
	TA-3	Interstage	100	1000 C.T.	100	.25	5.8	45	A	1 1/2	2 3/8	1 3/8	2	—	1 3/4	3/16	.35
	TA-4	Interstage	500 C.T.	5000 C.T.	12	.03	37	250	A	1 5/8	2 3/8	1 3/8	2	—	1 3/4	3/16	.35
	TA-5	Driver	1000	200 C.T.	10	.05	400	115	A	5/8	1 5/16	11/16	1 1/16	—	13/16	1/8	.05
	TA-6	Driver	2000	200 C.T.	5	.05	720	115	A	5/8	1 5/16	11/16	1 1/16	—	13/16	1/8	.05
	TA-7	Driver	100	100 C.T.	100	.5	12	12	A	1 5/8	2 7/8	1 5/8	2 3/8	—	2	3/16	.60
	TA-8	Output	9800	15	2	.05	640	2	A	5/8	1 5/16	11/16	1 1/16	—	13/16	1/8	.05
	TA-9	Output	1000	16/8/4	10	.2	180	3.5	A	7/8	1 5/8	13/16	1 3/8	—	1 1/16	1/8	.07
	TA-10	Output	2000 C.T.	16/8/4	—	.2	250	4	A	7/8	1 5/8	13/16	1 3/8	—	1 1/16	1/8	.08
	TA-11	Output	48 C.T.	16/8	275	5	5	1.5	A	1 7/8	3 1/4	2	2 13/16	—	2 3/8	3/16	1.0
	TA-12	Output	20 C.T.	8	500	10	.55	.35	A	1 5/8	2 3/8	1 3/8	2	—	1 3/4	3/16	.45
	TA-13	Driver	200 C.T.	400 C.T.	10	.6	4	7	SC	2 1/4	2 11/16	2 13/16	1 1/2	2 3/8	2	3/16	1.5
	TA-14	Output	24 C.T.	16/4	200	10	2	1.2	SC	3 11/16	4 7/16	4 5/16	2 3/4	3 7/8	3 1/4	3/16	6.6
	TA-56	Output	48 C.T.	16/8/3.2	550	10	3.6	1.4	S†	1 3/4	2 7/8	2 3/8	2 3/8	—	2	3/16	.90
	TA-57	Output	100 C.T.	16/8/3.2	500	10	6.6	1.5	S	1 7/8	2 7/8	2 3/8	2 3/8	—	2	3/16	.95
	TA-58	Driver	100	200 C.T.	200	.5	6.5	15.5	A	1 1/4	2 1/8	1 1/4	1 3/4	—	1 1/2	3/16	.20
	TA-59	Driver	500 C.T.	200 C.T.	50	.5	36.5	15.5	A	1 3/8	2 1/8	1 1/4	1 3/4	—	1 1/2	3/16	.20
	TA-60	Output	125 C.T.	8	50	1.5	7.5	0.9	TS	1 5/16	1 5/16	1 11/16	—	1 9/32	—	6-32	.30
	TA-61	Driver	*	*	—	—	1.8	1.8	S	1 1/2	2 3/8	2	2	—	1 5/8	3/16	.60
	TA-62	Output	25	4	400	4	1.5	0.4	A	1 5/8	2 7/8	1 5/8	2 3/8	—	2	3/16	.60

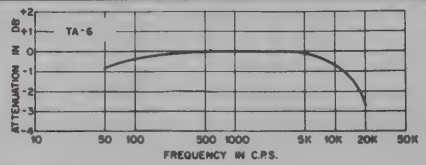
FOR TRANSISTORIZED AUTO RADIOS

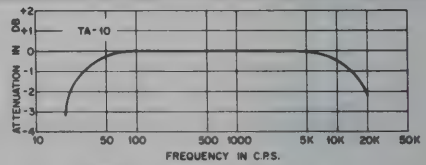
b	TA-48	Interstage	1000	40	10	2	136	2.8	S2	1 1/4	—	1 3/4	1 3/16	7/16	1 3/8	1/8	.35
	TA-49	Output	30 C.T.	4	50	10	2.2	0.3	S	1 1/2	2 7/8	2 3/8	2 3/8	—	2	3/16	.80
	TA-50	Output	9	4	920	10	1.5	1.0	A2	1 5/8	—	2	2	3/4	2 3/8	3/16	1.0
	TA-51	Interstage	1000	10	10	2	170	1.0	S2	1 1/4	—	1 3/4	1 3/16	7/16	1 3/8	1/8	.35

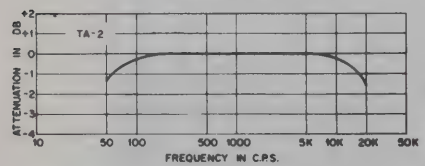
*Trifilar Wound-Ratio 1:1:1. †Has Lugs on Secondary.

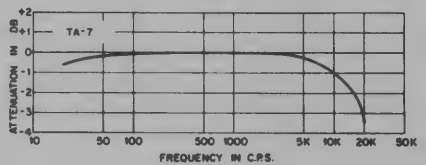
TYPICAL FREQUENCY RESPONSE CURVES

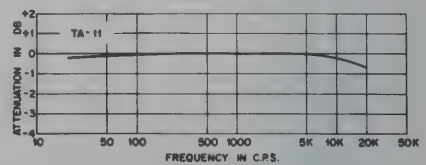


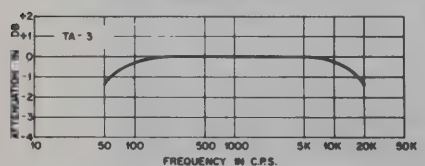


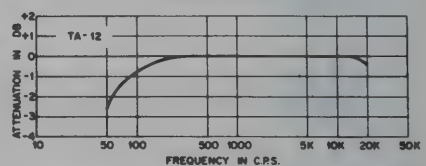


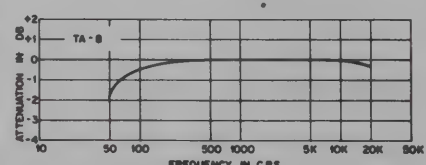


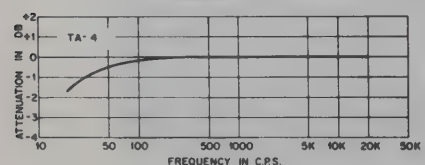


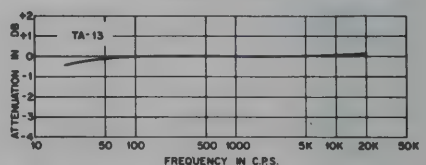


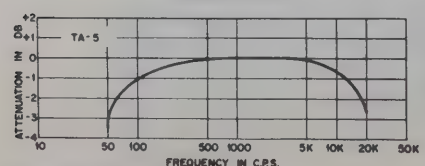


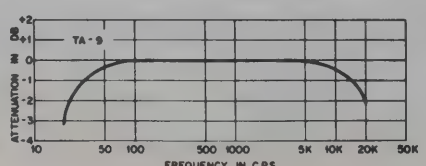


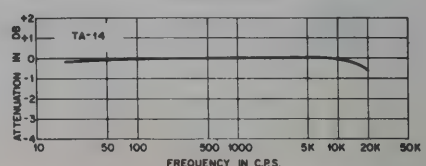




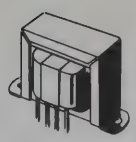




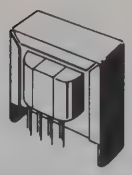




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A



A1

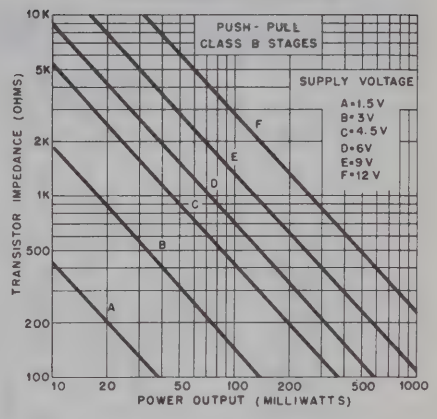
STANCOR
COMMERCIAL
transistor transformers

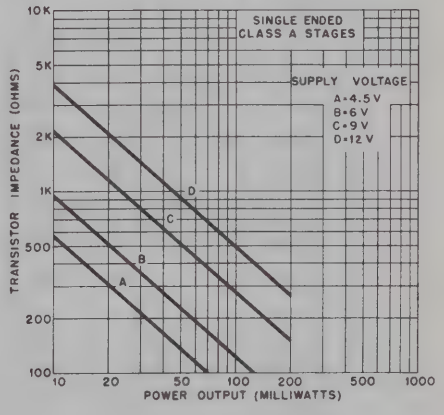
MINIATURE AUDIOS

.150 WATT GROUP — Dimensions: HxWxD, 2½2" x 1 3/16" x 5/8". Mounting tabs 3/16" wide, 2 3/32" centers • Weight .65 oz. Mounting Type A1.

	Catalog No.	Application	Turns Ratio Pri. to Sec.	Impedance in Ohms Pri.	Impedance in Ohms Sec.	D.C. Res. in Ohms Pri.	D.C. Res. in Ohms Sec.
a	TA-18	Input	1.00:45.5	30 CT	50,000	14.7	4060
	TA-19	Interstage	3.08:1	100 CT	10 CT	19	1.27
	TA-20	Output	5.22:1	350 CT	4, 12	38	1.45
	TA-21	Output	5.53:1	500 CT	4, 8, 16	75.3	3.55
	TA-22	Interstage	3.16:1	500 CT	50	59.7	7.9
	TA-23	Output	5.65:1	600 CT	4, 8, 16	73.2	3.2
	TA-24	Interstage	10.0:1	500 CT	50,000	76.8	5135
	TA-25	Output	6.75:1	825 CT	4, 8, 16	74	2.7
	TA-26	Output	9.80:1	1,250	4, 12	132.5	1.4
	TA-27	Interstage	1:4.08	1,200	20,000 CT	142	1860
	TA-28	Interstage	1.65:1	1,500	500 CT	104	46.5
	TA-29	Output	11.8:1	2,500	4, 16	370	2.3
	TA-30	Interstage	1.00:1.22	5,000 CT	7,500 CT	650	790
	TA-31	Interstage	1.00:1.41	5,000 CT	10,000 CT	635	825
	TA-53	Interstage	3:1	5,000 CT	45,000	310	1400
	TA-32	Interstage	1.00:4	5,000 CT	80,000 CT	573	5740
	TA-33	Output	24.6:1	10,000 CT	4, 8, 16	1174	2.6
	TA-34	Interstage	6.97:1	10,000	200 CT	1200	33.4
	TA-35	Interstage	2.24:1	10,000	2,000 CT	1200	257
	TA-36	Interstage	1.83:1	10,000	3,000 CT	1200	385
	TA-54	Interstage	5:1	20,000	800 CT	1350	95
	TA-37	Output	5.55:1	400 CT	11	71.5	1.5
	TA-38	Interstage	1.72:1	500 CT	150 CT	62	21.2

Transistor Impedance Characteristic Curves





.300 WATT GROUP — Dimensions: HxWxD, 1 3/16" x 1 5/8" x 3/4". Mounting Centers: 1 3/8" • Weight 1.2 oz. Mounting Type A.

	Catalog No.	Application	Turns Ratio Pri. to Sec.	Impedance in Ohms Pri.	Impedance in Ohms Sec.	D.C. Res. in Ohms Pri.	D.C. Res. in Ohms Sec.
b	TA-39	Output	2.5:1	100 CT	4, 8, 16	0.9	1.45
	TA-40	Output	3.27:1	160	4, 8, 16	18.7	1.4
	TA-41	Output	5.00:1	400 CT	4, 8, 16	34	1.5
	TA-42	Output	5.60:1	500 CT	4, 8, 16	47	.85
	TA-52	Interstage	1:1	500 CT	500 CT	40	55
	TA-43	Output	6.63:1	700 CT	4, 8, 16	77	1.15
	TA-44	Output	12.5:1	2,500	4, 8, 16	172	1.15
	TA-45	Output	13.7:1	3,000	4, 8, 16	192	1.2
	TA-46	Interstage	8.17:1	100,000	1,500 CT	3250	143
	TA-55	Input	50:1	500,000	200 CT	7000	8.5
	TA-47	Input	1.00:14.1	1,000 CT	200,000 CT	123	1815
	TA-63	Driver	3.17:1	20,000 CT	2,000 CT	2140	325

ULTRA MINIATURE

Here are the smallest iron core audio transformers ever built. They weigh less than 1/10 ounce and are no larger than the transistors they power.

These transformers are designed primarily for transistor audio applications but they can be used wherever low power is involved. Useful range, below 1 mw level. They are constructed of extremely fine wire, wound on molded nylon bobbins, with special nickel alloy steel laminations.



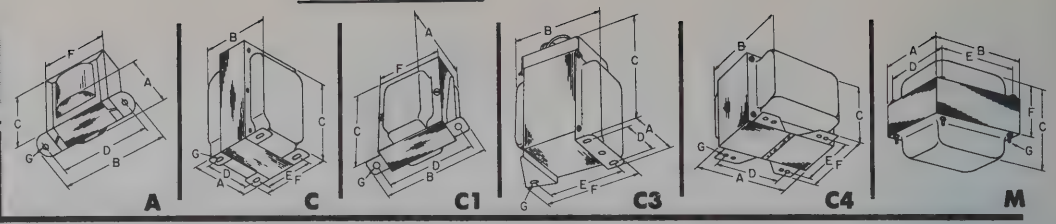
	Catalog No.	Application	Pri. Imp.	Sec. Imp.	Pri. DC Res.	Sec. DC Res.	Weight
c	UM-110	Interstage	20,000	1,000	1675	285	0.07
	UM-111	Output or matching	1,000	50/60	120	9.0	0.10
	UM-112	High imp. mic. input	200,000	1,000	4000	195	0.10
	UM-113	Interstage	20,000	1,000	1350	205	0.10
	UM-114	Output or matching	500	50/60	70	9.0	0.10

Dimensions* UM-110, 1/4" x 3/8" x 3/8"; UM-111, 112, 113, 114, 3/8" x 3/8" x 3/8". *Dimensions +.015".

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STANCOR COMMERCIAL power transformers



Stancor's broad line of commercial grade power transformers offers a choice of standard mounting styles. Listings are in ascending order of plate-supply voltage for ease of selection.

All units are designed and built to meet the exacting requirements of EIA for electrical tolerances, dielectric strength, temperature rise and construction. All are insulated with class A materials; (105°C max. operating temperature).

Transformers designed for full-wave C.T. rectification with capacitor input filter may be used with choke input filter allowing an increase in D.C. current of 30%.

Transformers designed for full-wave C.T. rectification with choke input filter may be used with capacitor input filter requiring a decrease in D.C. current of 25%.

CONSULT FACTORY

for detailed information concerning electrical rating and/or mechanical characteristics.

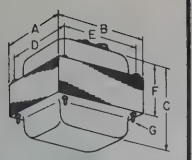
FOR CAPACITOR INPUT SYSTEMS — PRIMARIES 117 VOLTS 60 CYCLES

	Catalog No.	Plate Windings		Rectifier Fil.		Other Windings		Termination		Style	Dimensions							Wt. lbs.
		AC Volts	DCMA	Volts	Amps	Volts	Amps	Pri.	Sec.		A	B	C	D	E	F	G	
a	P-8379	115[a]	290			2.7 6.3	.45 8.0	Leads	Leads	M†	2 13/16	3 7/16	4	2 7/16	3	2 7/8	8-32	5.7
	P-8158	117[a]	200			6.3 6.3 6.3	4.25 4.0 2.0	Leads	Leads	M†	3 7/16	4 5/16	3 5/8	2 3/4	3 7/16	2 3/8	8-32	6.2
	P-8336	117[a]	280			6.3 6.3 6.3	9.5 1.2 .6	Leads	Leads	M†	3 3/4	4 5/16	4 1/4	3 1/4	4 1/16	3	8-32	8.0
	P-8386	117[a]	300			6.3 24.0	8.5 1.2	Leads	Leads	C4†	3 3/4	4	3 1/8	2 1/8	2 1/2	2 5/8	3/16 x 3/8	6.9
b	P-6146	120-0-120	250	5.0	3.0			Leads	Leads	C	3 1/8	3 1/4	3 7/8	2 1/2	1 15/16	2 13/16	3/16 x 3/8	4.2
	PS-8415	125[b]	15			6.3	.6	Leads	Leads	S	1 3/4	2 3/8	1 13/16	2	—	1 11/16	3/16	.7
	PS-8416	125-0-125	25			6.3	1.0	Leads	Leads	S	1 3/4	2 13/16	2 5/16	2 3/8	—	2	3/16	1.0
	PA-8421	125[b]	50			6.3	2.0	Leads	Leads	A	2 1/8	3 11/16	2 1/4	3 1/8	—	2 3/4	3/16	1.5
	P-8181	150[b]	25			6.3 C.T.	.5	Leads	Leads	VE	1 13/16	2 3/8	1 13/16	2	—	1 5/8	3/16	.8
	P-8372	150[b]	250			6.3 6.3	8.0 1.2	Leads	Leads	M	3 3/4	4 1/2	4 1/8	3	3 3/4	2 3/8	8-32	8.7
	P-9000C	155[a]	450			6.3 6.3	2.0 13.5	Leads	Leads	C†	3 1/2	4 7/8	4 3/16	3 1/16	3 13/16	4 1/2	1/4 x 3/8	12.0
	P-8359	190-160-0- 160-190	70			6.3 C.T. 6.3	3.0 .6	Leads	Leads	C	2 1/2	2 5/8	3 1/8	2	1 7/8	2 5/16	3/16 x 3/8	2.8
	P-8383	200-0-200	110			6.3 6.3 C.T.	2.0 4.0	Leads	Leads	C	2 1/2	3 1/4	3 1/8	2	2 1/4	2 5/16	3/16 x 3/8	3.0
	PC-8417	220-0-220	50			6.3 25.2	.6 .5	Leads	Leads	C	2 1/2	2 5/8	3 1/8	2	1 7/16	2 5/16	3/16 x 3/8	2.2
c	P-8168	220-0-220 130-0-130	330 220	5.0	3.0	6.3 6.3	6.5 6.5	Leads	Leads	M†	3 3/4	4 5/16	4 7/8	3	3 3/4	3 5/8	8-32	10.5
	PCC-40	225-0-225	40	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	SC	2 7/8	3 1/2	3 1/2	2	3 1/8	2 11/16	3/16	3.2
	PSC-40	225-0-225	40	5.0	2.0	6.3 C.T.	2.0	Lugs	Lugs	SC	2 7/8	3 1/2	3 3/4	2	3 1/8	2 11/16	3/16	3.2
	P-8155	225-0-225	90	5.0	2.0	6.3	5.15	Leads	Leads	M	2 13/16	3 3/8	3 3/4	2 1/4	2 13/16	2 1/2	8-32	4.5
	PC-8418	230-0-230	50			6.3	2.5	Leads	Leads	C	2 1/2	2 5/8	3 1/8	2	1 7/16	2 5/16	3/16 x 3/8	2.2
	PM-8418	230-0-230	50			6.3	2.5	Leads	Leads	M	2 1/2	3	2 5/8	2	2 1/2	1 1/2	8-32	2.2
	PC-8401	235-0-235	40	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	C	2 1/2	2 5/8	3 1/8	2	1 7/16	2 5/16	3/16 x 3/8	2.2
	PM-8401	235-0-235	40	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	M	2 1/2	3	2 5/8	2	2 1/2	1 7/8	8-32	2.2
	P-8374	235-0-235	260	5.0	6.0	6.3 6.3 6.3	5.0 5.0 1.2	Leads	Leads	M	3 7/16	4 5/16	4 7/8	3	3 11/16	3 5/8	8-32	10.0
	P-8382	235 35	20 1	5.0	2.0	6.3	2.85	Leads	Leads	M6	2 3/16	2 5/8	3 1/8	2 13/16	—	—	.136	2.5
	PC-8402	240-0-240	55	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	C	2 1/2	2 3/4	3 1/8	2	1 3/4	2 7/16	3/16 x 3/8	2.4
	PM-8402	240-0-240	55	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	M	2 1/2	3	2 3/4	2	2 1/2	1 7/8	8-32	2.4
d	P-6348	240-0-240	60			6.3 C.T.	2.75	Leads	Leads	M	2 3/16	2 5/8	2 3/4	1 15/16	—	2 1/8	6-32	2.3
	PC-8419	240-0-240	70			6.3	3.0	Leads	Leads	C	2 1/2	2 7/8	3 1/8	2	1 13/16	2 5/16	3/16 x 3/8	2.6
	PM-8419	240-0-240	70			6.3	3.0	Leads	Leads	M	2 1/2	3	2 7/8	2	2 1/2	2	8-32	2.6
	P-8173	250-0-250	10			6.3 6.3	.6 1.2	Leads	Leads	C1	2 7/8	2 1/8	2 1/4	2 3/8	—	1 1/2	3/8	1.0
	P-8174	250-0-250	20			6.3 6.3	.6 1.2	Leads	Leads	C1	3 5/16	2 1/4	2 5/8	2 13/16	—	2 5/16	3/8	1.5
	PC-8403	250-0-250	70	5.0	2.0	6.3 C.T.	2.5	Leads	Leads	C	2 1/2	3 1/8	3 1/8	2	2 1/16	2 13/16	3/16 x 3/8	3.2
	PM-8403	250-0-250	70	5.0	2.0	6.3 C.T.	2.5	Leads	Leads	M	2 1/2	3	3 1/8	2	2 1/2	2 1/4	8-32	3.2
	PC-8404	260-0-260	90	5.0	2.0	6.3 C.T.	3.0	Leads	Leads	C	2 13/16	3 1/2	3 1/2	2 1/4	2 1/4	3 1/16	3/16 x 3/8	4.0
	PM-8404	260-0-260	90	5.0	2.0	6.3 C.T.	3.0	Leads	Leads	M	2 13/16	3 3/8	3 1/2	2 1/4	2 13/16	2 3/8	8-32	4.0
	PC-8420	260-0-260	90			6.3	4.0	Leads	Leads	C	2 13/16	3 1/4	3 1/2	2 1/4	2	2 13/16	3/16 x 3/8	3.5
	PM-8420	260-0-260	90			6.3	4.0	Leads	Leads	M	2 13/16	3 3/8	3 1/2	2 1/4	2 13/16	2 1/8	8-32	3.5
	P-8354	260-0-260	325	5.0 C.T.	6.0	6.3	11.0	Leads	Leads ‡	M5†	3 3/4	4 1/2	5 1/4	3 5/16	4 1/16	4	8-32	11.0
	P-8353	265-0-265	300	5.0	6.0	12.6 C.T.	6.0	Leads	Leads ‡	C3†	3 3/4	4 3/4	5 7/8	3	4	5 1/4	7/32 x 1/2	12.5
e	PCC-55	270-0-270	55	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	SC	2 7/8	3 1/2	3 1/2	2	3 1/8	2 11/16	3/16	3.5
	PSC-55	270-0-270	55	5.0	2.0	6.3 C.T.	2.0	Lugs	Lugs	SC	2 7/8	3 1/2	3 3/4	2	3 1/8	2 11/16	3/16	3.5
	PC-8405	270-0-270	120	5.0	3.0	6.3 C.T.	3.5	Leads	Leads	C	3 1/8	3 1/2	3 7/8	2 1/2	2 3/16	3 1/16	3/16 x 3/8	4.9
	PM-8405	270-0-270	120	5.0	3.0	6.3 C.T.	3.5	Leads	Leads	M	3 1/8	3 3/4	3 7/16	2 1/2	3 1/8	2 3/8	8-32	4.9
	P-8172	270-0-270	200	5.0	3.0	6.3	8.5	Leads	Leads	M	3 1/8	3 3/4	4 7/16	2 11/16	3 5/16	3 1/4	8-32	7.0
	P-8356	270-0-270	260	5.0	3.0	6.3	8.8	Leads	Leads	C†	3 1/8	3 3/8	3 7/8	2 1/2	2 1/4	2 15/16	.136	6.5
	P-8376	270-0-270	270	5.0	4.0	6.3	10.0	Leads	Leads	M	3 7/16	4 1/4	4 1/8	3	3 11/16	2 7/8	8-32	8.5
	P-8377	270-0-270	260	5.0	3.0	6.3	10.0	Leads	Leads	M†	3 1/8	3 15/16	3 5/8	2 11/16	3 5/16	2 3/4	8-32	6.7
	P-8334	275-0-275	305	5.0	5.0	6.3 6.3	8.5 1.2	Leads	Leads	M†	3 3/4	4 5/16	5 1/8	3 1/4	4 1/16	4	8-32	13.0
	P-8167	280-0-280	400	5.0	6.0	6.3 6.3	4.5 8.5	Leads	Leads	M†	3 3/4	4 5/16	5 1/2	3 1/4	4 1/16	4 1/4	8-32	13.0
	P-8332	280-0-280	260	5.0	5.0	6.3 6.3 6.3	7.1 1.2 .9	Leads	Leads	M†	3 3/4	4 5/16	4 15/16	3 1/4	4 1/16	3 5/8	8-32	11.0

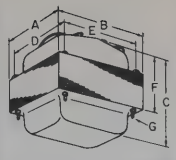
a. For use in Voltage Doubles Circuits. b. For use in Half-Wave Circuits. † With Copper shorting band to reduce external Magnetic Field.
‡ Plate wdg and rectifier filament wdg Connected to Tube Socket.

ALL SECONDARY A.C. VOLTAGE ±3% **ALL PCC AND PSC NUMBERS MAY BE OPERATED AT 50 CYCLES**

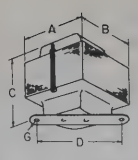
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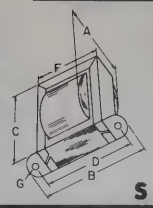
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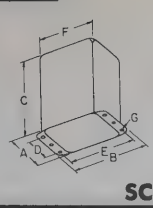
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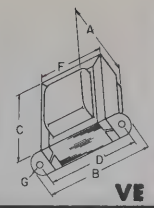
M6



S



SC



VE

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power transformers

FOR CAPACITOR INPUT SYSTEMS — PRIMARIES 117 VOLTS 60 CYCLES

	Catalog No.	Plate Windings AC Volts	Plate Windings DCMA	Rectifier Fil. Volts	Rectifier Fil. Amps	Other Windings Volts	Other Windings Amps	Termination Pri.	Termination Sec.	Style	Dimensions A	B	C	D	E	F	G	Wt. lbs.
a	P-8373	280-0-280	280	5.0	3.0	6.3 24.0	10.0 2.6	Leads	Leads	M	3 1/8	3 3/4	4 1/4	2 11/16	3 5/16	3 1/8	8-32	8.0
	P-8378	280-0-280 250-0-250	300	5.0/3.0	4.5	6.3 24.0 6.3	10.0 1.2 7.5	Leads	Leads	C†	3 1/8	4 5/8	3 7/8	2 1/2	3 1/4	4 3/16	3/16 x 3/8	7.9
	P-8375	283-0-283	210	5.0 C.T.	3.0	6.3 6.3	1.5 1.2	Leads	Leads ‡	M3†	3 3/4	4 9/16	4 5/8	3	3 3/4	3 1/4	8-32	8.3
	P-8355	285-0-285	250	5.0	3.0	6.3	9.5	Leads	Leads	C4†	3 3/4	3 1/2	3 3/16	2 1/2	2 3/16	2 3/4	8-32	6.5
	P-8365	285-0-285	325	5.0	6.0	12.6 C.T.	6.0	Leads	Leads	M†	3 3/4	4 9/16	4 5/16	3	3 3/4	3	8-32	10.2
	P-8352	290-0-290	240	5.0	3.0	12.6 C.T.	5.25	Leads	Leads	C†	3 3/4	3 13/16	4 13/16	3	3 3/8	4 3/4	3/16 x 1/2	8.5
	P-8367	290-0-290	270	5.0	6.0	6.3 6.3	8.5 1.2	Leads	Leads ‡	M5†	3 3/4	4 1/2	5 1/8	3	3 3/4	3 3/4	8-32	12.5
	P-8381	290-0-290	290	5.0	3.0	6.3 6.3	5.0 5.0	Leads	Leads	M	3 1/8	3 13/16	5	2 11/16	3 5/16	3 7/8	8-32	6.9
	P-8333	295-0-295	225	5.0 C.T.	3.0	6.3 6.3	11.4 .9	Leads	Leads ‡	M3†	3 3/4	4 9/16	4 7/8	3 1/4	4 1/16	3 5/8	8-32	10.0
b	PCC-60	300-0-300	60	5.0	2.0	6.3 C.T.	3.0	Leads	Leads	SC	3 1/4	4	3 7/8	2 1/4	3 1/2	2 15/16	7/32	4.5
	PSC-60	300-0-300	60	5.0	2.0	6.3 C.T.	3.0	Lugs	Lugs	SC	3 1/4	4	4 1/4	2 1/4	3 1/2	2 15/16	7/32	4.5
	P-6358	300-0-300	65			6.3 C.T.	2.7	Leads	Leads	C	2 1/2	2 1/2	3 1/8	2	1 3/4	2 3/16	3/16 x 3/8	3.0
	P-8175	300-0-300	70	5.0	3.0	6.3 C.T.	3.0	Leads	Leads	C	2 7/8	3 1/8	3 1/2	2 1/4	2 1/4	3 1/8	3/16 x 7/16	4.0
	PM-8423	300-0-300	90	5.0	2.0	6.3 C.T.	3.5	Leads	Leads	M	2 13/16	3 3/8	3	2 1/4	2 13/16	2	8-32	4.0
	P-8177	300-0-300	120	5.0	3.0	6.3 C.T.	3.0	Leads	Leads	C	3 3/16	3 5/8	3 7/8	2 3/4	2 9/16	3 5/8	3/16 x 1/2	5.8
	P-8164	300-0-300	225	5.0	3.0	6.3	9.0	Leads	Leads	M†	3 7/16	4 5/16	4 1/8	2 3/4	3 7/16	3 1/8	8-32	7.5
	P-8335	300-0-300	325	5.0	6.0	6.3 6.3	8.8 1.5	Leads	Leads	M†	3 3/4	4 9/16	5 1/8	3 1/4	4 1/16	4	8-32	13.0
	P-8331	310-0-310	240	5.0	3.0	6.3 6.3	6.4 3.0	Leads	Leads	M†	3 3/4	4 9/16	4 1/2	3 1/4	4 1/16	3 1/4	8-32	9.0
	P-8370	310-0-310	320	5.0 C.T.	6.0	6.3 6.3 6.3	11.0 1.2 1.2	Leads	Leads ‡	M5†	3 3/4	4 5/8	5 5/8	3	3 3/4	4 3/8	8-32	14.0
	P-8337	315-0-315	225	5.0	3.0	6.3	8.25	Leads	Leads ‡	M3	3 3/4	4 1/2	4 1/2	3 1/4	4 1/16	3 1/4	8-32	8.5
c	P-8338	315-0-315	310	5.0	6.0	6.7 6.4 6.3	10.0 1.6 4.0	Leads	Leads	M†	3 7/8	4 3/4	5 3/8	3	3 3/4	4	10-32	12.5
	P-8371	320-0-320 200-0-200	200 80	5.0 C.T.	3.0	6.3 6.3	4.0 3.0	Leads	Leads ‡	M3†	3 3/4	4 5/8	5 3/8	3	3 3/4	4	8-32	11.3
	P-6010	325-0-325	40	5.0 C.T.	2.0	6.3 C.T.	2.0	Leads	Leads	M	2 1/2	3	2 3/4	2	2 1/2	1 7/8	8-32	2.4
	PC-8406	325-0-325	40	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	C	2 1/2	2 3/4	3 1/8	2	1 11/16	2 7/16	3/16 x 3/8	2.4
	PM-8406	325-0-325	40	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	M	2 1/2	3	2 3/4	2	2 1/2	1 7/8	8-32	2.4
	PC-8407	325-0-325	55	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	C	2 1/2	3 1/8	3 1/8	2	2 1/16	2 13/16	3/16 x 3/8	3.2
	PM-8407	325-0-325	55	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	M	2 1/2	3	3 1/8	2	2 1/2	2 1/4	8-32	3.2
	PC-8422	325-0-325	150	5.0	3.0	6.3 C.T.	5.0	Leads	Leads	C	3 1/8	3 7/8	3 7/8	2 1/2	2 9/16	3 7/16	3/16 x 3/8	5.8
	PM-8422	325-0-325	150	5.0	3.0	6.3 C.T.	5.0	Leads	Leads	M	3 1/8	3 3/4	3 5/8	2 1/2	3 1/8	2 5/8	8-32	5.8
	P-8339	325-0-325	255	5.0	3.0	12.6 C.T.	5.25	Leads	Leads	C†	3 3/4	4	4 7/8	3	3 3/4	4 3/4	3/16 x 1/2	8.5
	P-8369	325-0-325	240	5.0 C.T.	3.0	6.3 6.3 6.3	10.0 .9 1.2	Leads	Leads ‡	M3†	3 3/4	4 5/8	5 3/8	3	3 3/4	4 1/8	8-32	11.5
d	PCC-85	330-0-330	85	5.0	2.0	6.3 C.T.	3.0	Leads	Leads	SC	3 11/16	4 7/16	4 5/16	2 3/4	3 7/8	3 1/4	7/16	6.0
	PSC-85	330-0-330	85	5.0	2.0	6.3 C.T.	3.0	Lugs	Lugs	SC	3 11/16	4 7/16	4 5/16	2 3/4	3 7/8	3 1/4	7/32	6.0
	PCC-70	335-0-335	70	5.0	2.0	6.3 C.T.	3.0	Leads	Leads	SC	3 1/4	4	3 7/8	2 1/4	3 1/2	2 15/16	7/32	4.5
	PSC-70	335-0-335	70	5.0	2.0	6.3 C.T.	3.0	Lugs	Lugs	SC	3 1/4	4	4 1/4	2 1/4	3 1/2	2 15/16	7/32	4.5
	P-5059	337-0-337	200	5.0 C.T.	3.0	6.3 C.T.	5.0	Leads *	Leads	C	3 3/4	4 5/16	4 11/16	3	3 3/16	4	3/16 x 3/8	9.6
	PC-8408	340-0-340	70	5.0	2.0	6.3 C.T.	2.5	Leads	Leads	C	2 13/16	3 3/8	3 1/2	2 1/4	2 1/8	2 15/16	3/16 x 3/8	3.8
	PM-8408	340-0-340	70	5.0	2.0	6.3 C.T.	2.5	Leads	Leads	M	2 13/16	3 3/8	3 1/2	2 1/4	2 13/16	2 1/4	8-32	3.8
	P-8166	340-0-340	330	5.0	6.0	6.3 6.3 6.3	2.5 5.0 5.0	Leads	Leads	M†	3 3/4	4 9/16	5 3/8	3 1/4	4 1/16	4 1/8	8-32	13.0
	PCC-105	345-0-345	105	5.0	2.0	6.3 C.T.	3.5	Leads	Leads	SC	3 11/16	4 7/16	4 5/16	2 3/4	3 7/8	3 1/4	7/32	6.5
	PSC-105	345-0-345	105	5.0	2.0	6.3 C.T.	3.5	Lugs	Lugs	SC	3 11/16	4 7/16	4 11/16	2 3/4	3 7/8	3 1/4	7/32	6.5
	P-6011	350-0-350	70	5.0 C.T.	3.0	6.3 C.T.	2.5	Leads	Leads	M	2 1/2	3	3 3/8	2	2 1/2	2 1/2	8-32	3.5
	P-6012	350-0-350	90	5.0 C.T.	3.0	6.3 C.T.	3.5	Leads	Leads	M	2 13/16	3 3/8	3 1/2	2 1/4	2 13/16	2 1/2	8-32	4.2
	PC-8409	350-0-350	90	5.0	2.0	6.3 C.T.	3.0	Leads	Leads	C	2 13/16	3 5/8	3 1/2	2 1/4	2 3/8	3 3/16	3/16 x 3/8	4.5
	PM-8409	350-0-350	90	5.0	2.0	6.3 C.T.	3.0	Leads	Leads	M	2 13/16	3 3/8	3 1/2	2 1/4	2 13/16	2 1/2	8-32	4.5
e	P-8176	350-0-350	110	5.0	2.0	6.3 C.T. 6.3 C.T.	3.0 3.0	Leads	Leads	C	3 1/4	3 7/8	3 13/16	2 3/4	3	3 7/8	1/16 x 1/2	5.5
	P-6013	350-0-350	120	5.0 C.T.	3.0	6.3 C.T.	4.7	Leads	Leads	M	3 1/8	3 3/4	3 3/8	2 1/2	3 1/8	2 3/8	8-32	5.2
	P-8345	350-0-350	215	5.0	3.0	6.3 6.3	9.0 1.2	Leads	Leads	M†	3 3/4	4 9/16	5	3 1/4	4 1/16	3 5/8	8-32	11.5
	P-8165	350-0-350 220-0-220	180 70	5.0	3.0	6.3 6.3	2.0 10.0	Leads	Leads	M†	3 3/4	4 9/16	4 3/4	3	3 3/4	3 1/2	8-32	11.0
	P-8350	350-0-350	270	5.0 5.0	6.0 2.0	6.3 6.6	1.5 7.8	Leads	Leads	M†	3 3/4	4 9/16	5 1/2	3 1/4	4 1/16	4	8-32	13.0
	P-8340	355-0-355	270	5.0	6.0	6.3 6.3 6.3	9.5 1.65 2.4	Leads	Leads	M†	3 3/4	4 9/16	5 3/8	3 1/4	4 1/16	4 1/8	8-32	12.0
	PC-8410	360-0-360	120	5.0	3.0	6.3 C.T.	3.5	Leads	Leads	C	3 1/8	3 3/4	3 7/8	2 1/2	2 7/16	3 5/16	3/16 x 3/8	5.5
	PM-8410	360-0-360	120	5.0	3.0	6.3 C.T.	3.5	Leads	Leads	M	3 1/8	3 3/4	3 1/2	2 1/2	3 1/8	2 1/2	8-32	5.5

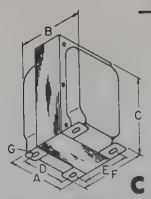
† With Copper shorting band to reduce external Magnetic Field. ‡ Plate wdg and rectifier filament wdg Connected to Tube Socket. * Primary for 117-107 volts.

ALL SECONDARY A.C. VOLTAGE ±3% **ALL PCC AND PSC NUMBERS MAY BE OPERATED AT 50 CYCLES**

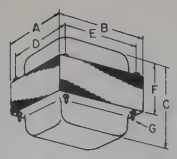
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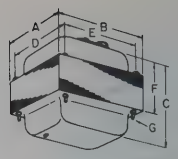
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C



M



M3

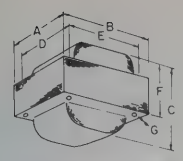
FOR CAPACITOR INPUT SYSTEMS — PRIMARIES 117 VOLTS 60 CYCLES

	Catalog No.	Plate Windings AC Volts	Plate Windings DCMA	Rectifier Fil. Volts	Rectifier Fil. Amps.	Other Windings Volts	Other Windings Amps	Termination Pri.	Termination Sec.	Style	Dimensions A	B	C	D	E	F	G	Wt. lbs.
a	P-8160	360-0-360 165-0-165	185 65	5.0	3.0	6.45	12.0	Leads	Leads	M	3¾	4½	4¼	3	3¾	3⅛	8-32	9.6
	P-8341	360-0-360 220-0-220	175 110	5.0 5.0	3.0 2.0	12.6 C.T.	5.45	Leads	Leads	C†	3¾	4⅞	4¾	3	3½	4⅝6	3⁄16 x ½	11.0
	P-8349	360-0-360	260	5.0	6.0	5.0 6.3	2.0 8.85	Leads	Leads	M†	3¾	4⅝6	5½	3¼	4⅛6	4	8-32	13.0
	P-8159	360-0-360	250	5.0 5.0	3.0 2.0	6.3 6.3	8.0 .6	Leads	Leads	M†	3¾	4⅝6	4⅞	3¼	4⅛6	3⅝	8-32	10.0
	P-8351	360-0-360	240	5.0	6.0	6.5	9.3	Leads	Leads	M†	3¾	4⅝6	4 15⁄16	3¼	4⅛6	3⅝	8-32	10.5
	P-8343	360-0-360 220-0-220	220 110	5.0 5.0	3.0 2.0	12.8 C.T.	5.8	Leads	Leads	C†	3¾	5¼	4¾	3	3⅞	4 15⁄16	3⁄16 x ½	11.5
	P-8344	365-0-365 200-0-200	170 84	5.0 5.0	3.0 2.0	12.6	4.25	Leads	Leads	C†	3¾	4½	4¾	3	3⅛	4⅜6	3⁄16 x ½	9.0
	P-8342	365-0-365	260	5.0	6.0	6.3 6.3	8.85 1.2	Leads	Leads	M†	3¾	4⅝6	5⅜	3¼	4⅛6	4	8-32	13.0
	P-8156	365-0-365	295	5.0	6.0	5.0 12.6 C.T	2.0 5.0	Leads	Leads	M†	3¾	4⅝6	6⅝	3¼	4⅛6	5¼	8-32	16.5
b	P-8348	365-0-365	270	5.0	6.0	6.7	4.5	Leads	Leads	M†	3¾	4⅝6	4⅞	3¼	4⅛6	3⅜	8-32	10.0
	PCC-150	370-0-370	150	5.0	3.0	6.3 C.T. 6.3 C.T.	4.0 1.0	Leads	Leads	SC	4⅝6	5¼	5⅝6	2½	4¾	4⅛	1⁵⁄64	11.5
	PSC-150	370-0-370	150	5.0	3.0	6.3 C.T. 6.3 C.T.	4.0 1.0	Lugs	Lugs	SC	4⅝6	5¼	5⅝6	2½	4¾	4⅛	1⁵⁄64	11.5
	P-8163	370-0-370	190	5.0	3.0	6.3 6.3	7.75 1.2	Leads	Leads	M†	3¾	4⅝6	5⅝6	3¼	4⅛6	3¾	8-32	10.8
	P-6315	370-0-370	275	5.0 C.T	3.0	6.3 C.T.	7.0	Leads	Leads	M	3¾	4½	4¼	3	3¾	3	8-32	9.3
	P-8366	370-0-370	220	5.0	6.0	6.3 6.3 6.3	6.0 4.0 1.2	Leads	Leads	M†	3¾	4⅝6	5¼	3	3¾	3½	8-32	11.0
	PCC-120	375-0-375	120	5.0	3.0	6.3 C.T.	4.0	Leads	Leads	SC	4⅝6	5¼	5⅝6	2½	4¾	4⅛	1⁵⁄64	9.5
	PSC-120	375-0-375	120	5.0	3.0	6.3 C.T.	4.0	Lugs	Lugs	SC	4⅝6	5¼	5⅝6	2½	4¾	4⅛	1⁵⁄64	9.5
	P-6014	375-0-375	150	5.0 C.T	3.0	6.3 C.T.	5.0	Leads	Leads	M	3⅛	3¾	3¾	2½	3⅛	2¾	8-32	6.0
	PC-8411	375-0-375	150	5.0	3.0	6.3 C.T.	4.5	Leads	Leads	C	3⅞6	4	4¼	2¾	2 13⁄16	3 11⁄16	3⁄16 x ⅜	5.8
	PM-8411	375-0-375	150	5.0	3.0	6.3 C.T.	4.5	Leads	Leads	M	3⅞6	4⅛	3⅞	2¾	3⅞6	2½	8-32	5.8
c	P-6008	375-0-375	180	5.0 C.T.	3.0	2.5 C.T. 6.3 C.T.	6.0 3.3	Leads	Leads	M	3⅞6	4⅛	3⅝	2¾	3⅞6	2⅜	8-32	6.2
	P-8154	375-0-375	205	5.0	3.0	5.0 6.3	2.0 5.6	Leads	Leads	M	3¾	4½	4¼	3	3¾	3⅛	8-32	9.1
	P-8171	375-0-375	225	5.0 C.T	3.0	6.3 6.3	2.0 9.0	Leads	Leads ‡	M3†	3¾	4½	4⅞	3	3¾	3⅝	8-32	10.5
	P-8162	380-0-380	180	5.0 C.T	3.0	6.3	9.0	Leads	Leads ‡	M3†	3⅞6	4⅛	5¼	2¾	3⅞6	4⅛	8-32	9.0
	P-8169	380-0-380	220	5.0	3.0	6.3 6.3 6.3 6.3	1.2 5.0 7.0 1.2	Leads	Leads	M†	3¾	4⅝6	4¾	3	3¾	3½	8-32	10.5
	P-8170	380-0-380	220	5.0	3.0	6.3 6.3	5.0 7.0	Leads	Leads	C†	3¾	4¾	4¾	3	3⅝6	4⅞6	3⁄16 x ⅜	10.5
	PCC-200	385-0-385	200	5.0	3.0	6.3 C.T. 6.3 C.T.	4.5 1.0	Leads	Leads	SC	4⅝6	5¼	5⅝6	2½	4¾	4⅛	1⁵⁄64	12.0
	PSC-200	385-0-385	200	5.0	3.0	6.3 C.T. 6.3 C.T.	4.5 1.0	Lugs	Lugs	SC	4⅝6	5¼	5⅝6	2½	4¾	4⅛	1⁵⁄64	12.0
d	P-8347	385-0-385	230	5.0	3.0	5.0 6.45 6.3	2.0 7.4 1.6	Leads	Leads	M†	3¾	4⅝6	5⅝6	3¼	4⅛6	4	8-32	13.0
	P-8157	385-0-385 235-0-235	195 105	5.0 5.0	3.0 2.0	5.0 6.3 6.3	2.0 7.65 .6	Leads	Leads	M	3¾	4½	4¾	3	3¾	3½	8-32	11.1
	P-8161	385-0-385	230	5.0	3.0	5.0 6.3	2.0 9.0	Leads	Leads	M†	3¾	4½	5⅝6	3¼	4⅛6	3⅞	8-32	11.8
	P-6007	400-0-400	110	5.0 C.T.	3.0	2.5 C.T. 2.5 C.T.	15.0 3.5	Leads	Leads	M	3⅛	3¾	3½	2½	3⅛	2½	8-32	5.4
	P-4004	400-0-400 80v. Bias	175	5.0 C.T.	3.0	2.5 6.3 C.T. 6.3 C.T.	1.75 2.5 2.5	Leads *	Leads	C	3¾	3⅞	4 11⁄16	3	2 13⁄16	3⅝6	3⁄16 x ⅜	8.3
e	P-8346	400-0-400 330-0-330	180 180	5.0 5.0	3.0 3.0			Leads	Leads	C†	3¾	4¾	4¾	3	3½	4⅞6	3⁄16 x ½	11.0
	PC-8412	400-0-400	200	5.0	3.0	6.3 C.T.	5.0	Leads	Leads	C	3¾	4	4 11⁄16	3	2 13⁄16	3 11⁄16	3⁄16 x ⅜	8.2
	PM-8412	400-0-400	200	5.0	3.0	6.3 C.T.	5.0	Leads	Leads	M	3¾	4½	3⅞	3	3¾	2⅝	8-32	8.2
	PC-8413	400-0-400	250	5.0	4.0	6.3 C.T.	5.0	Leads	Leads	C	3¾	4½	4 11⁄16	3	3⅝6	4⅜6	3⁄16 x ⅜	10.0
	PCC-250	400-80-0-80-400	250	5.0	6.0	5.0 6.3 C.T.	2.0 7.0	Leads	Leads	SC	5⅝6	5⅞	6⅛6	3½	5⅜	4¾	1⁷⁄64	15.0
	PSC-250	400-80-0-80-400	250	5.0	6.0	5.0 6.3 C.T.	2.0 7.0	Lugs	Lugs	SC	5⅝6	5⅞	6⅛6	3½	5⅜	4¾	1⁷⁄64	15.0
	P-8360	437-0-437	185	5.0	3.0	6.3 6.3	3.0 4.0	Leads	Leads	C	3¾	4½	4 11⁄16	3	3⅜	4⅜6	3⁄16 x ⅜	9.5
	P-6143	440-0-440	130	5.0	3.0	6.3 C.T.	3.5	Leads	Leads	C	3⅞6	4⅛6	4¼	2¾	2 13⁄16	3¾	3⁄16 x ⅜	7.0
	PC-8414	600-0-600	200 f	5.0	3.0	6.3 6.3	3.0 3.0	Leads	Leads	C	3¾	4¼	4 11⁄16	3	3⅛6	3 15⁄16	3⁄16 x ⅜	8.3
	P-8307	870-0-870 410-0-410	150 60	5.0	2.0	6.3	3.5	Leads	Leads	SC	3 11⁄16	4⅞6	4¼	2¾	3⅞	3¼	7⁄32	5.9

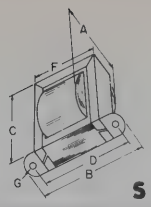
† With Copper shorting band to reduce external Magnetic Field. ‡ Plate wdg and rectifier filament wdg Connected to Tube Socket. * Primary for 117-107 Volts. f. Intermittent duty.

ALL SECONDARY A.C. VOLTAGE ±3% ALL PCC AND PSC NUMBERS MAY BE OPERATED AT 50 CYCLES

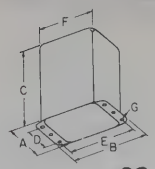
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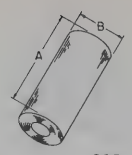
R



S



SC



W

STANCOR
COMMERCIAL
power transformers

FOR REACTOR INPUT SYSTEMS — PRIMARIES 117 VOLTS 50/60 CYCLES

	Catalog No.	Plate Windings AC Volts	Plate Windings DCMA	Rectifier Fil. Volts	Rectifier Fil. Amps.	Other Windings Volts	Other Windings Amps.	Termination Pri.	Termination Sec.	Style	Dimensions A	B	C	D	E	F	G	Wt. lbs.
a	PCR-55	350-0-350	55	5.0	2.0	6.3 C.T.	2.0	Leads	Leads	SC	2 7/8	3 1/2	3 1/2	2	3 1/8	2 11/16	3/16	3 1/4
	PSR-55	350-0-350	55	5.0	2.0	6.3 C.T.	2.0	Lugs	Lugs	SC	2 7/8	3 1/2	3 3/4	2	3 1/8	2 11/16	3/16	3 1/4
	PCR-70	425-0-425	70	5.0	2.0	6.3 C.T.	3.0	Leads	Leads	SC	3 1/4	4	3 7/8	2 1/4	3 1/2	2 15/16	7/32	4 1/2
	PSR-70	425-0-425	70	5.0	2.0	6.3 C.T.	3.0	Lugs	Lugs	SC	3 1/4	4	4 1/4	2 1/4	3 1/2	2 15/16	7/32	4 1/2
	PCR-85	440-0-440	85	5.0	2.0	6.3 C.T.	3.0	Leads	Leads	SC	3 11/16	4 7/16	4 5/16	2 3/4	3 7/8	3 1/4	7/32	6
	PSR-85	440-0-440	85	5.0	2.0	6.3 C.T.	3.0	Lugs	Lugs	SC	3 11/16	4 7/16	4 5/16	2 3/4	3 7/8	3 1/4	7/32	6
	PCR-105	450-0-450	105	5.0	2.0	6.3 C.T.	3.5	Leads	Leads	SC	3 11/16	4 7/16	4 5/16	2 3/4	3 7/8	3 1/4	7/32	6 1/2
	PSR-105	450-0-450	105	5.0	2.0	6.3 C.T.	3.5	Lugs	Lugs	SC	3 11/16	4 7/16	4 11/16	2 3/4	3 7/8	3 1/4	7/32	6 1/2
	PCR-120	500-0-500	120	5.0	3.0	6.3 C.T.	4.0	Leads	Leads	SC	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	15/64	9 1/2
	PSR-120	500-0-500	120	5.0	3.0	6.3 C.T.	4.0	Lugs	Lugs	SC	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	15/64	9 1/2
	PCR-150	510-0-510	150	5.0	3.0	6.3 C.T. 6.3 C.T.	1.0 4.0	Leads	Leads	SC	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	15/64	11 1/2
	PSR-150	510-0-510	150	5.0	3.0	6.3 C.T. 6.3 C.T.	1.0 4.0	Lugs	Lugs	SC	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	15/64	11 1/2
	PCR-200	520-0-520	200	5.0	3.0	6.3 C.T. 6.3 C.T.	1.0 4.5	Leads	Leads	SC	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	15/64	12 1/4
	PSR-200	520-0-520	200	5.0	3.0	6.3 C.T. 6.3 C.T.	1.0 4.5	Lugs	Lugs	SC	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	15/64	12 1/4
	PCR-300	550-370-75-0 -75-370-550	300	5.0	6.0	6.3 C.T. 6.3 C.T.	1.0 5.0	Leads	Leads	SC	5 5/16	5 7/8	6 1/16	3 1/2	5 3/8	4 3/4	17/64	17 1/2
	PSR-300	550-370-75-0 -75-370-550	300	5.0	6.0	6.3 C.T. 6.3 C.T.	1.0 5.0	Lugs	Lugs	SC	5 5/16	5 7/8	6 1/16	3 1/2	5 3/8	4 3/4	17/64	17 1/2

FOR REGULATED POWER SUPPLIES — PRIMARIES 117 VOLTS 50/60 CYCLES

b	PSC-165	440-0-440	165	5.0	3.0	6.3 6.3 6.3 6.3	0.6 3.0 3.0 7.5	Lugs	Lugs	SC	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	15/64	12
	PSC-205	450-0-450	200	5.0	2.0	6.3 6.3 6.3	0.6 4.0 4.0	Lugs	Lugs	SC	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	15/64	12

FOR BIAS SUPPLIES — PRIMARIES 117 VOLTS 50/60 CYCLES

c	IBC-150	180-160-140-120-0-120-140-160-180	150	5.0	3.0			Leads	Leads	SC	3 1/4	4	4 1/4	2 1/4	3 1/2	2 15/16	7/32	5
	IBS-150	180-160-140-120-0-120-140-160-180	150	5.0	3.0			Lugs	Lugs	SC	3 1/4	4	4 1/4	2 1/4	3 1/2	2 15/16	7/32	5
	2BC-150	180-160-140-120-0-120-140-160-180	150	5.0	3.0	(Pri.-230v.)		Leads	Leads	SC	3 1/4	4	4 1/4	2 1/4	3 1/2	2 15/16	7/32	5
	2BS-150	180-160-140-120-0-120-140-160-180	150	5.0	3.0	(Pri.-230v.)		Lugs	Lugs	SC	3 1/4	4	4 1/4	2 1/4	3 1/2	2 15/16	7/32	5
	P-6317	200-170-130-90-0-90-130-170-200	200	5.0	3.0			Leads	Leads/ Lugs	C	3 1/8	3 7/8	3 7/8	2 1/2	2 3/16	3 1/16	3/16 x 3/8	4.9
	P-6318	450-400-350-250-0-250-350-400-450	200	5.0	3.0			Leads	Leads/ Lugs	C	3 7/16	4 1/4	4 5/16	2 3/4	2 13/16	3 15/16	3/16 x 3/8	7.0

FOR CATHODE RAY TUBES — PRIMARIES 117 VOLTS 60 CYCLES

d	P-8150	1550 [b]	1.5	2.5	1.75			Leads	Leads	SC	2 1/2	3	3 1/16	1 3/4	2 11/16	2 5/16	3/16	1.8
	P-8179	1600 [b]	3.0			6.3/5/2.5 6.3/5/2.5	1.0 3.0	Lugs	Lugs	M	2 1/2	3	3 1/2	2	2 1/2	2 1/2	8-32	3.5
	P-8178	1800 [b]	2.0	2.5	1.8	2.5 6.3	2.2 0.6	Leads	Leads	C	3 1/8	3 3/4	3 7/8	2 1/2	2 1/2	3 5/16	3/16 x 3/8	5
	P-8151	2400 [b]	5.0	2.5	2.0	2.5	2.0	Leads	Leads	C	3 7/16	3 7/8	4 1/4	2 3/4	2 11/16	3 5/16	3/16 x 3/8	6.4

FOR SOLAR CF-160 CONDENSER TESTER — PRIMARY 117 VOLTS 60 CYCLES

e	P-6459	550 [b] 55	30 60			6.3 6.3	0.9 0.6	Leads	Leads	R	2 3/16	2 5/8	2 1/4	1 3/4	2 3/16	1 11/16	5/32	1.4

FOR 100 WS ELECTRONIC PHOTOFLASH — PRIMARY 105/115/125 VOLTS 60 CYCLES

f	P-6425	380 [b]	20					Leads	Leads	S	2	2 7/8	2 5/16	2 3/8	—	2	3/16	1.4
	P-6426	Charges 1050 mfd. to 450 volts D.C. Trigger Coil for use with P-6425 Ratio 1 to 35 Write for Bulletin #470R for Circuit Details						Leads	Leads	W	3/4	9/16	—	—	—	—	—	.2

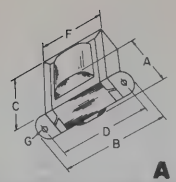
b. For use in Half-Wave Circuits.

ALL SECONDARY A.C. VOLTAGE ±3%

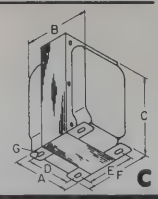
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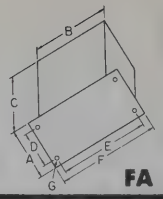
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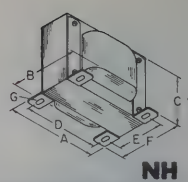
A



C



FA



NH

WITH SINGLE SECONDARY: ALL PRIMARIES 50/60 CYCLES

	Catalog No.	Secondary Volts	Secondary Amps.	Insulation Test RMS Volts	Primary Volts	Termination Pri	Termination Sec	Style	Dimensions A	B	C	D	E	F	G	WT Lbs.
a	P-4026	2.5	1.5	2500	117	Leads	Leads	A	1 5/8	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	P-4082	2.5 CT	2.5	2500	117/107	Leads	Leads	SC	2 1/4	2 11/16	2 11/16	1 1/2	2 3/8	2	3/16	1.5
	P-6133	2.5 CT	5.0	7500	117	Leads	Leads	S	2 1/4	3 1/8	2 3/4	2 13/16	—	2 1/4	3/16	1.5
	F-25	2.5 CT	5.25	3500	115/230	Lugs	Lugs	SC	2 1/2	3	3 1/16	1 3/4	2 11/16	2 3/8	3/16	2.0
	P-4083†	2.5 CT	6.0	2500	117/107	Leads	Leads	C	2 1/2	2 1/2	3 1/8	2	1 1/2	2 1/8	3/16 x 3/8	2.2
	P-3024†	2.5 CT	10.0	2500	117/107	Leads	Leads	C	2 1/2	2 3/4	3 1/8	2	1 3/4	2 3/8	3/16 x 3/8	2.5
	P-6454	2.5 CT	10.0	7500	117/107	Leads	Leads	S	2 1/2	3 5/8	3 1/8	3 1/8	—	2 5/8	3/16	2.5
	P-3060	2.5 CT	10.0	10000	117	Lugs	Lugs	NV	2 13/16	2 3/8	3 7/16	2 1/4	1 7/8	2 1/2	3/16 x 5/16	2.5
	F-210	2.5 CT	10.0	5000	115/230	Terms	Terms	SC	2 7/8	3 1/2	3 3/4	2	3 1/8	2 11/16	3/16	3.0
	F-210H	2.5 CT	10.0	9000	115/230	Terms	Terms	SC	3 1/4	4	4 1/4	2 1/4	3 1/2	3	3/16	4.0
	F-215H	2.5 CT	15.0	9000	115/230	Terms	Terms	SC	3 11/16	4 7/16	4 5/16	2 3/4	3 7/8	3 1/4	3/16	6.0
	P-3026†	5.0 CT	3.0	2500	117/107	Leads	Leads	C	2 1/2	2 5/8	3 1/8	2	1 5/8	2 1/4	3/16 x 3/8	2.4
	P-4088†	5.0 CT	3.0	2500	117	Lugs	Lugs	NV	2 1/2	1 5/8	3 1/8	2	1 5/8	2 1/4	3/8 x 5/16	1.8
	P-6467	5.0 CT	3.0	2500	117	Leads	Leads	A	2 1/8	3 1/4	2	2 13/16	—	2 3/8	3/16	1.4
	F-54†	5.0 CT	4.0	2500	115/230	Lugs	Lugs	SC	2 1/2	3	3 5/16	1 3/4	2 11/16	2 3/8	3/16	2.2
	P-6455	5.0 CT	6.0	2000	117/107	Leads	Leads	S	2 1/8	3 1/8	2 3/4	2 13/16	—	2 1/4	3/16	2.0
	P-3062†	5.0 CT	6.0	2500	117	Lugs	Lugs	NV	2 1/2	2 1/4	3 1/8	2	2	2 5/8	3/16 x 5/16	2.3
	P-5000†	5.0 CT	6.0	2500	117/107	Leads	Leads	C	2 1/2	3	3 1/8	2	2	2 5/8	3/16 x 3/8	3.1
	P-6135	5.0 CT	10.0	2500	117	Leads	Leads	NV	2 1/2	2 3/4	3 1/8	2	2 3/8	3	3/16 x 5/16	3.0
	F-58	5.0 CT	10.0	2500	115/230	Terms	Terms	SC	2 7/8	3 1/2	3 3/4	2	3 1/8	2 11/16	3/16	3.5
b	F-510H†	5.0 CT	10.0	10000	115/230	Terms	Terms	SC	3 11/16	4 7/16	4 11/16	2 3/4	3 7/8	3 1/4	3/16	6.5
	P-4086†	5.0 CT	14.0	10000	117/107	Terms	Terms	FA	4 1/4	5 1/2	5 1/8	2 3/4	6	7	1/4	12.3
	P-6433†	5.0 CT	15.0	2500	117	Leads	Leads/Lugs	NV	2 1/2	2 3/4	3 1/8	2	2 1/4	2 7/8	3/16 x 5/16	3.0
	F-516	5.0 CT	20.0	2500	115/230	Terms	Terms	SC	3 11/16	4 7/16	4 11/16	2 3/4	3 7/8	3 1/4	3/16	6.5
	F-520HB	5.0 CT	20.0	10000	115/230	Terms	Terms	SC	4 9/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	3/16	13.0
	P-6432†	5.0 CT	21.0	2500	117	Leads	Leads/Lugs	NV	3 1/8	2 7/8	3 13/16	2 1/2	2 1/4	2 7/8	3/16 x 5/16	4.5
	P-6302†	5.0 CT	22.0	10000	117/107	Terms	Terms	FA	4 1/4	5 1/2	5 1/8	2 3/4	6	7	1/4	13.5
	P-6492	5.0 CT	30.0	2500	117	Leads	Leads	C	3 3/4	4	4 11/16	3	2 13/16	3 5/8	3/16 x 3/8	7.5
	P-6468†	5.0 CT	30.0	2500	117/107	Lugs	Lugs	C	3 7/16	3 7/8	4 1/4	2 3/4	2 11/16	3 1/2	3/16 x 3/8	6.3
	F-530	5.0 CT	30.0	2500	115/230	Terms	Terms	SC	4 9/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	3/16	10.5
	F-530BX	5.0 CT	30.0	2500	115/230	Terms	Terms	SC	4 9/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	3/16	10.5
	P-6305†	5.0 CT	30.0	10000	117/107	Terms	Terms	FA	4 1/4	7	5	3 3/8	7 3/4	8 1/2	1/4	18.3
	P-6137†	5.25 CT	13.0	2500	117	Leads	Leads	NV	3 1/8	2 7/8	3 13/16	2 1/2	2 1/2	3 1/8	3/16 x 5/16	5.2
	P-6465	6.3 CT	.6	1500	117	Leads	Leads	A	1 1/2	2 3/8	1 3/8	2	—	1 3/4	3/16	0.4
	• P-8389	6.3	1.0	1500	117	Leads	Leads	A	1 1/2	2 7/8	1 5/8	2 3/8	—	2	3/16	0.6
	P-6134	6.3 CT	1.2	3000	117	Leads	Leads	A	1 7/8	2 7/8	1 5/8	2 3/8	—	2	3/16	0.8
	P-8190	6.3	1.2	5000	117	Leads	Leads	A	1 7/8	3 1/4	2	2 13/16	—	2 3/8	3/16	1.0
	P-8191	6.3	1.2	5000	6.3	Leads	Leads	A	2	3 1/4	2	2 13/16	—	2 3/8	3/16	1.0
	F-615†	6.3 CT	1.5	2500	115/230	Lugs	Lugs	SC	2 1/4	2 11/16	3 1/16	1 1/2	2 3/8	2	3/16	1.0
	F-63†	6.3 CT	3.0	2500	115/230	Lugs	Lugs	SC	2 1/2	3	3 1/16	1 3/4	2 11/16	2 3/8	3/16	2.0
c	P-5014†	6.3 CT	3.0	2500	117	Lugs	Lugs	NV	2 1/2	2	3 1/8	2	1 3/4	2 3/8	3/16 x 5/16	2.0
	P-6466	6.3 CT	3.0	2500	117	Leads	Leads	A	2 1/8	3 1/4	2	2 13/16	—	2 3/8	3/16	1.4
	P-6462	6.3	3.0	7000	117/107	Leads	Leads	S	2 3/8	3 5/8	3 1/8	3 1/8	—	2 5/8	3/16	2.0
	P-4019†	6.3 CT	4.0	2500	117/107	Leads	Leads	C	2 1/2	2 3/4	3 1/8	2	1 3/4	2 3/8	3/16 x 3/8	2.7
	F-65	6.3 CT	5.5	2500	115/230	Lugs	Lugs	SC	2 7/8	3 1/2	3 3/4	2	3 1/8	2 11/16	3/16	3.0
	P-3064†	6.3 CT	6.0	2500	117	Lugs	Lugs	NV	2 1/2	2 3/8	3 1/8	2	2	2 5/8	3/16 x 5/16	2.4
	P-4089†	6.3 CT	6.0	2500	117/107	Leads	Leads	C	2 13/16	3 1/4	3 1/2	2 1/4	2	2 3/4	3/16 x 3/8	3.5
	P-6456	6.3 CT	6.0	2000	117/107	Leads	Leads	A	2 3/8	3 3/4	2 3/8	3 1/8	—	2 3/4	3/16	2.0
	P-6464	6.3 CT	10.0	2000	117	Leads	Leads	C	2 13/16	3 1/4	3 1/2	2 1/4	2	2 3/4	3/16 x 3/8	3.5
	P-6308†	6.3 CT	10.0	2500	117/107	Leads	Leads	NV	2 13/16	2 5/8	3 7/16	2 1/4	2 1/8	2 3/4	3/16 x 5/16	3.4
	F-610	6.3 CT	10.0	2500	115/230	Terms	Terms	SC	3 1/4	4	4 1/4	2 1/4	3 1/2	3	3/16	5.0
	P-6309†	6.3 CT	20.0	2500	117/107	Leads	Leads	NV	3 3/4	3 3/8	4 9/16	3	2 3/8	3	3/16 x 5/16	6.7
	P-5015†	7.5 CT	4.0	2500	117	Lugs	Lugs	NV	2 1/2	2 1/4	3 1/8	2	2 1/8	2 3/4	3/16 x 5/16	2.7
	P-4091†	7.5 CT	5.0	2500	117/107	Leads	Leads	C	2 13/16	3 1/8	3 1/2	2 1/4	1 7/8	2 5/8	3/16 x 3/8	3.4
	P-6138†	7.5 CT	8.0	2500	117	Leads	Leads	NV	3 1/8	2 3/4	3 13/16	2 1/2	2 3/8	3	3/16 x 5/16	4.7
	F-712	7.5 CT	12.0	2500	115/230	Terms	Terms	SC	3 11/16	4 7/16	4 11/16	2 3/4	3 7/8	3 1/4	3/16	6.5
	P-6457	7.5 CT	21.0	2000	117/107	Leads	Leads	C	3 3/4	4	4 5/8	3	2 3/4	4	1/4 x 1/2	8.0
	F-725	7.5 CT	25.0	2500	115/230	Terms	Terms	SC	4 9/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	3/16	12.0
	F-751	7.75 CT	51.0	2500	115/230	Terms	Terms	SC	6 1/8	6 1/2	7 1/16	4 1/4	6	5 1/4	1/4	29.0
	F-104	10.0 CT	4.0	2500	115/230	Lugs	Lugs	SC	2 7/8	3 1/2	3 3/4	2	3 1/8	2 11/16	3/16	3.2
d	P-5016†	10.0 CT	4.0	2500	117	Lugs	Lugs	NV	2 13/16	2 1/2	3 7/16	2 1/4	2	2 5/8	3/16 x 5/16	3.3
	P-6458†	10.0 CT	5.0	2000	117/107	Leads	Leads	NV	2 1/2	2 1/2	3 1/16	2 1/8	1 15/16	2 3/4	3/16 x 1/2	3.0
	P-4096†	10.0 CT	5.0	2500	117/107	Leads	Leads	C	3 1/8	3 1/4	3 7/8	2 1/2	1 15/16	2 3/4	3/16 x 3/8	4.0
	F-106	10.0 CT	6.5	2500	115/230	Terms	Terms	SC	3 1/4	4	4 1/4	2 1/4	3 1/2	3	3/16	5.0
	P-6139†	10.0 CT	8.0	2500	117	Leads	Leads	NV	3 1/8	3	3 13/16	2 1/2	2 3/8	3	3/16 x 5/16	4.9
	P-4097†	10.0 CT	8.0	2500	117/107	Leads	Leads	C	3 1/8	3 3/4	3 7/8	2 1/2	2 1/2	3 1/8	3/16 x 3/8	5.2
	P-6461	10.0 CT	10.0	2000	117	Leads	Leads	C	3 1/4	3 5/16	3 7/8	2 3/4	2 11/16	2 11/16	3/16 x 1/2	5.0
	F-1010	10.0 CT	10.0	2500	115/230	Terms	Terms	SC	3 11/16	4 7/16	4 11/16	2 3/4	3 7/8	3 1/4	3/16	6.5
	P-5002†	10.0 CT	12.0	7500	117/107	Terms	Terms	FA	4 1/4	5 1/2	5 1/8	2 3/4	6	7	1/4	14.7
	P-3020†	11.0 CT	10.0	2500	117/107	Leads	Leads	C	3 3/4	3 5/8	4 11/16	3	2 7/16	3 1/4	3/16 x 3/8	7.7
	P-8130	12.6 CT	2.0	1500	117	Leads	Leads	A	2 1/8	3 1/4	2	2 13/16	—	2 3/8	3/16	1.4
	P-8358	12.6 CT	3.0	1500	117	Leads	Leads	A	2 1/4	3 3/4	2 3/8	3 1/8	—	2 3/4	3/16	1.6
	P-6469	25.2	1.0	1500	117	Leads	Leads	A	2 1/8	3 1/4	2	2 13/16	—	2 3/8	3/16	1.4
	• P-8180	25.2 CT	1.0	1500	117	Leads	Leads	A	2 1/8	3 1/4	2	2 13/16	—	2 3/8	3/16	1.4
	P-8357	25.2 CT	2.0	1500	117	Leads	Leads	A	2 1/4	4	2 5/8	3 5/16	—	3 1/8	3/16	2.2
	• P-8388	25.2 CT	2.8	1500	117	Leads	Leads	A	2 1/4	4	2 5/8	3 5/16	—	3 1/8	3/16	2.2

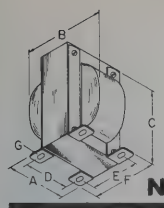
ALL SECONDARY VOLTAGES ±3%

•New Part Number.

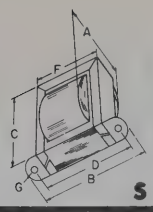
†Has Electrostatic shield.

Insulation Test Voltage: Twice Allowable RMS Working Voltage plus 1000 Volts.

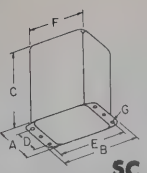
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NV



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SC

STANCOR
COMMERCIAL
filament transformers

WITH MULTIPLE SECONDARIES: ALL PRIMARIES 50/60 CYCLES

	Catalog No.	Secondary Volts	Secondary Amps.	Insulation Test RMS Volts	Primary Volts	Termination Pri	Termination Sec	Style	Dimensions A	B	C	D	E	F	G	WT Lbs.
a	P-6144†	2.5 CT 5.0 CT 6.3 CT	3.5 3.0 3.0	2500	117	Leads	Leads	C	2 13/16	3 1/4	3 1/2	2 1/4	2	2 3/4	3/16 x 3/8	3.7
	P-6338	2.5 5.0 5.0 CT 6.3 CT	3.0 3.0 2.0 3.0	2500	117	Leads	Leads	NH	3 3/8	2 3/4	2 7/8	2 13/16	2 1/8	2 3/4	3/16 x 5/16	3.4
	F1†	5.0 6.3 CT	2.0 2.5	2500	105/115/125	Lugs	Lugs	SC	2 1/2	3	3 5/16	1 3/4	2 11/16	2 3/8	3/16	2.7
b	F2†	5.0 12.6 CT	2.0 1.25	2500	105/115/125	Lugs	Lugs	SC	2 1/2	3	3 5/16	1 3/4	2 11/16	2 3/8	3/16	2.7
	F3†	5.0 6.3 CT	3.0 5.0	2500	105/115/125	Lugs	Lugs	SC	2 7/8	3 1/2	3 3/4	2	3 1/8	2 11/16	3/16	3.5
	F4†	5.0 6.3 CT 6.3 CT or 12.6 CT	3.0 3.0 3.0 3.0	2500	105/115/125	Lugs	Lugs	SC	3 1/4	4	3 7/8	2 1/4	3 1/2	3	3/16	4.7
	F5†	5.0 6.3 CT 6.3 CT	3.0 1.0 5.0	2500	105/115/125	Lugs	Lugs	SC	3 1/4	4	3 7/8	2 1/4	3 1/2	3	3/16	4.7
c	P-5009†	5.0 CT 6.3 CT	3.0 6.0	2500	117/107	Leads	Leads	C	3 1/8	3 3/8	3 7/8	2 1/2	2 1/16	2 7/8	3/16 x 3/8	4.5
	P-5008†	5.0 CT 6.3 CT	4.0 3.6	2500	117/107	Leads	Leads	C	2 13/16	3 1/4	3 1/2	2 1/4	2	2 3/4	3/16 x 3/8	3.8
	P-4022†	5.0 CT 6.3 CT	6.0 6.0	2500	117/107	Leads	Leads	C	3 1/8	3 1/2	3 7/8	2 1/2	2 1/16	2 7/8	3/16 x 3/8	4.8
d	P-6333	5.0 5.0 6.3 CT 7.5/6.3 CT	3.0 3.0 4.0 3.0	2500	117	Lugs	Lugs	NH	3 3/8	3 1/4	2 7/8	2 13/16	2 3/4	3 3/8	1/16 x 5/16	4.7
	F8†	5.0 CT 5.0 CT 5.0 CT	3.0 3.0 6.0	5000	105/115/125	Lugs	Lugs	SC	3 11/16	4 7/16	4 11/16	2 3/4	3 7/8	3 1/4	3/16	7.0
	P-6463	6.0 CT or 6.5 CT or 7.0 CT	13	2000	117	Lugs	Lugs	NV	2 13/16	2 7/8	3 7/16	2 1/4	2 11/16	3 5/16	3/16 x 5/16	4.5
e	P-6428†	6.3 6.3 6.3 6.3 CT	1.75 1.75 1.75 1.75	2500	117	Leads	Leads	C	2 1/2	3 1/8	3 1/8	2	2	2 5/8	3/16 x 3/8	3.0
	P-6430†	6.3 CT 6.3 CT	3.0 3.0	2500	117	Leads	Leads	C	2 1/2	2 7/8	3 1/8	2	1 7/8	2 1/2	3/16 x 3/8	2.8
	F-6†	6.3 CT 6.3 CT or 12.6 CT	3.0 3.0 3.0	2500	105/115/125	Lugs	Lugs	SC	2 7/8	3 1/2	3 3/4	2	3 1/8	2 11/16	3/16	3.5
f	P-6429†	6.3 6.3 6.3 6.3 CT	3.5 3.5 3.5 3.5	2500	117	Leads	Leads	C	3 1/8	3 1/2	3 7/8	2 1/2	2 3/16	3	3/16 x 3/8	4.8
	P-6431†	6.3 CT 6.3 CT	6.0 6.0	2500	117	Leads	Leads	C	3 1/8	3 1/2	3 7/8	2 1/2	2 3/16	3	3/16 x 3/8	4.8
	F-7†	6.3 CT 6.3 CT or 12.6 CT	6.0 6.0 6.0	2500	105/115/125	Lugs	Lugs	SC	3 11/16	4 7/16	4 11/16	2 3/4	3 7/8	3 1/4	3/16	6.5

MULTI-TAPPED FOR TUBE CHECKERS: PRIMARY 50/60 CYCLES

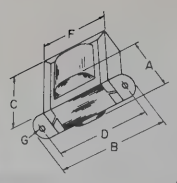
	Catalog No.	Secondary Volts	Primary Volts	Termination Pri	Termination Sec	Style	Dimensions A	B	C	D	E	F	G	WT Lbs.
g	P-1834-3	1.1/1.4/1.5/2.0/2.5/3.0/3.3/4.0 5.0/6.3/7.5/12/20/25/30/35 50/70/85/110/117	105/115/125	Leads	Leads/ Lugs	A	2 7/8	4	2 5/8	3 9/16		3 1/8	3/16	2.4

•New Part Number.
†Has Electrostatic shield.
ALL SECONDARY VOLTAGES ±3%

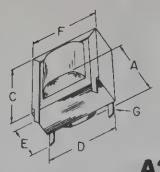
Insulation Test Voltage: Twice Allowable RMS Working Voltage plus 1000 Volts.

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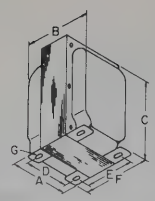
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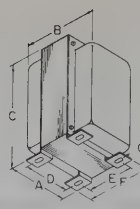
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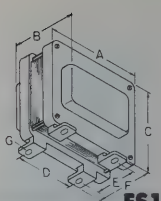
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C



FS



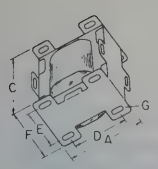
FS1

SMOOTHING CHOKES: INDUCTANCE TOLERANCE-MINUS 15% PLUS 50% AT 10 VOLTS 60 CYCLES

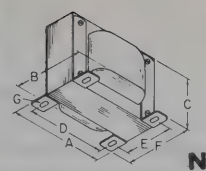
	Catalog No.	Inductance Henries	DCMA	DC. Res. ohms	Insul. Test RMS Volts	Termination	Style	Dimensions A	B	C	D	E	F	G	WT Lbs
a	C-2345	350	5	5600	2500	Leads	A	1 3/4	3 1/4	2	2 13/16	—	2 3/8	3/16	1.0
	C-2344	1.5	10	85	2500	Leads	A	1 1/8	2 1/8	1 1/4	1 3/4	—	1 1/2	3/16	0.4
	C-2707	2.0	15	70	1500	Leads	A	1 1/8	2 1/8	1 1/4	1 3/4	—	1 1/2	3/16	0.4
	C-1515	20.0	15	900	1500	Leads	A	1 3/8	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	C-2346	35	15	1800	2500	Leads	A	1 3/8	2 3/8	1 3/8	2	—	1 3/4	3/16	0.5
	C-2318	12.0	30	400	2000	Leads	A	1 3/8	2 3/8	1 3/8	2	—	1 3/4	3/16	0.5
	RC-1540	15.0	40	475	2500	Leads	SC	2 1/4	2 11/16	2 11/16	1 1/2	2 3/8	2	3/16	1.5
	RS-1540	15.0	40	475	2500	Lugs	SC	2 1/4	2 11/16	2 11/16	1 1/2	2 3/8	2	3/16	1.5
	C-1080	3.5	50	200	1500	Leads	A	1 3/8	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	C-1706	4.5	50	300	1500	Leads	A	1 1/4	2 3/8	1 3/8	2	—	1 3/4	3/16	0.5
	C-1723	4.5	50	325	1500	Leads	A	1 3/8	2 3/8	1 3/8	2	—	1 3/4	3/16	0.5
	C-1325	5.0	50	250	1500	Leads	A	1 1/4	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	C-1277	7.0	50	300	1500	Leads	A	1 3/8	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	C-1227	7.0	50	350	1500	Leads	A	1 3/8	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	C-1707	7.0	50	550	1500	Leads	A	1 1/4	2 3/8	1 3/8	2	—	1 3/4	3/16	0.5
	C-1333	8.0	50	450	1500	Leads	A	1 3/8	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	C-1279	8.5	50	400	1500	Leads	A	1 3/8	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	C-1215	9.0	50	500	1500	Leads	A	1 3/8	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	C-1003	16.0	50	580	1500	Leads	A	1 5/8	3 1/4	2	2 13/16	—	2 3/8	3/16	1.0
	RC-1055	10.0	55	230	2500	Leads	SC	2 1/4	2 11/16	2 11/16	1 1/2	2 3/8	2	3/16	1.7
b	RS-1055	10.0	55	230	2500	Lugs	SC	2 1/4	2 11/16	2 11/16	1 1/2	2 3/8	2	3/16	1.7
	RC-1555	15.0	55	380	2500	Leads	SC	2 1/4	2 11/16	2 11/16	1 1/2	2 3/8	2	3/16	2.0
	RS-1555	15.0	55	380	2500	Lugs	SC	2 1/4	2 11/16	2 11/16	1 1/2	2 3/8	2	3/16	2.0
	C-1708	13.0	65	500	1500	Leads	A	1 3/4	3 1/4	2	2 13/16	—	2 3/8	3/16	1.0
	C-1355	8.0	75	290	1500	Lugs	L	2 3/8	—	2	1 1/2	1 3/16	1 5/8	3/16 x 1/2	1.0
	C-1002	15.0	75	400	1500	Leads	A	1 7/8	3 3/4	2 3/8	3 1/8	—	2 3/4	3/16	1.7
	C-1420	16.0	80	360	1500	Leads	C	2 1/2	2 3/4	3 1/8	2	1 3/4	2 3/8	3/16 x 3/8	2.5
	C-1709	8.0	85	250	1500	Leads	A	1 7/8	3 1/4	2	2 13/16	—	2 3/8	3/16	1.4
	RC-1085	10.0	85	175	2500	Leads	SC	2 1/2	3	3 1/16	1 3/4	2 11/16	2 3/8	3/16	2.5
	RS-1085	10.0	85	175	2500	Lugs	SC	2 1/2	3	3 5/16	1 3/4	2 11/16	2 3/8	3/16	2.5
	RC-1585	15.0	85	285	2500	Leads	SC	2 1/2	3	3 1/16	1 3/4	2 11/16	2 3/8	3/16	2.7
	RS-1585	15.0	85	285	2500	Lugs	SC	2 1/2	3	3 5/16	1 3/4	2 11/16	2 3/8	3/16	2.7
	C-2305	5.0	100	300	1500	Leads	SC	2 1/4	2 11/16	2 11/16	1 1/2	2 3/8	2	3/16	1.5
	RC-8105	8.0	105	100	2500	Leads	SC	2 7/8	3 1/2	3 1/2	2	3 1/8	2 11/16	3/16	3.7
	RS-8105	8.0	105	100	2500	Lugs	SC	2 7/8	3 1/2	3 3/4	2	3 1/8	2 11/16	3/16	3.7
	RC-12105	12.0	105	170	2500	Leads	SC	2 7/8	3 1/2	3 1/2	2	3 1/8	2 11/16	3/16	4.0
	RS-12105	12.0	105	170	2500	Lugs	SC	2 7/8	3 1/2	3 3/4	2	3 1/8	2 11/16	3/16	4.0
	C-1001	10.5	110	225	3000	Leads	A	2 1/8	4	2 5/8	3 5/16	—	3 1/8	3/16	2.3
	C-2704	9.0	125	250	1500	Leads	A	1 7/8	3 3/4	2 3/8	3 1/8	—	2 3/4	3/16	1.8
	C-2303	2.5	130	100	2000	Leads	A	1 5/8	3 1/4	2	2 13/16	—	2 3/8	3/16	1.0
c	C-1421	7.0	140	165	3000	Leads	C	2 1/2	2 3/4	3 1/8	2	1 3/4	2 3/8	3/16 x 3/8	2.5
	C-2304	2.3	150	60	1500	Leads	A	1 3/4	3 1/4	2	2 13/16	—	2 3/8	3/16	1.0
	C-2309	3.0	150	90	2000	Leads	A	1 7/8	3 3/4	2 3/8	3 1/8	—	2 3/4	3/16	1.7
	C-2335	7.0	150	170	1500	Leads	SC	2 1/2	3	3 1/16	1 3/4	2 11/16	2 3/8	3/16	2.3
	C-1710	7.0	150	200	1500	Leads	A	2	4	2 5/8	3 5/16	—	3 1/8	3/16	2.2
	RC-8150	8.0	150	100	2500	Leads	SC	3 1/4	4	3 7/8	2 1/4	3 1/2	3	3/16	5.2
	RS-8150	8.0	150	100	2500	Lugs	SC	3 1/4	4	4 1/4	2 1/4	3 1/2	3	3/16	5.2
	RC-12150	12.0	150	150	2500	Leads	SC	3 1/4	4	3 7/8	2 1/4	3 1/2	3	3/16	5.5
	RS-12150	12.0	150	150	2500	Lugs	SC	3 1/4	4	4 1/4	2 1/4	3 1/2	3	3/16	5.5
	C-1410	4.0	175	100	3000	Leads	C	2 1/2	2 3/4	3 1/8	2	1 3/4	2 3/8	3/16 x 3/8	2.4
	C-2327	1.5	200	85	1500	Leads	A	1 1/2	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	C-2325	2.0	200	60	1500	Leads	A	1 7/8	3 3/4	2 3/8	3 1/8	—	2 3/4	3/16	1.8
	C-1411	4.5	200	80	3000	Leads	C	2 13/16	4 1/4	3 1/2	2 1/4	2	2 3/4	3/16	3.5
	C-1646	5.0	200	90	5000	Leads	C	3 1/8	3 1/2	3 7/8	2 1/2	2 3/16	3	3/16 x 3/8	4.5
	RC-8200	8.0	200	85	2500	Leads	SC	3 11/16	4 7/16	4 5/16	2 3/4	3 7/8	3 1/4	3/16	7.0
	RS-8200	8.0	200	85	2500	Lugs	SC	3 11/16	4 7/16	4 11/16	2 3/4	3 7/8	3 1/4	3/16	7.0
	C-1721	8.5	200	120	3000	Leads	NV	2 13/16	2 5/8	3 7/16	2 1/4	2 1/2	3 1/8	3/16 x 5/16	4.4
	C-2705	10.0	200	150	2500	Leads	C	2 13/16	3 5/16	3 1/2	2 1/4	2 5/16	3 1/16	3/16 x 3/8	4.5
	RC-12200	12.0	200	140	2500	Leads	SC	3 11/16	4 7/16	4 5/16	2 3/4	3 7/8	3 1/4	3/16	7.0
	RS-12200	12.0	200	140	2500	Lugs	SC	3 11/16	4 7/16	4 11/16	2 3/4	3 7/8	3 1/4	3/16	7.0

Insulation Test Voltage: Twice Allowable RMS Working Voltage plus 1000 Volts.

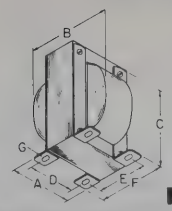
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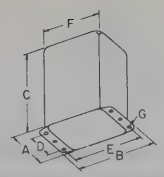
L



NH



NV



SC

STANCOR
COMMERCIAL
filter chokes

	Catalog No.	Inductance Henries	DCMA	DC. Res. ohms	Insul. Test RMS Volts	Termination	Style	Dimensions A	B	C	D	E	F	G	W Lbs.
a	C-1703	4.0	250	60	3000	Lugs	NV	2 13/16	2 5/8	3 7/16	2 1/4	2 1/2	3 1/8	3/16 x 5/16	4.2
	C-1412	4.0	250	60	3000	Leads	C	2 13/16	3 5/8	3 1/2	2 1/4	2 3/8	3 1/8	3/16 x 3/8	4.3
	RC-8250	8.0	250	90	2500	Leads	SC	4 9/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	3/16	10.5
	RS-8250	8.0	250	90	2500	Lugs	SC	4 9/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	3/16	10.5
	C-2343	0.75	300	32	1500	Leads	A	1 3/8	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	C-2326	1.0	300	43	1500	Leads	A	2	3 3/4	2 3/8	3 1/8	—	2 3/4	3/16	1.7
	C-2334	2.8	300	60	1500	Leads	A	2 1/8	4	2 5/8	3 9/16	—	3 1/8	3/16	2.5
	R-63	6.0	300	35	7500	Terms	SC	5 5/16	5 7/8	6 1/16	3 1/2	5 3/8	4 3/4	1/4	16.5
	RC-8300	8.0	300	60	3500	Leads	SC	4 9/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	3/16	12.5
	RS-8300	8.0	300	60	3500	Lugs	SC	4 9/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	3/16	12.5
	C-1722	8.0	300	80	3000	Leads	NV	3 3/4	3	4 9/16	3	2 1/2	3 1/8	3/16 x 5/16	7.3
	C-2308	8.0	300	80	3000	Leads	C	3 3/4	4	4 11/16	3	2 13/16	3 5/8	3/16 x 3/8	7.8
	C-1413	8.0	300	80	3000	Lugs	C	3 3/4	4	4 11/16	3	2 13/16	3 5/8	3/16 x 3/8	7.8
	R-103	10.0	300	40	2500	Terms	SC	6 1/8	6 1/2	7 1/16	4 1/4	6	5 1/8	1/4	22.0
	C-2706	2.6	310	50	1500	Leads	C	2 1/2	3 3/8	3 1/8	2	2 3/8	3	3/16 x 3/8	4.0
	C-2347	1.0	350	40	1500	Leads	A	1 3/4	3 1/4	2	2 13/16	—	2 3/8	3/16	1.0
	C-2328	0.8	375	25	1500	Leads	A	1 7/8	3 3/4	2 3/8	3 1/8	—	2 3/4	3/16	1.5
	C-2709	2.0	400	40	2500	Leads	A	2 1/8	4	2 5/8	3 9/16	—	3 1/8	3/16	2.3
	C-1414	7.5	400	60	5000	Lugs	C	3 3/4	5	4 11/16	3	3 13/16	4 5/8	3/16 x 3/8	11.8
	R-65	6.0	500	35	9000	Terms	FS1	7 1/2	3 1/4	7	4 3/4	5 1/4	6 3/8	3/8 x 3/4	35.0
	C-1415	6.0	500	75	7500	Terms	FS	5 5/8	5 1/2	7 1/8	4 5/8	3 5/8	4 5/8	3/8 x 1/2	23.7
	R-105	10.0	500	40	9000	Terms	FS1	7 1/2	4	7	4 3/4	6	7 1/8	3/8 x 3/4	35.0
	C-2708	0.32	600	10	1500	Leads	A	1 5/8	3 1/4	2	2 13/16		2 3/8	3/16	1.3
	R-67	6.0	700	35	10000	Terms	FS1	7 1/2	4 1/4	7	4 3/4	5 5/8	6 3/4	3/8 x 3/4	35.0

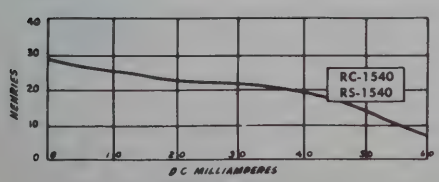
SWINGING CHOKES: INDUCTANCE MEASURED AT 50 VOLTS 60 CYCLES

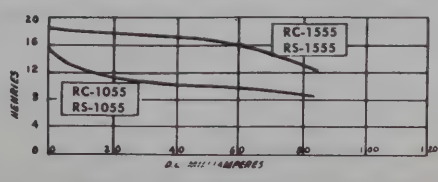
b	C-1718	13.5 / 3.5	15 / 150	130	2000	Leads	C	2 1/2	2 5/8	3 1/8	2	1 5/8	2 1/4	3/16 x 3/8	2.3
	C-1400	12.0 / 2.0	17.5 / 175	100	3000	Leads	C	2 1/2	2 3/4	3 1/8	2	1 3/4	2 3/8	3/16 x 3/8	2.4
	C-1401	12.0 / 2.0	20 / 200	80	3000	Leads	C	2 13/16	3 1/4	3 1/2	2 1/4	2	2 3/4	3/16 x 3/8	3.5
	C-1645	12.0 / 2.0	20 / 200	90	5000	Leads	C	3 1/8	3 1/2	3 7/8	2 1/2	2 3/16	3	3/16 x 3/8	4.5
	C-1702	12.0 / 2.0	25 / 250	60	3000	Lugs	NV	2 13/16	2 3/4	3 7/16	2 1/4	2 1/2	3 1/8	3/16 x 5/16	4.3
	C-1402	12.0 / 2.0	25 / 250	60	3000	Leads	C	2 13/16	3 5/8	3 1/2	2 1/4	2 3/8	3 1/8	3/16 x 3/8	4.3
	C-1720	20.0 / 4.0	30 / 300	80	3000	Leads	NV	3 3/4	3 1/8	4 9/16	3	2 1/2	3 1/8	3/16 x 5/16	7.2
	C-2307	20.0 / 4.0	30 / 300	80	3000	Leads	C	3 3/4	4	4 11/16	3	2 13/16	3 5/8	3/16 x 3/8	7.9
	C-1403	20.0 / 4.0	30 / 300	80	5000	Lugs	C	3 3/4	4	4 11/16	3	2 13/16	3 5/8	3/16 x 3/8	7.7
	C-1404	17.0 / 3.0	40 / 400	60	5000	Lugs	C	3 3/4	5	4 11/16	3	3 13/16	4 5/8	3/16 x 3/8	11.7
	C-1405	16.0 / 4.0	50 / 500	75	7500	Terms	FS	5 5/8	5 1/4	7 1/8	4 5/8	3 5/8	4 5/8	3/8 x 1/2	24.3

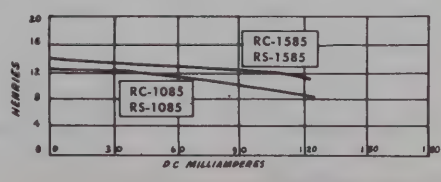
HIGH CURRENT CHOKES: INDUCTANCE MEASURED AT 1 VOLT 60 CYCLES

	Catalog No.	Inductance Millihenries	DC Amps	DC. Res. ohms	Insul. Test RMS Volts	Termination	Style	Dimensions A	B	C	D	E	F	G	W Lbs.
c	TC-1	3.0	1.0	.25	1000	Leads	A2	1 1/8	—	1 3/16	1 3/16	7/16	1 1/2	3/32	0.6
	TC-2	11.0	1.0	.75	1000	Leads	A2	1 1/8	—	1 3/16	1 3/16	7/16	1 1/2	3/32	0.6
	C-2690	300 or 75	1.0 / 2.0	3.0 / .75	1500	Leads	NV	2 13/16	3	3 7/16	2 1/4	2 5/8	3 1/4	3/16 x 5/16	5.0
	C-2685	35	2.0	.75	1500	Leads	NH	2 5/8	2 1/8	2 5/16	2 3/16	2	2 5/8	3/16 x 5/16	1.9
	C-2691	80 or 20	2.5 / 5.0	.60 / .15	1500	Leads	NV	3 1/8	3 1/2	3 13/16	2 1/2	3	3 5/8	3/16 x 5/16	7.0
	C-2686	25	4.0	.425	1500	Leads	NH	3 3/8	2 5/8	2 7/8	2 13/16	2 1/8	2 3/4	3/16 x 5/16	3.4
	C-2687	10	8.0	.15	1500	Leads	NH	3 3/4	3	3 3/16	3 1/8	2 1/2	3 1/8	3/16 x 5/16	5.3
	C-2688	10	12.5	.11	1500	Leads	NH	4 1/8	2 7/8	3 1/2	3 7/16	2 3/8	3	3/16 x 5/16	5.9
	C-2689	5	22.5	.03	1500	Leads	NH	4 1/2	4 3/8	3 13/16	3 3/4	3 1/2	4 1/8	3/16 x 5/16	11.9

TYPICAL INDUCTANCE CHARACTERISTIC CYRVES





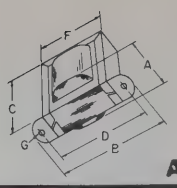


Insulation Test Voltage: Twice Allowable RMS Working Voltage plus 1000 Volts.

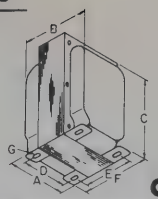
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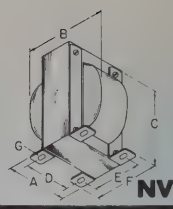
STANCOR
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rectifier transformers



A



C

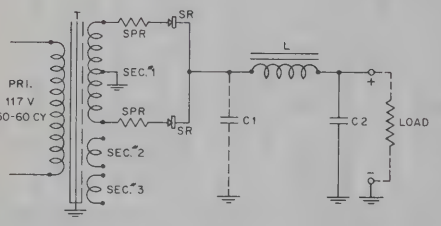
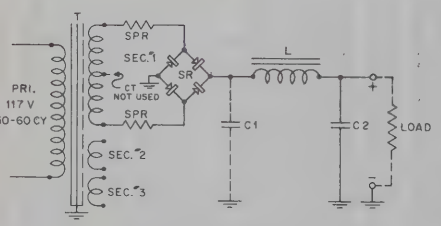
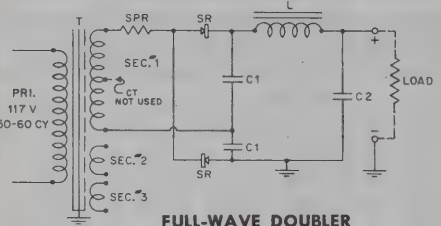


NV

SILICON RECTIFIER POWER TRANSFORMERS: Primaries — 117 Volts 50/60 Cycle-Lead Wire Termination.

	Catalog No.	Secondary #1 Volts	Secondary #1 DCMA †	Secondary #2 Volts	Secondary #2 Amps.	Secondary #3 Volts	Secondary #3 Amps.	Style	Dimensions A	B	C	D	E	F	G	WT. Lbs.
a	RP-400	400 C.T.	400	6.3	3.0	6.3	3.0	C	3 7/16	4 1/4	4 1/4	2 3/4	3 1/16	3 7/8	3/16 x 3/8	7.1
	RP-600	300 C.T.	600	6.3	2.5	6.3	2.5	C	3 7/16	4 1/4	4 1/4	2 3/4	3 1/16	3 7/8	3/16 x 3/8	7.1
	RP-800	200 C.T.	800	6.3	2.0	6.3	2.0	C	3 7/16	4 1/8	4 1/4	2 3/4	2 15/16	3 3/4	3/16 x 3/8	6.9
	RP-1600	100 C.T.	1600	6.3	1.5	6.3	1.5	C	3 7/16	3 7/8	4 1/4	3 3/4	2 11/16	3 1/2	3/16 x 3/8	6.0
	RP-2000	80 C.T.	2000	6.3	1.5	6.3	1.5	C	3 7/16	4	4 1/4	2 3/4	2 13/16	3 5/8	3/16 x 3/8	6.5
	RP-2500	60 C.T.	2500	6.3	1.5	6.3	1.5	C	3 7/16	3 7/8	4 1/4	2 3/4	2 11/16	3 1/2	3/16 x 3/8	6.0

†Refer to operating. Conditions as shown below.

		T Stancor No.	SR★	L Stancor No.	C1 (in MFD)	C2 (in MFD)	SPR*	D.C. Ouput Volts	D.C. Ouput MA.	Rectifier Load
b	 FULL-WAVE C.T.	RP-400	Four #F-4	C-2709	10	10	Yes	192	400	Capacitive
		RP-400	Four #F-4	C-2690	—	200	No	173	540	Inductive
		RP-600	Four #F-6	C-2334	80	80	Yes	190	600	Capacitive
		RP-600	Four #F-6	C-2690	—	125	No	126	1090	Inductive
		RP-800	Two #40-L	C-2690	40	150	Yes	105	800	Capacitive
		RP-800	Two #40-L	C-2690	—	350	No	86	1340	Inductive
		RP-1600	Two #40-L	C-2690	200	200	Yes	53	1600	Capacitive
		RP-1600	Two #40-L	C-2691	—	300	No	41	2600	Inductive
		RP-2000	Two #40-L	C-2690	500	500	Yes	47	2000	Capacitive
		RP-2000	Two #40-L	C-2686	—	1000	No	33	2950	Inductive
		RP-2500	Two #40-LF	C-2691	500	500	Yes	31	2500	Capacitive
		RP-2500	Two #40-LF	C-2686	—	1000	No	23	3950	Inductive
c	 FULL-WAVE BRIDGE	RP-400	Four #F-4	C-1710	8	10	Yes	502	150	Capacitive
		RP-400	Four #F-4	C-1722	—	20	No	330	302	Inductive
		RP-600	Four #F-6	C-2334	8	20	Yes	322	305	Capacitive
		RP-600	Four #F-6	C-2690	—	125	No	285	425	Inductive
		RP-800	Four #F-6	C-2709	30	40	Yes	247	377	Capacitive
		RP-800	Four #F-6	C-2708	—	250	No	172	625	Inductive
		RP-1600	Four #F-4	C-2690	40	80	Yes	100	880	Capacitive
		RP-1600	Four #F-4	C-2690	—	300	No	88	1160	Inductive
		RP-2000	Four #F-4	C-2690	100	100	Yes	93	810	Capacitive
		RP-2000	Four #40-L	C-2690	—	250	No	71	1450	Inductive
		RP-2500	Four #40-L	C-2690	200	200	Yes	70	1060	Capacitive
		RP-2500	Four #40-L	C-2690	—	500	No	50	1950	Inductive
d	 FULL-WAVE DOUBLER	RP-400	Four #F-6	C-1420	8	0.5	Yes	1040	75	Capacitive
		RP-600	Four #F-6	—	60	—	Yes	802	142	Capacitive
		RP-800	Two #F-6	—	80	—	Yes	536	188	Capacitive
		RP-1600	Two #F-6	C-2326	80	16	Yes	240	325	Capacitive
		RP-2000	Two #F-6	—	150	—	Yes	212	390	Capacitive
		RP-2500	Two #40-L	—	500	—	Yes	150	553	Capacitive

Note: Filtering shown permits maximum output ripple voltage of 3% or less.

★Quantity Shown is Total Number used in a given circuit. Rectifiers should be equivalent to Sarkes Tarzian numbers shown.

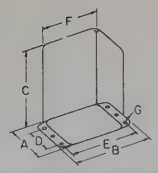
*Surge protection resistors are recommended when capacitor input filters are used. Allow 3.3 ohms per 70 volts R.M.S. applied voltage. Transformer secondary winding D.C. resistance may be used as part or all of the amount required.

FOR TRANSISTOR POWER SUPPLIES: Primary 117 Volts 60 Cycles — Lead Wire Termination.

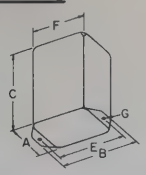
	Catalog No.	Secondary #1 Volts	Secondary #1 DCMA	Secondary #2 Volts	Secondary #2 DCMA	Style	Dimensions A	B	C	D	E	F	G	WT. Lbs.
e	TP-1	13/18	900	13/18	900	C	2 1/2	3	3 1/8	2	2	2 5/8	3/16 x 3/8	2.7
	TP-2	10/20 C.T./40 C.T.	100	—	—	A	1 7/8	2 7/8	1 5/8	2 3/8	—	2	3/16	0.7
	TP-3	10/20 C.T./40 C.T.	300	—	—	A	2 1/8	3 3/4	2 3/8	3 1/8	—	2 3/4	3/16	1.5
	TP-4	10/20 C.T./40 C.T.	1000	—	—	C	2 1/2	3 1/8	3 1/8	2	2 1/8	2 3/4	3/16 x 3/8	3.2
	P-8193▲	17/18	6 Amps. RMS	—	—	NV	3 1/8	3 1/8	3 13/16	2 1/2	2 5/8	3 5/16	3/16 x 5/16	6.0
	P-8194▲	36	3 Amps. RMS	36	3 Amps. RMS	NV	3 3/4	3 3/4	4 9/16	3	3	3 11/16	3/16 x 5/16	10
	P-8196	80 C.T.	1200	—	—	C	2 13/16	3 5/8	3 1/2	2 1/4	2 3/8	3 1/8	3/16 x 3/8	4.5

▲Write for Bulletin #587 for Rectifier Circuits showing D.C. Voltages and allowable D.C. Current.

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SC



TD

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rectifier & inverter trans.

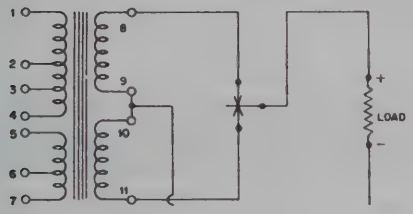
SILICON OR SELENIUM RECTIFIER TRANSFORMERS:

Primary — 117 Volts 50/60 Cycles.
Solder Lug Termination

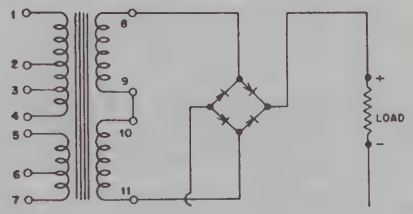
These transformers have been designed to operate in full-wave center tap or bridge rectifier circuits. The D.C. voltages shown are approximate since they depend on the internal drop of the rectifiers used.

Primary taps and an additional buck or boost tapped winding provides a wide range of output voltages. For detailed terminal connections, output voltages, etc. write for bulletin 518-R. For matching high current chokes see page 20.

FULL-WAVE C. T.



FULL-WAVE BRIDGE



	Catalog No.	Rectifier Circuit	Range of Applied A.C. Volts Under Load (Approx.)	Output Resistive or Inductive Load Max D.C. Volts	Output Resistive or Inductive Load Max D.C. Amps.	Output Capacitive Load* Max. D.C. Volts	Output Capacitive Load* Max. D.C. Amps.	Style	Dimensions A	B	C	D	E	F	G	WT. Lbs.
a	RT-201	C. T.	11.7 to 29.4	11.2	2.0	13.8[1]	2.0	NV	2 1/2	2 3/8	3 1/8	2	2 1/8	2 13/16	3/16 s 5/16	2.5
		Bridge	11.1 to 28.5	23.0	1.25	30.0[2]	1.25									
	RT-202	C. T.	12.0 to 29.8	11.1	4.0	14.7[3]	4.0	NV	2 13/16	2 3/4	3 7/16	2 1/4	2 3/8	3 1/16	3/16 x 5/16	3.8
		Bridge	12.0 to 29.8	24.3	2.0	33.0[1]	2.0									
	RT-204	C. T.	11.7 to 29.2	12.0	8.0	14.5[4]	8.0	NV	3 1/8	3 1/2	3 13/16	2 1/2	2 7/8	3 5/16	3/16 x 5/16	6 1
		Bridge	11.6 to 29.2	24.0	4.0	32.4[3]	4.0									
	RT-206	C. T.	12.0 to 29.7	11.5	12.0	14.4[5]	12.0	NV	3 7/16	4	4 3/16	2 3/4	3 1/4	3 15/16	3/16 x 5/16	9.1
		Bridge	12.0 to 29.7	24.0	6.0	32.0[6]	6.0									
	RT-208	C. T.	12.1 to 29.2	11.4	15.0	14.8[7]	15.0	NV	3 3/4	5	4 5/16	2 13/16	3 3/4	4 7/16	3/16 x 5/16	12.6
		Bridge	12.1 to 29.2	23.7	8.0	32.5[4]	8.0									
	RT-2012	C. T.	12.2 to 29.0	11.4	22.5	14.3[8]	22.5	NV	4 3/8	5 7/8	5 5/16	3 1/2	4 1/4	4 15/16	3/16 x 5/16	20.5
		Bridge	12.2 to 29.0	23.5	12.0	33.0[5]	12.0									
	RT-408	Bridge	25.0 to 53.5	44.0	8.0	63.0[4]	8.0	NV	4 3/8	6 3/4	5 5/16	3 1/2	5 1/4	5 13/16	3/16 x 5/16	26.5
	RT-4012	Bridge	25.0 to 53.0	43.5	12.0	60.0[5]	12.0	NV	5 3/8	6	7 1/8	4 5/8	5 1/2	6 1/2	3/8 x 1/2	34

*MFD Filter Capacitor 1-1000, 2-500, 3-2000, 4-4000, 5-6000, 6-3000, 7-7500, 8-12000.

TRANSISTOR INVERTER TRANSFORMERS:

Write for Bulletin CT-43 for Circuit Diagram.
Lead Wire Termination.

	Catalog No.	Input	Output Volts	MADC	Style	Dimensions A	B	C	D	E	F	G	WT. Lbs.
b	DCT-1	12 Volts D.C.	275 D.C.	125	TD	1 7/8	2 7/16	2 1/4	—	2 1/8	1 7/8	3/16	0.9
	DCT-2	12 Volts D.C.	250 D.C. or 500 D.C.	275 / 165	SC	2 1/4	2 11/16	2 11/16	1 1/2	2 3/8	.2	3/16	1.5

TRANSISTOR INVERTER TRANSFORMER:

With 12 Volts D.C. and 117 Volts 60 Cycle Primary.
Write for Bulletin 596 for Circuit Diagram.

	Catalog No.	D.C. Output Volts	D.C. Output DCMA	Filament Winding	Style	Dimensions A	B	C	D	E	F	G	WT. Lbs.
c	P-8195	280	150 CCS 250 ICAS	12.6 V. @ 3 Amps. (with 117 V. Pri)	C	3 1/8	3 15/16	3 7/8	2 1/2	2 5/8	3 7/8	3/16 x 3/8	6.0

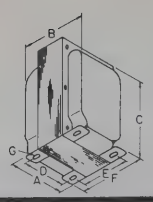
SPECIAL VIBRATOR TRANSFORMERS:

With D.C. and 117 Volts 60 Cycle Primary.
Lead Wire Termination.

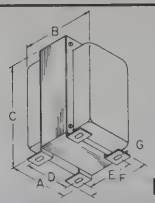
	Catalog No.	D.C. Pri.	Plate Winding A.C. Volts	Plate Winding DCMA	Buffer Cap.	Filament Winding Volts	Filament Winding Amps.	Style	Dimensions A	B	C	D	E	F	G	WT. Lbs.
d	P-6166	6 V.	350-0-350	135	.01 mfd	6.3	2.25	C	3 3/4	3 3/4	4 11/16	3	2 9/16	3 3/8	3/16 x 3/8	6.9
	P-6496	12 V.	350-0-350	100	.005 mfd	12.6 C.T.	2.0	C	3 3/4	4	4 11/16	3	2 13/16	3 5/8	3/16 x 3/8	7.9

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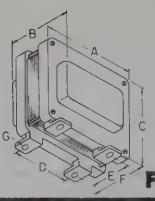
STANCOR
COMMERCIAL
plate transformers



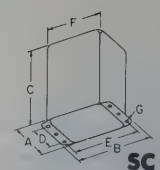
C



FS



FS1



SC

***FOR REACTOR INPUT SYSTEMS:** All Primaries — 50/60 Cycles.

	Catalog No.	Plate Winding AC Volts	DC Volts	DCMA CCS	DCMA ICAS	Primary Volts	Style	Dimensions A	B	C	D	E	F	G	WT. Lbs.
a	P-8040	500-40-0-500	400 40	300	375	115	C	3¾	4⅝	4 11/16	3	3 7/16	4¼	3/16 x ⅜	9.8
	P-8041	615-520-40-0 520-615	500 400 40	250	310	115	C	3¾	5¼	4 11/16	3	4 1/16	4⅞	3/16 x ⅜	13.6
	P-45	675-575-0 575-675	500 400	250	325	115/230	SC	4 9/16	5¼	5 5/16	2½	4¾	4⅛	3/16	12.0
	P-8042	770-510-40-0 510/770	600 400 40	300	375	115	C	3¾	6½	4 11/16	3	5 5/16	6⅛	3/16 x ⅜	18.0
	P-67	900-735-0 735-900	750 600	250	325	115/230	SC	4 9/16	5¼	5 5/16	2½	4¾	4⅛	3/16	13.5
	P-8043	950-750-40-0 750-950	750 600 40	300	375	115	FS	5⅝	6¾	7⅛	4⅝	4	5	⅜ x ½	29.0
b	P-8044†	1200-0-1200 535-0-535	1000 400	150 150	190 190	115	FS	6⅛	8¼	7⅝	4¾	4	5	5/16 x ¾	29.8
	P-8025	1230-940-0 940-1230	1000 750	400	500	115	FS	5⅝	7½	7⅛	4⅝	4¾	5¾	⅜ x ½	35.0
	P-1240†	1425-0-1425 600-0-600	1250 400	150 200	200 260	115/230	SC	5 5/16	5⅞	6 1/16	3½	5⅜	4 11/16	¼	26.0
	P-8026	1475-1175-0 1175-1475	1250 1000	300	375	115	FS	5⅝	7½	7⅛	4⅝	4¾	5¾	⅜ x ½	36.5
	P-8027	1510-1210-0 1210-1510	1250 1000	500	625	115	FS	5⅝	8¼	7⅛	4⅝	5½	6½	⅜ x ½	45.2
	P-1512	1710-1430-0 1430-1710	1500 1250	300	425	115/230	FS-1	7½	7	7	4¾	6	7⅛	⅜ x ¾	43.0
	P-8028	1740-1460-0 1460-1740	1500 1250	300	375	115	FS	5⅝	7¾	7⅛	4⅝	5	6	⅜ x ½	38.7
	P-8029	1775-1500-0 1500-1775	1500 1250	500	625	115/230	FS	7¼	8⅛	9	6	5⅝	6⅞	7/16 x ⅝	65.0
	P-8031	2075-1775-0 1775-2075	1750 1500	500	625	115/230	FS	7¼	8⅛	9	6	5⅝	6⅞	7/16 x ⅝	65.0
c	P-8030	2100-1800-0 1800-2100	1750 1500	300	375	115	FS	5⅝	7¼	7⅛	4⅝	5½	6½	⅜ x ½	45.8
	P-8033	2375-2065-0 2065-2375	2000 1750	500	625	115/230	FS	7¼	8⅜	9	6	5⅞	7⅛	7/16 x ⅝	77.0
	P-8032	2400-2100-0 2100-2400	2000 1750	300	375	115	FS	5⅝	8	7⅛	4⅝	6¼	7¼	⅜ x ½	46.0
	P-2520	2820-2260-0 2260-2820	2500 2000	300	425	115/230	FS-1	8⅞	7½	8½	5½	6⅝	8⅛	⅜	71.0
	P-8034	2900-2385-0 2385-2900	2500 2000	300	375	115/230	FS	7¼	8⅛	9	6	5⅝	6⅞	7/16 x ⅝	62.8
	P-2126	2900-2320-0 2320-2900	2600 2100	500	700	115/230	FS	7¼	10½	9	6	7¾	9	7/16 x ⅝	95.0
	P-8035	2950-2375-0 2375-2950	2500 2000	500	575	115/230	FS	7¼	9⅝	9	6	7 1/16	8⅜	7/16 x ⅝	80.0
	P-4353	4600-4050-3400 0-3400-4050 4600	4000 3500 3000	600	800	115/230	FS-1	13⅞	10	12¾	9	8⅞	10½	½	150.

††WITH PLATE LEADS OUT OF TOP: For Reactor Input Systems. All Primaries — 50/60 Cycles.

d	PT-8311	1200-0-1200	1000	225	280	117	C	3¾	5¼	4 11/16	3	4 1/16	4⅞	3/16 x ⅜	13.0
	PT-8312	1200-0-1200	1000	325	405	117	C	4⅝	6¾	5⅜	3½	5⅛	6¼	¼ x ⅝	22.5
	PT-8313	1475-0-1475	1250	250	310	117	C	4⅝	6⅝	5⅜	3½	5	6⅛	¼ x ⅝	22.0
	PT-8314	1790-0-1790	1500	225	280	117	C	4⅝	6½	5⅜	3½	4⅞	6	¼ x ⅝	21.5
	PT-8315	2065-0-2065	1750	200	250	117	C	4⅝	6⅝	5⅜	3½	5	6⅛	¼ x ⅝	22.0

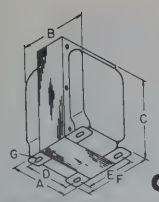
††CCS RATING FOR REACTOR INPUT — ICAS RATING FOR CAPACITOR INPUT: All Primaries — 50/60 Cycles.

e	PC-8301	415-0-415	300 425	200	150	117	C	3⅛	3½	3⅞	2½	2 3/16	3	3/16 x ⅜	4.8
	PC-8302	515-0-515	385 500	235	200	117	C	3 7/16	4⅛	4¼	2¾	2 15/16	3¾	3/16 x ⅜	6.8
	PC-8303	665-0-665	500 750	250	200	117	C	3¾	4⅜	4 11/16	3	3 3/16	4	3/16 x ⅜	9.6
	PC-8304	750-0-750	600 850	265	200	117	C	3¾	4⅞	4 11/16	3	3 11/16	4½	3/16 x ⅜	11.5
	PC-8305	920-0-920	750 1000	250	200	117	C	3¾	5	4 11/16	3	3 13/16	4⅝	3/16 x ⅜	11.9
	PC-8306†	920-0-920 500-0-500	750 1100 380 550	150 150	125 125	117	C	3¾	5	4 11/16	3	3 13/16	4⅝	3/16 x ⅜	11.9

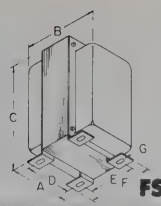
All "C" style have Leads; "SC" style have lugs; "FS" and "FS1" have Terminals.
†Both Secondaries may be Loaded Simultaneously.

††Secondary C.T. must be grounded.
*May be used with Secondary C.T. ungrounded.
All Secondary A.C. Voltages ±3%.

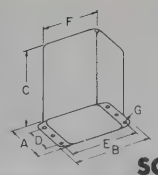
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C



FS



SC

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isolation/auto transformers

STEP-DOWN AUTO-TRANSFORMERS: Primary — 230 Volts 50/60 Cycles — Line Cord and Plug. Secondary — 115 Volts — Standard Female Receptable.

	Catalog No.	Watts	Style	Dimensions A	B	C	D	E	F	G	Wt. Lbs.
a	P-6287	40	C	2 5/8	2 1/2	3 1/2	2	1 1/2	2 1/8	3/16 x 3/8	2.2
	P-5062	80	C	2 13/16	3 3/8	3 1/2	2 1/4	2 1/8	2 7/8	3/16 x 3/8	3.8
	P-5063	100	C	3 1/8	3 5/8	3 7/8	2 1/2	2 1/16	2 7/8	3/16 x 3/8	4.5
	P-5064	150	C	3 7/16	3 5/8	4 1/4	2 3/4	2 7/16	3 1/4	3/16 x 3/8	5.2
	P-5065	300	C	3 3/4	4 1/4	4 11/16	3	3 1/16	3 7/8	3/16 x 3/8	8.8
	P-6141	500	C	3 3/4	5 1/4	4 11/16	3	4 1/16	4 7/8	3/16 x 3/8	13.7
	P-6124	1000	FS	5 5/8	6 3/4	7 1/8	4 5/8	4	5	3/8 x 1/2	24.7
b	SD-50	50	SC	2 7/8	3 1/2	3 1/2	2	3 1/8	2 11/16	3/16	2.8
	SD-100	100	SC	3 11/16	4 7/16	4 5/16	2 3/4	3 7/8	3 1/4	3/16	4.3
	SD-150	150	SC	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	3/16	7.0
	SD-250	250	SC	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	3/16	8.8
	SD-500	500	SC	5 5/16	5 7/8	6 1/16	3 1/2	5 3/8	4 11/16	1/4	14.5
	SD-1000	1000	SC	6 1/8	6 1/2	7 1/16	4 1/4	6	5 1/8	1/4	22.5

LINE ADJUSTING AUTO-TRANSFORMERS: Primary — 50/60 Cycle. Line Cord and Selector Switch. Secondary — Female Receptacle with Voltmeter.

	Catalog No.	Watts	Input Voltage	Output Voltage	Style	Dimensions A	B	C	D	E	F	G	WT. Lbs.
c	PV-6441	150	65/75/90/100/115/130/145	115	C	3 3/4	5 3/8	5 1/2	3	4 5/16	5 1/8	3/16 x 3/8	6.4
	PV-6442	350	65/75/90/100/115/130/145	115	C	3 3/4	6 1/8	5 1/2	3	5 1/16	5 7/8	3/16 x 3/8	10.5
	PV-6443	500	65/75/90/100/115/130/145	115	C	3 3/4	6 7/8	5 1/2	3	5 13/16	6 5/8	3/16 c 3/8	15
	PV-6444	750	65/75/90/100/115/130/145	115	C	4 5/8	8 1/8	6 5/16	3 1/2	6 5/8	7 3/4	1/4 x 5/8	19

LINE ADJUSTING ISOLATION TRANSFORMERS: Primary — 50/60 Cycles. Line Cord and Selector Switch. Secondary Standard Female Receptacle.

d	IS-50	50	105/115/125	††125/115/105	SC	3 11/16	4 7/16	4 11/16	2 3/4	3 7/8	3 1/4	3/16	5
	IS-100	100	105/115/125	††125/115/105	SC	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	3/16	8.5
	IS-150	150	105/115/125	††125/115/105	SC	5 5/16	5 7/8	6 1/16	3 1/2	5 3/8	4 11/16	1/4	12.5
	IS-250	250	105/115/125	††125/115/105	SC	5 5/16	5 7/8	6 1/16	3 1/2	5 3/8	4 11/16	1/4	18.3

STRAIGHT ISOLATION: ELECTROSTATIC SHIELDS GROUNDED TO CORE Primary — 50/60 Cycles. Line Cord. Secondary — Female Receptacle.

e	P-6410	50	115	115	C	2 13/16	3 1/8	3 1/2	2 1/4	1 7/8	2 5/8	3/16 x 3/8	3.7
	P-6160†	100	105/115/125	115	C	3 3/4	3 3/4	4 11/16	3	2 9/16	3 3/8	3/16 x 3/8	7.0
	P-6371	175	117	117	SC	4 5/16	5 1/4	5 5/16	2 1/2	4 3/4	4 1/8	3/16	9.0
	P-6161†	250	105/115/125	115	C	3 3/4	5 1/2	4 11/16	3	4 5/16	5 1/8	3/16 x 3/8	14.2
	P-6298†	500	105/115/125	115	FS	5 5/8	7 1/8	7 5/8	4 5/8	4 1/4	5 1/4	3/8 x 1/2	28
	P-6125*	1000	105/115/125	115	FS	5 5/8	7 3/4	7 1/8	4 5/8	5	6	3/8 x 1/2	35
	P-6123*	1500	105/115/125	115	FS	5 5/8	9	7 1/8	4 5/8	6 1/4	7 1/4	3/8 x 1/2	50

STEP-DOWN ISOLATION: ELECTROSTATIC SHIELDS GROUNDED TO CORE Primary — 50/60 Cycles. Line Cord. Secondary — Female Receptacle.

f	P-6383†	100	210/230/250	115	C	3 3/4	3 3/4	4 11/16	3	2 9/16	3 3/8	3/16 x 3/8	7.3
	P-6385†	250	210/230/250	115	C	3 3/4	5 1/2	4 11/16	3	4 5/16	5 1/8	3/16 x 3/8	14.2
	P-6387†	500	210/230/250	115	FS	5 5/8	7 1/8	7 3/4	4 5/8	4 1/4	5 1/4	3/8 x 1/2	29.5
	P-6389*	1000	210/230/250	115	FS	5 5/8	7 7/8	7 1/8	4 5/8	5	6	3/8 x 1/2	34
	P-6390*	1500	210/230/250	115	FS	5 5/8	9 3/8	7 1/8	4 5/8	6 1/2	7 1/2	3/8 x 1/2	50

ISOLATION TESTING TRANSFORMER: ELECTROSTATIC SHIELD GROUNDED TO CORE Primary—50/60 Cycles. Line Cord. Secondary—Three Female Receptacles

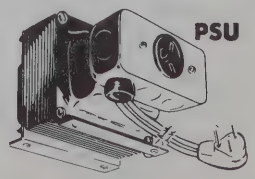
g	P-6415	350	117	105/115/125	C	4 5/8	5 11/16	5 3/8	3 1/2	4 11/16	5 3/16	1/4 x 5/8	17

AUTO-TRANSFORMER FOR TESTING: Primary 50/60 Cycles — Line Cord and Selector Switch. Secondary — Female Receptacle.

h	P-6299	150	115	{90/100/110/120 | 130/140/150}	C	3 1/8	3 7/8	3 7/8	2 1/2	2 9/16	3 3/8	3/16 x 3/8	6

STEP UP — STEP-DOWN AUTO-TRANSFORMERS: (Three wire Line Cord and Receptable) 208 V./230 V., or 230 V./208 V. 60 Cy. by means of Connection. Change inside outlet Box.

	Catalog No.	Application	Style	Height	Base Area	Mtg Ctrs	Wt. Lbs.
j	PSU-2000	2.3 KVA for 1/2 to 1 hp Motors	PSU	3 1/2	3 3/4 x 6 1/2	2 7/8 x 3 1/4	9
	PSU-3000	3 KVA for 1 to 2 hp Motors	PSU	4	4 1/2 x 6	2 1/2 x 3 3/4	10

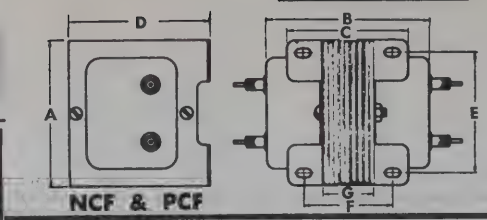

PSU

† Has Primary Switch. * Has Primary Terminals. †† With 115 volt input.

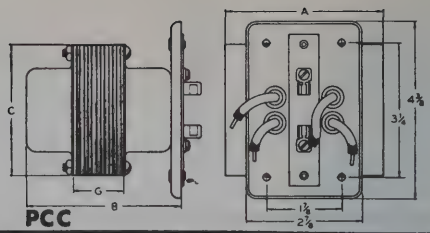
STANCOR PAGE 24

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STANCOR
COMMERCIAL
control transformers



NCF & PCF



PCC

NORMAL REACTANCE TYPE: Primary 115 Volts 50/60 Cycles — Lead Wire Termination.

	Catalog Number	Secondary			Dimensions in Inches							Approx. Weight Lbs.
		Volts	Amps.	V-A Cap.	A	B	C	D	E	F	G	
a	NCF-1650	16	3.15	50	3	3 1/4	2 3/8	2 3/4	2 3/8	1 3/4	1	3 1/2
	NCF-2425	24	1.05	25	2 5/8	2 1/2	2 1/8	2 1/2	2 1/8	1 1/2	7/8	2 1/4
	NCF-2450	24	2.1	50	3	3 1/4	2 3/8	2 3/4	2 3/8	1 3/4	1	3 1/2
	NCF-2475	24	3.15	75	3 1/2	3 5/8	2 7/8	3 3/16	3	2 1/4	1 7/16	4 1/2
	NCF-24100	24	4.15	100	3 15/16	3 15/16	3 13/16	3 1/2	3 3/16	2 15/16	1 9/16	5 1/4
	NCF-24150	24	6.25	150	4 1/2	4 1/8	3 3/4	4	3 3/4	3	1 1/2	8 1/2
	NCF-3250	32	1.55	50	3	3 1/4	2 3/8	2 3/4	2 3/8	1 3/4	1	3 1/2
	NCF-3275	32	2.35	75	3 1/2	3 5/8	2 7/8	3 3/16	3	2 1/4	1 7/16	4 1/2
	NCF-32150	32	4.7	150	4 1/2	4 1/8	3 3/4	4	3 3/4	3	1 1/2	8 1/2
	NCF-1550	550	(NL)	50	2 7/8	2 7/8	2 7/8	3 1/2	2 1/4	2 1/8	1 1/8	3 1/2

POWER CIRCUIT TRANSFORMERS: Primary 50/60 Cycles. Lead Wire Termination.

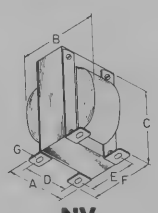
	Catalog Number	Primary Volts	Secondary			Dimensions in Inches							Weight Lbs.
			Volts	Amps.	V-A Cap.	A	B	C	D	E	F	G	
b	PCF-2025	230	115	.25	25	3	3	2 1/8	2 13/16	2 3/8	1 1/2	3/4	2
	PCF-2050	230	115	.45	50	3	3 1/2	2 5/8	2 13/16	2 3/8	2	1 1/4	2 3/4
	PCF-24075	230/460	115	.65	75	3 1/2	3 5/8	2 7/8	3 3/16	3	2 1/4	1 7/16	4 1/4
	PCF-24100	230/460	115	.85	100	3 15/16	4 1/8	3 13/16	3 1/2	3 3/16	2 15/16	1 9/16	5 1/4
	PCF-24150	230/460	115	1.5	150	4 1/2	4 1/8	3 3/4	4	3 3/4	3	1 1/2	7 3/4
	PCF-24250	230/460	115	2.2	250	5 1/4	4 5/16	3 15/16	4 5/16	4 1/4	3	1 11/16	12

POWER CIRCUIT TRANSFORMERS: Conduit Box Mounting

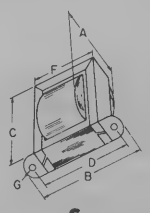
	Catalog Number	Primary		Secondary			Dimensions in Inches				Weight Lbs.
		Volts	Cycles	Volts	Amps.	V-A Cap.	A	B	C	G	
c	PCC-24100	230/460	50-60	115	.85	100	3 3/4	4 3/16	3 1/8	1 9/16	5 1/4
	PCC-24150	230/460	50-60	115	1.5	150	4 1/2	4 3/8	3 3/4	1 1/2	7 3/4
	PCC-24250	230/460	50-60	115	2.2	250	5 1/4	4 7/8	4 5/16	1 11/16	11 1/2

CONTROL TRANSFORMERS: Primary — 115/230 Volts 50/60 Cycles — Solder Lug Termination.

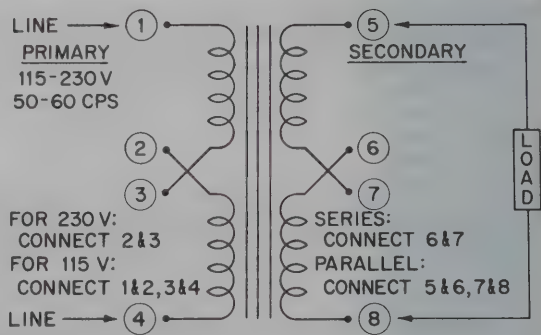
Typical Applications: Automatic Assembly equipment. Relays, Solenoids, Small Motors, Speed Changers, Recording Device, Pumps, Electronic Tubes, Heating Elements, Elevators, Door Openers, Automatic Musical Instruments, Low Voltage Lighting Signal Lamps, Spark Plug Testers, Control Valves for Fluids and Gases, Fans and Blowers, Mechanical and Electrical Signs and similar applications.



NV



S

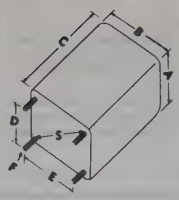


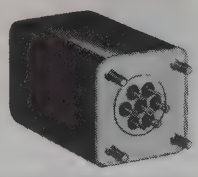
	Catalog No.	VA Cap.	Secondary		Style	Dimensions							WT. Lbs.
			Parallel	Series		A	B	C	D	E	F	G	
d	P-6375	12	6V @ 2A	12V @ 1A	S	1 5/8	2 7/8	2 3/8	2 3/8	—	2	3/16	1.0
	P-6376	24	6V @ 4A	12V @ 2A	S	1 7/8	3 1/8	2 3/4	2 13/16	—	2 1/4	3/16	1.5
	P-6377	48	12V @ 4A	24V @ 2A	S	2 1/4	3 5/8	3 1/8	3 1/8	—	2 5/8	3/16	2.5
	P-6378	96	12V @ 8A	24V @ 4A	NV	2 13/16	2 7/8	3 7/16	2 1/4	2 1/4	2 7/8	3/16 x 5/16	4.2
	P-6379	192	12V @ 16A	24V @ 8A	NV	3 7/16	3 3/8	4 3/16	2 3/4	3	3 11/16	3/16 x 5/16	8.0

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PMS FMS





AMS

STANCOR MILITARY standard transformers

All stancor Military grade Transformers are designed and built to meet the exacting requirements of the latest version of MIL-T-27. They are Manufactured under quality control conditions specified in MIL-Q-9858.

AUDIO TRANSFORMERS (Military Standards)

Frequency Response ±2db 300-10,000 Cycles
Maximum operating Altitude — 50,000 ft.

	Catalog No.	Mil-T-27A Classification	Mil-T-27A Part No.	Application	Impedance	Operating Level	Pri. DCMA	Max. Wt. Lbs.	MS Case Dimensions in inches A	B	C	D	E	F
a	AMS-1	TF1RX15AJ001	MS-90000	P-P Plates to P-P Grids	Pri: 10,000 ohms CT Sec: 90,000 ohms CT 22,500 ohms CT	15 dbm.	10	.6	1 5/8	1 5/8	2 3/8	1 3/16	1 3/16	6-32
	AMS-2	TF1RX16AJ002	MS-90001	Line to Voice Coil	Pri: 600 ohms CT 150 ohms Sec: 4/8/16 ohms	2W	—	.6	1 5/8	1 5/8	2 3/8	1 3/16	1 3/16	6-32
	AMS-3	TF1RX10AJ001	MS-90002	Line to P-P Grids	Pri: 600 ohms CT 150 ohms Sec. 135,000 ohms CT	15 dbm.	—	.6	1 5/8	1 5/8	2 3/8	1 3/16	1 3/16	6-32
	AMS-4	TF1RX16AJ001	MS-90003	Line to Line	Pri: 600 ohms CT 150 ohms Sec: 600 ohms CT 150 ohms	15 dbm.	—	.6	1 5/8	1 5/8	2 3/8	1 3/16	1 3/16	6-32
	AMS-5	TF1RX13AJ001	MS-90004	Single Plate to Line	Pri: 7600/4800 ohms Sec: 600 ohms CT/150 ohms	2W	40	.6	1 5/8	1 5/8	2 3/8	1 3/16	1 3/16	6-32
	AMS-6	TF1RX13AJ002	MS-90005	Single Plate to Voice Coil	Pri. 7600/4800 ohms Sec: 4/8/16 ohms	2W	40	.6	1 5/8	1 5/8	2 3/8	1 3/16	1 3/16	6-32
	AMS-7	TF1RX13AJ003	MS-90006	P-P Plates to Line	Pri: 15,000 ohms CT Sec: 600 ohms CT/150 ohms	2W	10	.6	1 5/8	1 5/8	2 3/8	1 3/16	1 3/16	6-32
	AMS-8	TF1RX13AJ004	MS-90007	P-P Plates to Line	Pri: 24,000 ohms CT Sec: 600 ohms CT/150 ohms	1W	20	.6	1 5/8	1 5/8	2 3/8	1 3/16	1 3/16	6-32
	AMS-9	TF1RX13AJ005	MS-90008	P-P Plates to Line	Pri: 60,000 ohms CT Sec: 600 ohms CT/150 ohms	5W	20	.6	1 5/8	1 5/8	2 3/8	1 3/16	1 3/16	6-32

POWER TRANSFORMERS (Military Standards)

For Reactor Input Systems — Primary 105/115/125 Volts, 54-66 Cycles
Maximum operating Altitude — 10,000 ft.

	Catalog No.	Mil-T-27A Classification	Mil-T-27A Part No.	High Voltage Secondary A-C Volts	High Voltage Secondary D-C Ma.	D-C, V Output	Rectifier Filament Volts	Rectifier Filament Amps	Filament No. 2 Volts	Filament No. 2 Amps	Wt. Lbs.	MS Case Dimensions in inches A	B	C	D	E	F
b	PMS-70	TF4RX03HA001	MS-90026	200-100-0 100-200	70	156	6.3/5	2	6.3	3	4	3 1/16	2 5/8	4 1/4	2 19/64	1 55/64	8-32
	PMS-70A	TF4RX03JB002	MS-90027	325-0-325	70	260	6.3/5	2	6.3	4	5	3 5/16	3 1/16	3 7/8	2 5/8	2 1/8	8-32
	PMS-150	TF4RX03KB006	MS-90028	325-0-325	150	245	6.3	5	5	3	7 1/4	3 15/16	3 3/8	4 5/16	3	2 7/16	10-32
	PMS-175	TF4RX03LB003	MS-90029	400-0-400	175	318	5	3	6.3	8	10	4 5/16	3 11/16	4 1/2	3 5/16	2 11/16	10-32
	PMS-250	TF4RX03MB004	MS-90030	450-0-450	250	345	5	3	6.3	8	13	4 11/16	4	4 15/16	3 11/16	3	1/4-20
	PMS-350	1F4RX02KB001	MS-90031	350-0-350	250	255	—	—	—	—	7 1/2	3 15/16	3 3/8	4 5/16	3	2 7/16	10-32
	PMS-550	TF4RX02LB002	MS-90032	550-0-550	250	419	—	—	—	—	11	4 5/16	3 11/16	4 1/2	3 5/16	2 11/16	10-32
	PMS-800	TF4RX02NB003	MS-90036	800-0-800	250	640	—	—	—	—	16 1/2	5 1/16	4 5/16	5 1/2	4 1/16	3 5/16	1/4-20

FILAMENT TRANSFORMERS (Military Standards)

Primary 105/115/125 Volts, 54-66 Cycles
Maximum operating Altitude — 10,000 ft.

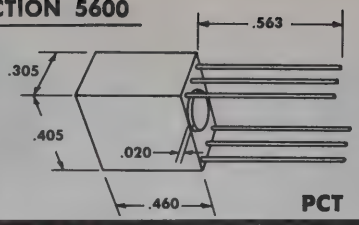
	Catalog No.	Mil-TI27A Classification No.	Mil T-27A Part No.	Secondary Volts	Secondary Amps	Insul. Test Volts RMS	Wt. Lbs.	MS Case Dimensions in inches A	B	C	D	E	F
c	FMS-23	TF4RX01EB002	MS-90016	2.5	3.0	2500	1 1/2	1 15/16	1 13/16	2 7/16	1 3/8	1 1/4	6-32
	FMS-210	TF4RX01GB003	MS-90017	2.5	10	2500	2 1/2	2 3/4	2 3/8	2 13/16	2 1/8	1 3/4	6-32
	FMS-53	TF4RX01FB004	MS-90018	5.0	3.0	2500	1 3/4	2 5/16	2 1/16	2 1/2	1 11/16	1 7/16	6-32
	FMS-510	TF4RX01HB005	MS-90019	5.0	10	2500	4	3 1/16	2 5/8	3 3/16	2 19/64	1 55/64	8-32
	FMS-62	TF4RX01FB006	MS-90020	6.3	2.0	2500	1 3/4	2 5/16	2 1/16	2 1/2	1 11/16	1 7/16	6-32
	FMS-65	TF4RX01GB007	MS-90021	6.3	5.0	2500	2 3/4	2 3/4	2 3/8	2 13/16	2 1/8	1 3/4	6-32
	FMS-610	TF4RX01JB008	MS-90022	6.3	10	2500	5	3 5/16	3 1/16	3 7/8	2 5/8	2 1/8	8-32
	FMS-620	TF4RX01KB009	MS-90023	6.3	20	2500	8	3 15/16	3 3/8	4 5/16	3	2 7/16	10-32
	FMS-210H	TF4RX01JB012	MS-90024	2.5	10	10000	4 3/4	3 5/16	3 1/16	3 7/8	2 5/8	2 1/8	8-32
	FMS-510H	TF4RX01KB013	MS-90025	5.0	10	10000	7	3 15/16	3 3/8	4 5/16	3	2 7/16	10-32

All Secondary AC Voltages ±3%.

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STANCOR
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PCT


UME

POLYCHROMATRANS With Multiples of 0.1" Grid Spacing for Printed Circuits.

COLOR CODING by application to assure immediate and positive transformer identification.

RECTANGULAR SHAPE allows the utmost utilization of space and stacking in limited area.

PROTECTIVE STAND-OFF prevents solder flow-back and maximum lead exit protection.

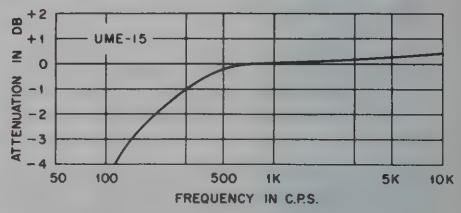
SPACED LEADS of fatigue resistant gold plated nickel-iron alloy are .020" in diameter, 9/16" long and have multiples of 0.1" grid spacing for printed circuit application.

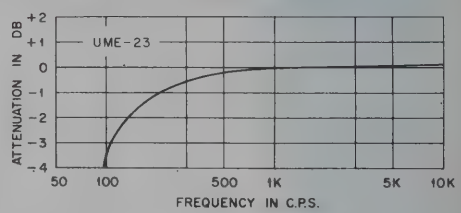
	Catalog No.	MIL Type No.	Power Level in M.W.	Application	Color Application Guide	Matching Impedance Primary	Matching Impedance Secondary	Max. MA. D.C. Unbal. in Pri.	D.C. Resistance Primary	D.C. Resistance Secondary	Overall Turns Ratio	RMS Test Volts
a	PCT-14	TF5SX16ZZ	15	Input	Brown	200,000 CT	1,000 CT	0	6300	130	14.1:1	500
	PCT-15	TF5SX16ZZ	35	Input	Brown	50,000 CT	1,000 CT	0	4600	90	7.1:1	500
	PCT-16	TF5SX10ZZ	.5	Input	Brown	250,000	250,000	0	3500	4500	1:1	500
	PCT-17	TF5SX16ZZ	15	Input	Brown	200,000	1,000	0	6300	130	14.1:1	500
	PCT-21	TF5SX13ZZ	55	Interstage	Red	25,000	1,000	.5	2000	140	5:1	500
	PCT-23	TF5SX13ZZ	55	Interstage	Red	25,000 CT	1,000 CT	.5	2000	140	5:1	500
	PCT-25	TF5SX13ZZ	75	Interstage	Red	10,000 CT	1,500 CT	1	1250	360	2.57:1	500
	PCT-30	TF5SX13ZZ	75	Driver	Orange	10,000 CT	1,200 CT	1	1250	240	2.88:1	500
	PCT-31	TF5SX13ZZ	75	Driver	Orange	10,000 CT	2,000 CT	1	1250	400	2.24:1	500
	PCT-39	TF5SX13ZZ	75	Driver	Orange	10,000 CT	500 CT	1	1250	100	4.47:1	500
	PCT-43	TF5SX17ZZ	75	Output	Yellow	1,000	50	3	175	9.5	4.4:1	500
	PCT-54	TF5SX17ZZ	75	Output	Yellow	600 CT	12	4.5	92	3.6	7.06:1	500
	PCT-60	TF5SX17ZZ	75	Output	Yellow	500 CT	600	3	80	118	1.1:1	500
	PCT-61	TF5SX17ZZ	75	Output	Yellow	900 CT	600	4	125	115	1.22:1	500
	PCT-62	TF5SX13ZZ	75	Output	Yellow	1,500 CT	600	3	200	110	1.58:1	500
b	PCT-70	TF5SX17ZZ	75	Output	Yellow	320 CT	3.2	6	52	.9	10:1	500
	PCT-71	TF5SX17ZZ	75	Output	Yellow	600 CT	3.2	4.5	84	1	13.6:1	500
	PCT-76	TF5SX13ZZ	75	Output Isolation	Green	10,000 CT	10,000 CT	1	1440	1500	1:1	500
	PCT-77	TF5SX17ZZ	75	Output—Isolation	Green	600 CT	600 CT	3	85	110	1:1	500
	PCT-116	TF5SX20ZZ	—	Choke	Blue	6 HYS.	—	2	1800	—	—	500
	PCT-117	TF5SX20ZZ	—	Choke	Blue	1.25 HYS.	—	2	200	—	—	500
	PCT-118	TF5SX20ZZ	—	Choke	Blue	3.5 HYS.	—	2	1200	—	—	500
	PCT-128	TF5SX20ZZ	—	Choke	Blue	.3 HY.	—	4	50	—	—	500
	SPCT-10	Magnetic Alloy Shield-fits all PCT Transformers.										

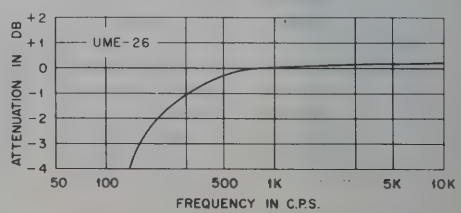
ULTRA MINIATURE ENCAPSULATED TRANSFORMERS Size .312" x .400" x .426". Insulation Test — 100 Volts

	Catalog No.	Application	Pri. Res.	Pri. Imp. in Ohms	D.C. MA in Pri.	Sec. Imp. in Ohms	Sec. Res.	Mw. Level
c	UME-11	interstage	1500	30,000	.5	1200	185	50
	UME-12	output	120	600	3	60	13	100
	UME-13	output	250	1200	3	60	17	100
	UME-14	output	70	600	3	3.2	.7	100
	UME-15	output	170	1200	2	3.2	.75	100
	UME-16	output	1200	10,000	1	3.2	.7	100
	UME-17	input	7500	200,000	0	1000	260	25
	UME-18	reactor	1000	3 hy @ 2 MADC	2	—	—	—
	UME-19	output or driver	1100	12,500 CT	1	600 CT	45	100
	UME-20	driver	1000	12,500	1	1500 CT	100	100
	UME-21	driver	1100	12,500	1	2500 CT	160	100
	UME-22	single or PP output	25	200 CT	10	16	3	500
	UME-23	single or PP output	35	400 CT	7	16	2.5	500
	UME-24	single or PP output	75	800 CT	5	16	2	500
	UME-25	single or PP output	85	1070 CT	4	16	2	500
	UME-26	single or PP output	120	1330 CT	3.5	16	2	500
d	UME-27	single or PP output	225	2000 CT	3	16	2.5	500
	UME-28	single or PP output	750	10,000 CT	1	16	2.5	500
	UME-29	output	35	300 CT	7	600	110	500
	UME-30	output	60	500 CT	5.5	600	110	500
	UME-31	output	105	900 CT	4	600	110	500
	UME-32	output	200	1500 CT	3	600	120	500
	UME-33	interstage	1500	30,000 CT	.5	1200 CT	175	100
	UME-34	input	6500	200,000 CT	0	1000 CT	250	25
	UME-35	interstage	1000	12,000 CT	1	1800 CT	115	100
	UME-36	reactor	2600	6 hy @ 2 MADC	2	—	—	—
	UME-37	reactor	190	1 hy @ 2 MADC	2	—	—	—
	UME-38	reactor	1800	12 hy @ 0 DC	0	—	—	—
	UME-39	reactor	2700	20 hy @ 0 DC	0	—	—	—

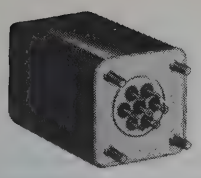
Typical Response Curves



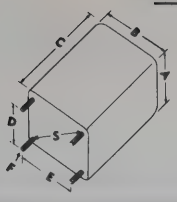


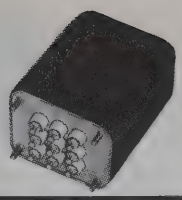


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TAMS





STANCOR MILITARY audio transformers

WIDE RANGE OUTPUT: TF4RX13YY

Frequency Response ± 1 db 30 to 15,000 cycles.
Maximum operating Altitude — 10,000 ft.

	Catalog No.	Application	Impedance Ohms Primary—Secondary	Operating Level	Output Tubes	Wt. Lbs.	YY Alternate Case Dimensions A	B	C	D	E	F
a	BOH-1	Single Plate to Line	Pri: 15,000 Sec: 600/150 CT	+15 dbm.	6C4's or equiv.	2¼	2.521	2.381	3.049	1.812	1.687	6-32
	BOH-2	Push-Pull Plates to Line	Pri: 20,000 CT Sec: 600/150 CT	+30 dbm.	6C5's or equiv.	3	2.861	2.711	3.492	2.000	1.875	8-32
	BOH-4	Push-Pull Plates to Line	Pri: 7,500 CT Sec: 600/150 CT	+43 dbm.	6L6's or equiv.	6	3.667	3.292	4.305	2.625	2.375	10-32
	BOH-5	P-P Plates to Line or Voice Coil	Pri: 10,000 CT Sec: 600/16/8 CT and 150/4	+37 dbm.	6V6's or equiv.	4	3.245	2.979	3.867	2.375	2.125	8-32
	BOH-9	P-P Plates to Line or Voice Coil	Pri: 5000/3000 CT Sec: 600/16/8 CT and 150/4	+42 dbm.	6GB4's or equiv.	6	3.667	3.292	4.305	2.625	2.375	10-32

WIDE RANGE INPUT: TF4RX †† YY

Frequency Response ± 1 db 30 to 15,000 cycles.
Maximum operating Altitude — 10,000 ft.

	Catalog No.	Application	Impedance Ohms Primary—Secondary	Operating Level	Hum Reduction	††Family	Wt. Lbs.	YY Alternate Case Dimensions A	B	C	D	E	F
b	BIH-1	Line to Single or Push-Pull Grids	Pri: 600/150 CT Sec: 50,000 CT	+15 dbm.	—70 dbm.	10	1½	2.241	2.101	2.930	1.562	1.375	6-32
	BIH-4	Line to Line	Pri: 600/150 CT Sec: 600/150 CT	+15 dbm.	—70 dbm.	16	1½	2.241	2.101	2.930	1.562	1.375	6-32
	BIH-6	Interstage—P-P Pl. to Sgl. or P-P Grids	Pri: 20,000 CT Sec: 50,000 CT	+15 dbm.	—70 dbm.	15	1½	2.241	2.101	2.930	1.562	1.375	6-32
	BIH-7	Low imped. mike, pickup, or multiple line to grid	Pri: 50/150/250/600 Sec: 50,000 CT	+15 dbm.	—70 dbm.	10	1½	2.241	2.101	2.930	1.562	1.375	6-32
	BIH-8	Single Plate to Push-Pull Grids	Pri: 10,000 Sec: 50,000 CT	+15 dbm.	—70 dbm.	10	1½	2.241	2.101	2.930	1.562	1.375	6-32
	BIH-10	Sgl. or P.P. Plates to S. or P.P. Grids	Pri: 20,000 CT/5000 Sec: 20,000 CT/5000	+35 dbm.	—	19	2.0	2.312	2.062	3.125	1.687	1.437	6-32

COMMUNICATIONS RANGE INPUT: TF4RX †† YY

Frequency Response ± 1 db 200 to 3500 cycles.
Maximum operating Altitude — 10,000 ft.

	Catalog No.	Application	Imdedances Ohms Primary—Secondary	Family††	Wt. Lbs.	YY Alternate Case Dimensions A	B	C	D	E	F
c	CIH-1	Low Level Line to Single or P-P Grids	Pri: 600/150 Sec: 100,000 CT	10	¾	1.546	1.546	2.143	1.000	1.000	6-32
	CIH-2	Low Level SB or DB Microphone to Sgl. or P-P Grids	Pri: 125/50, 80 ma. Sec: 125,000 CT	11	¾	2.241	2.101	2.680	1.562	1.375	6-32

COMMUNICATIONS RANGE OUTPUT: TF4RX13YY

Frequency Response ± 1db 200 to 3500 cycles.
Maximum operating Altitude — 10,000 ft.

	Catalog No.	Typical Output Tubes	Class	Impedances Ohms Primary—Secondary	Max. D-C In Pri.	Power Level	Wt. Lbs.	YY Alternate Case Dimensions A	B	C	D	E	F
d	COH-1	Sgl. 6L6, 6V6, 25A6, etc.	A	Pri: 5,000 Sec: 600/150/16/8/4	55 ma.	5 watts	2¼	2.521	2.381	3.049	1.812	1.678	6-32
	COH-2	Sgl. 6F6, 6V6, 6N6, 6K6, 7B5	A	Pri: 8,000 Sec: 600/150/16/8/4	55 ma.	5 watts	2¼	2.521	2.381	3.049	1.812	1.687	6-32

TRANSISTOR AUDIO: TF4RX† — †—

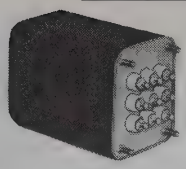
Maximum operating Altitude — 10,000 ft.

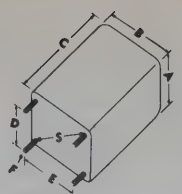
	Catalog No.	Application	Impedance in Ohms Pri.	Sec.	Max. Pri. D.C. Ma.	DC Res. in Ohms Pri.	Sec.	Power in Watts	Case† Size	Family†	Wt. Lbs.	MS Case Dimensions A	B	C	D	E	S	F
e	TAMS-1	Input	600 CT	10	20	42	.8	.05	AG	17	2½ oz.	1	1	1⅜	—	—	¾	4-40 x ⅜
	TAMS-2	Interstage	100 CT	10 CT	100	4.3	.8	.25	AH	17	5 oz.	1 5/16	1 5/16	1¾	—	—	1¼	6-32 x ⅜
	TAMS-3	Interstage	100	1000 CT	100	5.8	45	.25	AJ	17	11 oz.	1⅝	1⅝	2⅜	1 3/16	1 3/16	—	6-32 x ⅜
	TAMS-4	Interstage	500 CT	5000 CT	12	37	250	.03	AJ	17	11 oz.	1⅝	1⅝	2⅜	1 3/16	1 3/16	—	6-32 x ⅜
	TAMS-5	Driver	1000	200 CT	10	400	115	.05	AG	17	2 oz.	1	1	1⅜	—	—	¾	4-40 x ⅜
	TAMS-6	Driver	2000	200 CT	5	720	115	.05	AG	12	2 oz.	1	1	1⅜	—	—	¾	4-40 x ⅜
	TAMS-7	Driver	100	100 CT	100	12	12	.5	EB	17	1 lb.	1 15/16	1 13/16	2 7/16	1⅜	1¼	—	6-32 x ⅜
	TAMS-8	Output	9800	15	2	640	2	.05	AG	12	2 oz.	1	1	1⅜	—	—	¾	4-40 x ⅜
	TAMS-9	Output	1000	4/8/16	10	180	3.5	.2	AG	17	2½ oz.	1	1	1⅜	—	—	¾	4-40 x ⅜
	TAMS-10	Output	2000 CT	4/8/16	—	250	4	.2	AG	12	2½ oz.	1	1	1⅜	—	—	¾	4-40 x ⅜
	TAMS-11	Output	48 CT	8/16	275	5	1.5	5	FA	17	1½ lb.	2 3/16	2 1/16	3⅛	1 11/16	1 7/16	—	6-32 x ⅜
	TAMS-12	Output	20 CT	8	500	.55	.35	10	AJ	17	12 oz.	1⅝	1⅝	2⅜	1 3/16	1 3/16	—	6-32 x ⅜

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481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351

STANCOR MILITARY power transformers





FOR CAPACITOR INPUT SYSTEMS: TF4RX03YY

Primary 117 volts 50/60 Cycles.
Maximum operating Altitude 10,000 ft.

	Catalog No.	High Voltage Secondary A-C Volts	D-C Ma.	D-C V. Output	Rectifier Volts	Rectifier Amps	Filament No. 2 Volts	Filament No. 2 Amps	Filament No. 3 Volts	Filament No. 3 Amps	Wt. Lbs.	YY Alternate Case Dimensions A	B	C	D	E	F
a	PHC-10	250-0-250	10	320	—	—	6.3	0.6	6.3	1.2	2	2.521	2.381	3.049	1.812	1.687	6-32
	PHC-20	250-0-250	20	300	—	—	6.3	0.6	6.3	1.2	2	2.521	2.381	3.299	1.812	1.687	6-32
	PHC-40	225-0-225	40	210	5	2	6.3 CT	2	—	—	3¼	2.861	2.711	3.742	2.000	1.875	8-32
	PHC-55	270-0-270	55	260	5	2	6.3 CT	2	—	—	3½	2.861	2.711	3.742	2.000	1.875	8-32
	PHC-60	300-0-300	60	285	5	2	6.3 CT	3	—	—	4½	3.245	2.979	4.242	2.375	2.125	8-32
	PHC-70	335-0-335	70	320	5	2	6.3 CT	3	—	—	4½	3.245	2.979	4.242	2.375	2.125	8-32
	PHC-85	330-0-330	85	320	5	2	6.3 CT	3	—	—	6	3.667	3.292	4.305	2.625	2.375	10-32
	PHC-105	345-0-345	105	320	5	2	6.3 CT	3.5	—	—	6½	3.667	3.292	4.680	2.625	2.375	10-32
	PHC-120	375-0-375	120	380	5	3	6.3 CT	4	—	—	9½	3.667	3.292	4.680	2.625	2.375	10-32
	PHC-150	370-0-370	150	390	5	3	6.3 CT	4	6.3 CT	1	11½	4.573	4.120	5.318	3.375	3.000	10-32
	PHC-200	385-0-385	200	390	5	3	6.3 CT	4.5	6.3 CT	1	12	4.573	4.120	5.318	3.375	3.000	10-32
	PHC-250	400-80-0 -80-400	250	410	5	6	6.3 CT	7	5	2	15	5.323	4.792	6.068	3.375	3.000	12-24

FOR REACTOR INPUT SYSTEMS: TF4RX03YY

Primary 117 volts 50/60 Cycles.
Maximum operating Altitude 10,000 ft.

	Catalog No.	High Voltage Secondary A-C Volts	D-C Ma.	D-C V. Output	Rectifier Volts	Rectifier Amps	Filament No. 2 Volts	Filament No. 2 Amps	Filament No. 3 Volts	Filament No. 3 Amps	Wt. Lbs.	YY Alternate Case Dimensions A	B	C	D	E	F
b	PHR-55	350-0-350	55	260	5	2	6.3 CT	2	—	—	3¼	2.861	2.711	3.742	2.000	1.875	8-32
	PHR-70	425-0-425	70	320	5	2	6.3 CT	3	—	—	4½	3.245	2.979	4.242	2.375	2.125	8-32
	PHR-85	440-0-440	85	325	5	2	6.3 CT	3	—	—	6	3.667	3.292	4.305	2.625	2.375	10-32
	PHR-105	450-0-450	105	320	5	2	6.3 CT	3.5	—	—	6½	3.667	3.292	4.680	2.625	2.375	10-32
	PHR-120	500-0-500	120	390	5	3	6.3 CT	4	—	—	9½	3.667	3.292	4.680	2.625	2.375	10-32
	PHR-150	510-0-510	150	395	5	3	6.3 CT	4	6.3 CT	1	11½	4.573	4.120	5.318	3.375	3.000	10-32
	PHR-200	520-0-520	200	390	5	3	6.3 CT	4.5	6.3 CT	1	12¼	4.573	4.120	5.318	3.375	3.000	10-32
	PHR-300	550-370-75-0 -75-370-550	300	420	5	6	6.3 CT	5	6.3 CT	1	17½	5.323	4.792	6.068	3.375	3.000	12-24

FOR REGULATED POWER SUPPLIES: TF4RX03YY

Primary 115 Volts 50/60 Cycles.
Maximum operating Altitude 10,000 ft.

	Catalog No.	High Voltage Secondary A-C Volts	D-C Ma.	D-C V. Output	Rectifier Volts	Rectifier Amps	Filament No. 2 Volts	Filament No. 2 Amps	Filament No. 3 Volts	Filament No. 3 Amps	Wt. Lbs.	YY Alternate Case Dimensions A	B	C	D	E	F
c	PHC-165	440-0-440	165	430	5	3	6.3 6.3	7.5 0.6	6.3 6.3	3 3	12	4.573	4.120	5.318	3.375	3.000	10-32
	PHC-200A	450-0-450	200	442	5	2	6.3 6.3	4 4	6.3 —	0.6 —	12	4.573	4.120	5.318	3.375	3.000	10-32

FOR BIAS SUPPLIES: TF4RX03YY

Primary 115 Volts 50/60 Cycles.
Maximum Operating Altitude 10,000 ft.

	Catalog No.	Primary Volts	High Voltage Secondary A-C Volts	High Voltage Secondary D-C Ma.	Rectifier Filament Volts	Rectifier Filament Amps	Wt. Lbs.	YY Alternate Case Dimensions A	B	C	D	E	F
d	1BH-150	115	180-160-140-120-0 -120-140-160-180	150	5.0	3.0	5	3.245	2.979	4.242	2.375	2.125	8-32

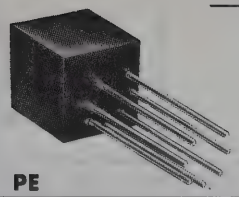
FOR SILICON RECTIFIER POWER SUPPLIES: TF4RX03LA

Primary 117 Volts 50/60 Cycles.
Maximum Operating Altitude 10,000 ft.

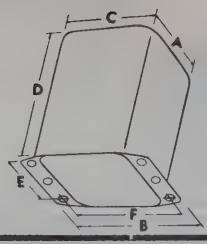
	Catalog No.	Secondary No. 1 Volts	Secondary No. 1 DCMA	Secondary No. 2 Volts	Secondary No. 2 Amps	Secondary No. 3 Volts	Secondary No. 3 Amps	Case Size	Wt. Lbs.	MS Case Dimensions A	B	C	D	E	S	F
e	HRP-400	400 CT	400	6.3	3.0	6.3	3.0	LA	10.5	4 5/16	3 11/16	5 5/16	3 5/16	2 11/16	—	10-32 x ½
	HRP-600	300 CT	600	6.3	2.5	6.3	2.5	LA	10.5	4 5/16	3 11/16	5 5/16	3 5/16	2 11/16	—	10-32 x ½
	HRP-800	200 CT	800	6.3	2.0	6.3	2.0	LA	10.0	4 5/16	3 11/16	5 5/16	3 5/16	2 11/16	—	10-32 x ½
	HRP-1600	100 CT	1600	6.3	1.5	6.3	1.5	LA	10.5	4 5/16	3 11/16	5 5/16	3 5/16	2 11/16	—	10-32 x ½
	HRP-2000	80 CT	2000	6.3	1.5	6.3	1.5	LA	9.6	4 5/16	3 11/16	5 5/16	3 5/16	2 11/16	—	10-32 x ½
	HRP-2500	60 CT	2500	6.3	1.5	6.3	1.5	LA	9.0	4 5/16	3 11/16	5 5/16	3 5/16	2 11/16	—	10-32 x ½

All Secondary AC Voltages ± 3%.

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PE

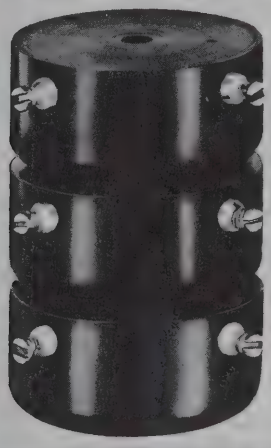


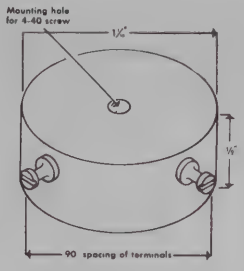
LPF-2

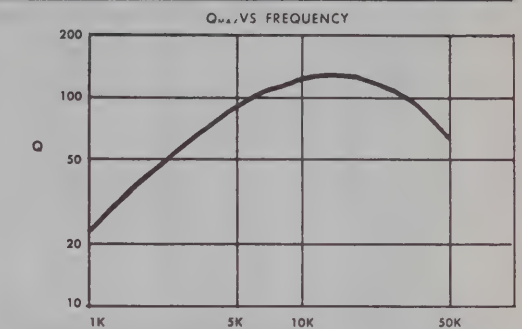
TOROIDAL INDUCTORS: TF5RX20ZZ Inductance Tolerance ± 1%, Max Altitude — 10,000 ft.

a

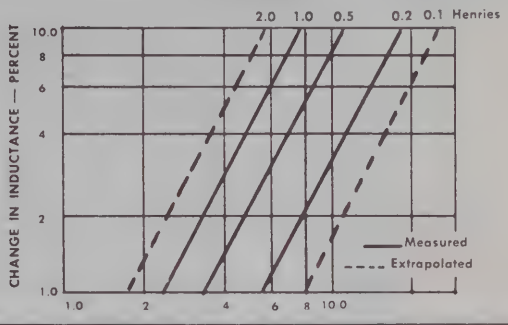
Catalog No.	Inductance (m.h.)	D.C. Res. (ohms)	Catalog No.	Inductance (m.h.)	D.C. Res. (ohms)
TM-1A	1	.32	TM-80A	80	29.5
TM-2A	2	.72	TM-100A	100	32.5
TM-5A	5	1.85	TM-200A	200	71.5
TM-8A	8	2.25	TM-500A	500	185
TM-10A	10	3.25	TM-800A	800	300
TM-20A	20	7.0	TM-1000A	1000	340
TM-50A	50	18.5			







PERCENT CHANGE IN INDUCTANCE FROM 1000 C.P.S. VALUE WITH FREQUENCY



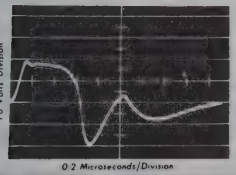
PULSE TRANSFORMERS: RATIO 1:1:1 Fits 7 Pin Miniature Tube Socket

b

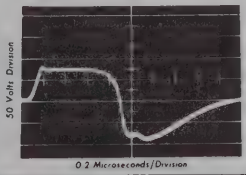
Catalog No.	Nominal Pulse Width in Microseconds	Rise Time in Microseconds	Height	Width	Depth	Aprox. Wt. Lbs.
PE-50	0.5	.07	9/16	9/16	9/16	.01
PE-75	0.75	.07	9/16	9/16	9/16	.01
PE-100	1	.06	9/16	9/16	9/16	.01
PE-200	2	.05	¾	11/16	11/16	.01
PE-500	5	.07	¾	11/16	11/16	.01
PE-700	7	.1	¾	11/16	11/16	.01

TYPICAL OSCILLOGRAPHS

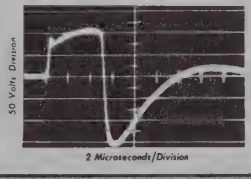
PE-50



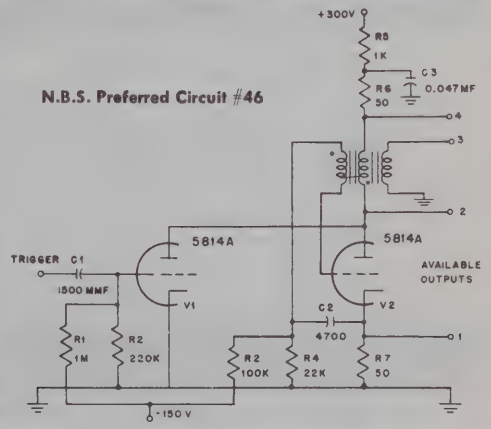
PE-75



PE-500



N.B.S. Preferred Circuit #46



LOW PASS FILTER LPF-2

c

For attenuating frequencies above 3,000 cycles in low level speech amplifiers.

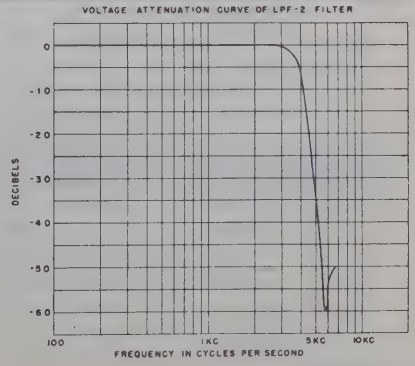
Originally designed and intended for commercial aircraft communication service, the LPF-2 can be advantageously employed in all types of amateur, police and commercial voice communication equipment.

Electrically, the filter operates out of a source impedance of 50,000 ohms (plate of a 6C4, 6J5 or equivalent) to a 50,000 ohm grid.

The low pass filter will function satisfactorily at input signal levels up to 10 volts RMS. A plate blocking condenser must be used between the input of the filter and the preceding audio amplifier stage, since none is incorporated in the filter proper. The insertion loss of the LPF-2 is relatively low, being in the order of 0.8 db. If greater attenuation than that which can be obtained from a single section is desired or required, two sections can be cascaded. Shipping weight: 8¾ oz.

CASE DIMENSIONS:

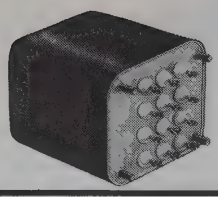
A—1½ B—2¼ C—1½ D—2⅛ E—Center hole only F—1⅞

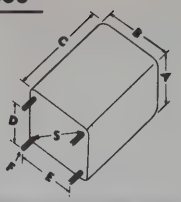


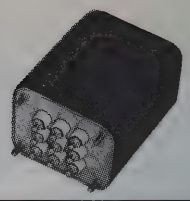
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STANCOR
MILITARY

filter reactors
filament trans.







FILTER REACTORS: TF4RX04YY

Max. Altitude — 10,000 ft.

	Catalog No.	Ind. Henries	Max. D.C. Ma.	D.C. Res. in Ohms	Insul. Test RMS V.	Wt. Lbs.	YY Alternate Case Dimensions A	B	C	D	E	F
a	RH-1510	15	10	680	1000	1	1.546	1.546	1.955	1.000	1.000	6-32
	RH-1520	15	20	680	1000	1	1.546	1.546	1.955	1.000	1.000	6-32
	RH-1540	15	40	475	2500	1 1/2	2.241	2.101	2.680	1.562	1.375	6-32
	RH-1055	10	55	230	2500	1 3/4	2.241	2.101	2.930	1.562	1.375	6-32
	RH-1555	15	55	420	2500	2	2.241	2.101	2.930	1.562	1.375	6-32
	RH-1085	10	85	175	2500	2 1/2	2.521	2.381	3.049	1.812	1.687	6-32
	RH-1585	15	85	285	2500	2 3/4	2.521	2.381	3.049	1.812	1.687	6-32
	RH-8105	8	105	100	2500	3 3/4	2.861	2.711	3.742	2.000	1.875	8-32
	RH-12105	12	105	170	2500	4	2.861	2.711	3.742	2.000	1.875	8-32
	RH-8150	8	150	100	2500	5 1/4	3.245	2.979	3.867	2.375	2.125	8-32
	RH-12150	12	150	150	2500	5 1/2	3.245	2.979	4.242	2.375	2.125	8-32
	RH-8200	8	200	85	2500	7	3.667	3.292	4.305	2.625	2.375	10-32
	RH-12200	12	200	140	2500	7	3.667	3.292	4.305	2.625	2.375	10-32
	RH-8250	8	250	90	2500	10 1/2	4.573	4.120	5.318	3.375	3.000	10-32
	RH-8300	8	300	60	3500	12 1/2	4.573	4.120	5.318	3.375	3.000	10-32

FILAMENT TRANSFORMERS: TF4RX01YY

Primary 115/230 Volts 50–60 Cycles Max. Altitude — 10,000 ft.

	Catalog No.	Secondary Volts	Secondary Amps	Insulation Test Volts RMS	Wt. Lbs.	YY Alternate Case Dimensions A	B	C	D	E	F
b	FH-25	2.5 CT	5.25	3500	2	2.521	2.381	3.299	1.812	1.687	6-32
	FH-210	2.5 CT	10.	5000	3	2.521	2.381	3.299	1.812	1.687	6-32
	FH-210H	2.5 CT	10.	9000	4	3.245	2.979	4.242	2.375	2.125	8-32
	FH-215H	2.5 CT	15.	9000	5 1/4	3.667	3.292	4.680	2.625	2.375	10-32
	FH-54	5.0 CT	4.	2500	2 1/4	2.521	2.381	3.299	1.812	1.687	6-32
	FH-58	5.0 CT	10.	2500	3 1/2	2.861	2.711	3.742	2.000	1.875	8-32
	FH-510H	5.0 CT	10.	8000	6	3.667	3.292	4.680	2.625	2.375	10-32
	FH-520HB	5.0 CT	20.	10000	13	5.323	4.792	6.068	3.375	3.000	12-24
	FH-615	6.3 CT	1.5	2500	1	2.241	2.101	2.680	1.562	1.375	6-32
	FH-63	6.3 CT	3.	2500	2	2.521	2.381	3.049	1.812	1.687	6-32
	FH-65	6.3 CT	5.5	2500	3	2.861	2.711	3.492	2.000	1.875	8-32
	FH-610	6.3 CT	10.	2500	5	3.245	2.979	4.242	2.375	2.125	8-32
	FH-104	10.0 CT	4.	2500	3 1/4	2.861	2.711	3.742	2.000	1.875	8-32

FILAMENT TRANSFORMERS: TF4RX01 — —†

Primary 105/115/125 Volts, 50–60 Cycles Max. Altitude — 10,000 ft.

	Catalog No.	Sec. No. 1	Sec. No. 2	Sec. No. 3	Insul. Test	Case Size†	Wt. Lbs.	MS Case Dimensions A	B	C	D	E	F
c	FMS-1	5 V. 2A	6.3 V. CT 2.5A	—	2500 V.	GA	3 1/2	2 3/4	2 3/8	3 13/16	2 1/8	1 3/4	6-32 x 3/8
	FMS-2	5 V. 2A	12.6 V. CT 1.25A	—	2500 V.	GA	3 1/2	2 3/4	2 3/8	3 13/16	2 1/8	1 3/4	6-32 x 3/8
	FMS-3	5 V. 3A	6.3 V. CT 5A	—	2500 V.	HA	4	3 1/16	2 5/8	4 1/4	2 19/64	1 55/64	8-32 x 3/8
	FMS-4	5 V. 3A	6.3 V. CT 3A	6.3 V. CT 3A	2500 V.	JB	4 3/4	3 9/16	3 1/16	3 7/8	2 5/8	2 1/8	8-32 x 3/8
			←12.6 V. CT 3A→										
	FMS-5	5 V. 3A	6.3 V. CT 1A	6.3 V. CT 5A	2500 V.	JB	4 3/4	3 9/16	3 1/16	3 7/8	2 5/8	2 1/8	8-32 x 3/8
	FMS-6	6.3 V. CT 3A	6.3 V. CT 3A	—	2500 V.	HA	4	3 1/16	2 5/8	4 1/4	2 19/64	1 55/64	8-32 x 3/8
		←12.6 V. CT 3A→											
	FMS-7	6.3 C. CT 6A	6.3 V. CT 6A	—	2500 V.	KA	6 1/2	3 15/16	3 3/8	5 1/4	3	2 7/16	10-32 x 1/2
		←12.6 V. CT 6A→											
	FMS-8	5V. CT 3A	5 V. CT 3A	5 V. CT 6A	5000 V.	KA	7	3 15/16	3 3/8	5 1/4	3	2 7/16	10-32 x 1/2

FILAMENT TRANSFORMERS: TF4SX01 — —†

Primary 105/115/125 Volts, 380-1000 cycles
Max. Altitude — 70,000 ft. Max. Ambient Temp. 85°C

	Catalog Number	Sec. Volts	Sec. Amps.	Insul. Test Volts RMS	Case Size†	Wt. Lbs.	MS Case Dimensions A	B	C	D	E	S	F
d	4FMS-63	6.3 CT	3	2,500	EB	1	1 15/16	1 13/16	2 7/16	1 3/8	1 1/4	—	6-32 x 3/8
	4FMS-65	6.3 CT	5.5	2,500	EA	1 1/4	1 15/16	1 13/16	2 3/4	1 3/8	1 1/4	—	6-32 x 3/8
	4FMS-610	6.3 CT	10	2,500	FA	2	2 5/16	2 1/16	3 1/8	1 11/16	1 7/16	—	6-32 x 3/8
	4FMS-620	6.3 CT	20	2,500	GA	2 1/2	2 3/4	2 3/8	3 13/16	2 1/8	1 3/4	—	6-32 x 3/8
	4FMS-2415	24 CT	1.5	1,500	EA	1.2	1 15/16	1 13/16	2 3/4	1 3/8	1 1/4	—	6-32 x 3/8
	4FMS-1208	12.6 CT 12.6	0.8 0.8	1 500 1,500	AJ	0.8	1 5/8	1 5/8	2 3/8	1 3/16	1 3/16	—	6-32 x 3/8
	4FMS-122	12.6 CT 12.6	2.0 2.0	1,500 1,500	EA	1.3	1 15/16	1 13/16	2 3/4	1 3/8	1 1/4	—	6-32 x 3/8

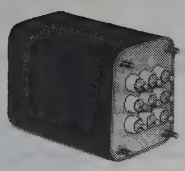
FILAMENT TRANSFORMERS: TF4SX01YY

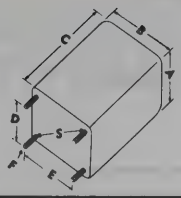
Primary 105/115/125 Volts, 380-1000 Cycles
Max. Altitude — 10,000 ft. Max. Ambient Temp. 85°C

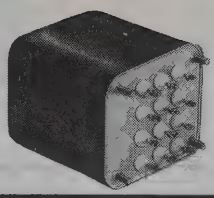
	Catalog Number	Sec. Volts	Sec. Amps.	Insul. Test Volts RMS	Wt. Lbs.	YY Alternate Case Dimensions A	B	C	D	E	S	F
e	4FH-63	6.3 CT	3	2,500	3/4	1.901	1,791	2.205	1.312	1.062	—	6-32
	4FH-65	6.3 CT	5.5	2,500	1	1.901	1.791	2.424	1.312	1.062	—	6-32
	4FH-610	6.3 CT	10	2,500	1 3/4	2.241	2,101	2,930	1.562	1.375	—	6-32
	4FH-620	6.3 CT	20	2,500	2 1/2	2.521	2.381	3.299	1.812	1:687	—	6-32

All Secondary AC Voltages ±3%.

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STANCOR
MILITARY
400 cycle transformers

FOR CAPACITOR INPUT SYSTEMS: TF4SX03— —† Primary 105/115/125 Volts, 380-1000 cycles Max. Altitude — 70,000 ft. Max. Ambient Temp. 85°C

	Catalog Number	High Voltage Secondary A.C. Volts	High Voltage Secondary D. C. Ma.	Rectifier Filament Volts	Rectifier Filament Amps.	Other Filaments Volts	Other Filaments Amps.	Case† Size	Wt. Lbs.	MS Case Dimensions A	B	C	D	E	S	F
a	4PMS-40	255-0-255	40	5.0	2	6.3 CT	2	GB	1 1/2	2 3/4	2 3/8	2 13/16	2 1/8	1 3/4	—	6-32 x 3/8
	4PMS-55	270-0-270	55	5.0	2	6.3 CT	2	GB	1 3/4	2 3/4	2 3/8	2 13/16	2 1/8	1 3/4	—	6-32 x 3/8
	4PMS-70	335-0-335	70	5.0	2	6.3 CT	3	GB	1 3/4	2 3/4	2 3/8	2 13/16	2 1/8	1 3/4	—	6-32 x 3/8
	4PMS-85	330-0-330	85	5.0	2	6.3 CT	3	GA	2 1/2	2 3/4	2 3/8	3 13/16	2 1/8	1 3/4	—	6-32 x 3/8
	4PMS-105	345-0-345	105	5.0	2	6.3 CT	3.5	GA	2 1/4	2 3/4	2 3/8	3 13/16	2 1/8	1 3/4	—	6-32 x 3/8
	4PMS-120	375-0-375	120	5.0	3	6.3 CT	4	HA	3 1/2	3 1/16	2 5/8	4 1/4	2 19/64	1 55/64	—	8-32 x 3/8
	4PMS-150	370-0-370	150	5.0	3	6.3 CT	4	JB	4 1/4	3 1/16	3 1/16	3 7/8	2 5/8	2 1/8	—	8-32 x 3/8
						6.3 CT	1									
	4PMS-165	440-0-440	165	5.0	3	6.3	7.5	KB	6 1/2	3 13/16	3 3/8	4 5/16	3	2 7/16	—	10-32 x 1/2
						6.3	3									
						6.3	3									
						6.3	0.6									
	4PMS-200A	450-0-450	200	5.0	2	6.3	4	KB	6 1/4	3 13/16	3 3/8	4 5/16	3	2 7/16	—	10-32 x 1/2
						6.3	4									
						6.3	0.6									
		550-370-75-0	300	5.0	6	6.3 CT	5									
	4PMS-300*	75-370-550				6.3 CT	1	KA	7 1/2	3 13/16	3 3/8	5 1/4	3	2 7/16	—	10-32 x 1/2

FOR CAPACITOR INPUT SYSTEMS: TF4SX03YY Primary 105/115/125 Volts. 380-1000 Cycles Max. Altitude 10,000 ft. Max. Ambient Temp. 85°C

	Catalog Number	High Voltage Secondary A.C. Volts	High Voltage Secondary D.C. Ma.	Rectifier Filament Volts	Rectifier Filament Amps.	Other Filaments Volts	Other Filaments Amps.	Wt. Lbs.	YY Alternate Case Dimensions A	B	C	D	E	S	F
b	4PHC-55	270-0-270	55	5.0	2	6.3 CT	2	1 1/2	2.241	2.101	2.930	1.562	1.375	—	6-32
	4PHC-70	335-0-335	70	5.0	2	6.3 CT	3	1 3/4	2.241	2.101	2.930	1.562	1.375	—	6-32
	4PHC-120	375-0-375	120	5.0	3	6.3 CT	4	2 1/2	2.861	2.711	3.742	2.000	1.875	—	8-32
	4PHC-165	440-0-440	165	5.0	3	6.3	7.5	6	3.667	3.292	4.305	2.625	2.375	—	10-32
						6.3	3								
						6.3	3								
						6.3	0.6								
	4PHC-200A	450-0-450	200	5.0	2	6.3	4	5 3/4	3.667	3.292	4.305	2.625	2.375	—	10-32
						6.3	4								
						6.3	0.6								
		550-370-75-0	300	5.0	6	6.3 CT	5								
	4PHR-300*	75-370-550				6.3 CT	1	6 1/2	3.667	3.292	4.680	2.625	2.375	—	10-32

FILTER REACTORS: TF4SX04— —†Max. Altitude 70,000 ft. Max. Ambient Temp. 85°C

	Catalog Number	Inductance (henries)	Maximum D. C. Ma.	D. C. Resistance (ohms)	Insul. Test Volts RMS	Case† Size	Wt. Lbs.	MS Case Dimensions A	B	C	D	E	S	F
c	4RMS-240	2.0	40	190	2,500	AH	1/4	1 5/16	1 5/16	1 3/4	—	—	1 1/4	6-32 x 3/8
	4RMS-255	2.0	55	160	2,500	AH	1/4	1 5/16	1 5/16	1 3/4	—	—	1 1/4	6-32 x 3/8
	4RMS-270	2.0	70	165	2,500	AJ	3/4	1 5/8	1 5/8	2 3/8	1 3/16	1 3/16	—	6-32 x 3/8
	4RMS-285	2.0	85	135	2,500	AH	3/8	1 5/16	1 5/16	1 3/4	—	—	1 1/4	6-32 x 3/8
	4RMS-2105	2.0	105	110	2,500	EB	1/2	1 15/16	1 13/16	2 7/16	1 3/8	1 1/4	—	6-32 x 3/8
	4RMS-2120	2.0	120	100	2,500	EB	1	1 15/16	1 13/16	2 7/16	1 3/8	1 1/4	—	6-32 x 3/8
	4RMS-3120	3.0	120	150	1,500	EB	1.2	1 15/16	1 13/16	2 7/16	1 3/8	1 1/4	—	6-32 x 3/8
	4RMS-2150	2.0	150	95	2,500	EB	1	1 15/16	1 13/16	2 7/16	1 3/8	1 1/4	—	6-32 x 3/8
	4RMS-2165	2.0	165	90	2,500	EB	1	1 15/16	1 13/16	2 7/16	1 3/8	1 1/4	—	6-32 x 3/8
	4RMS-2200	2.0	200	73	2,500	FA	2	2 5/16	2 1/16	3 1/8	1 11/16	1 7/16	—	6-32 x 3/8
	4RMS-2300	2.0	300	47	2,500	HA	4	3 1/16	2 5/8	4 1/4	2 19/64	1 55/64	—	8-32 x 3/8

FILTER REACTORS: TF4SX04YY Max. Altitude 10,000 ft. Max. Ambient Temp. 85°C

	Catalog Number	Inductance (henries)	Maximum D.C. Ma.	D.C. Resistance (ohms)	Insul. Test Volts RMS	Wt. Lbs.	YY Alternate Case Dimensions A	B	C	D	E	S	F
d	4RH-255	2.0	55	160	2,500	1/4	1.198	1.198	2.008	—	—	1.156	6-32
	4RH-270	2.0	70	165	2,500	1/2	1.361	1.361	2.037	—	—	1.312	6-32
	4RH-2120	2.0	120	100	2,500	1	1.901	1.791	2.424	1.312	1.062	—	6.32
	4RH-2165	2.0	165	90	2,500	1 1/2	1.901	1.791	2.424	1.312	1.062	—	6-32
	4RH-2200	2.0	200	73	2,500	1 3/4	2.241	2.101	2.930	1.562	1.375	—	6-32
	4RH-2300	2.0	300	47	2,500	3 1/4	2.861	2.711	3.492	2.000	1.875	—	8-32

ISOLATION: TF4RX01— —† Primary 115 Volts, 380-1000 Cycles Max. Altitude 70,000 ft. Max. Ambient Temp. 85°C

	Catalog No.	Secondary Volts	Secondary Amps.	V.A.	Insul. Test Volts RMS	Case Size†	Wt. Lbs.	MS Case Dimensions A	B	C	D	E	S	F
e	41MS-40	115	0.35	40	1,500	EA	1.5	1 15/16	1 13/16	2 3/4	1 3/8	1 1/4	—	6-32 x 3/8
	41MS-160	115	1.39	160	1,500	GA	3.1	2 3/4	2 3/8	3 13/16	2 1/8	1 3/4	—	6-32 x 3/8

THREE-PHASE Y-Y: TF4RX01YY Primary 115 Volts Line to Line 400 Cycle Max. Altitude 10,000 ft.

	Catalog Number	Secondary Volts	Secondary Va. Cap.	Weight Lbs.	YY Alternate Case Dimensions A	B	C	D	E	S	F
f	HP3-140	28.5	140	3	2,861	2.711	3.742	2.000	1.875	—	8-32

All secondary AC Voltages ±3%. *For Reactor Input Systems.

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STANCOR
COMMERCIAL
t.v. replacement

T.V. REPLACEMENT FLYBACKS

REFER TO STANCOR T.V. REPLACEMENT GUIDE FOR APPLICATION

Part No.	Mtg. Type	Part No.	Mtg. Type	Part No.	Mtg. Type	Part No.	Mtg. Type
A-B119/HO-155	1	A-8265/HO-215	8	HO-275	16	HO-333	40
A-8127/HO-156	1	A-8266/HO-216	31	HO-276	48	HO-334	40
A-8128/HO-157	1	A-8267/HO-217	32	HO-277	47	HO-335	40
A-8129/HO-158	1	A-8268/HO-218	32	HO-278	59	HO-336	56
A-8130/HO-159	2	A-8269/HO-219	33	HO-279	55	HO-337	54
A-8131/HO-160	3	A-8270/HO-220	33	HO-280	56	HO-338	2
A-8132/HO-161	4	A-8271/HO-221	33	HO-281	24	HO-339	32
A-8133/HO-162	5	A-8272/HO-222	33	HO-282	56	HO-340	67
A-8134/HO-163	5	A-8273/HO-223	62	HO-283	58	HO-341	Coil Only
A-8135/HO-164	6	A-8274/HO-224	34	HO-284	59	HO-342	56
A-8136/HO-165	7	A-8275/HO-225	35	HO-285	58	HO-343	55
A-8137/HO-166	8	A-8276/HO-226	35	HO-286	24	HO-344	55
A-8138/HO-167	8	A-8277/HO-227	35	HO-287	60	HO-345	63
A-8139/HO-168	9	A-8278/HO-228	8	HO-288	61	HO-346	63
A-8220/HO-169	10	A-8279/HO-229	8	HO-289	58	HO-347	64
A-8221/HO-170	10	A-8280/HO-230	8	HO-290	53	HO-348	65
A-8222/HO-171	11	A-8281/HO-231	30	HO-291	59	HO-349	66
A-8223/HO-172	8	A-8282/HO-232	22	HO-292	58	HO-350	40
A-8224/HO-173	12	A-8283/HO-233	8	HO-293	56	HO-351	26
A-8225/HO-174	12	A-8284/HO-234	36	HO-294	9	HO-352	65
A-8226/HO-175	12	A-8285/HO-235	37	HO-295	9	HO-353	61
A-8227/HO-176	13	A-8287/HO-237	6	HO-296	58	HO-354	40
A-8228/HO-177	13	A-8288/HO-238	31	HO-297	50	HO-355	40
A-8229/HO-178	13	A-8289/HO-239	31	HO-298	44	HO-356	40
A-8230/HO-179	14	A-8290/HO-240	31	HO-299	44	HO-357	40
A-8231/HO-180	14	A-8291/HO-241	38	HO-300	38	HO-358	61
A-8232/HO-181	16	A-8292/HO-242	26	HO-301	26	HO-359	40
A-8233/HO-182	8	A-8293/HO-243	39	HO-302	26	HO-360	62
A-8234/HO-183	17	A-8294/HO-244	40	HO-303	26	HO-361	53
A-8235/HO-184	17	A-8295/HO-245	40	HO-304	26	HO-362	68
A-8236/HO-185	39	A-8296/HO-246	41	HO-305	20	HO-363	68
A-8237/HO-186	18	A-8297/HO-247	30	HO-306	24	HO-364	68
A-8238/HO-188	18	A-8298/HO-248	42	HO-307	54	HO-365	68
A-8239/HO-189	19	A-8299/HO-249	30	HO-308	54	HO-366	68
A-8240/HO-190	4	HO-250	41	HO-309	9	HO-367	68
A-8241/HO-191	20	HO-251	41	HO-310	8	HO-368	67
A-8242/HO-192	21	HO-252	43	HO-311	38	HO-369	67
A-8243/HO-193	17	HO-253	44	HO-312	9	HO-370	67
A-8244/HO-194	22	HO-254	43	HO-313	8	HO-371	40
A-8245/HO-195	23	HO-255	45	HO-314	8	HO-372	40
A-8246/HO-196	23	HO-256	8	HO-315	42	HO-373	40
A-8247/HO-197	24	HO-257	42	HO-316	50	HO-374	40
A-8248/HO-198	12	HO-258	15	HO-317	26	HO-375	55
A-8249/HO-199	16	HO-259	13	HO-318	26	HO-376	49
A-8250/HO-200	14	HO-260	30	HO-319	40	HO-377	44
A-8251/HO-201	8	HO-261	20	HO-320	40	HO-378	44
A-8252/HO-202	8	HO-262	47	HO-321	53	•HO-379	40
A-8253/HO-203	25	HO-263	48	HO-322	22	•HO-380	68
A-8254/HO-204	26	HO-264	42	HO-323	26	•HO-381	40
A-8255/HO-205	26	HO-265	49	HO-324	42	•HO-382	40
A-8256/HO-206	27	HO-266	50	HO-325	45	•HO-383	40
A-8257/HO-207	27	HO-267	62	HO-326	2	•HO-384	40
A-8258/HO-208	28	HO-268	35	HO-327	27	•HO-385	40
A-8259/HO-209	27	HO-269	35	HO-328	27	•HO-386	40
A-8260/HO-210	27	HO-270	62	HO-329	27	•HO-387	26
A-8261/HO-211	2	HO-271	52	HO-330	55	•HO-388	40
A-8262/HO-212	29	HO-272	53	HO-331	14	•HO-600C†	69
A-8263/HO-213	20	HO-273	30	HO-332	27	•HO-601C†	70
A-8264/HO-214	30	HO-274	54				

•New Part Number. †For Color T.V.

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FLYBACK MOUNTING TYPES

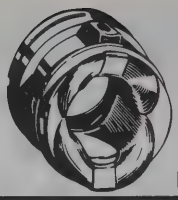
STANCOR
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t.v. replacement



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DY


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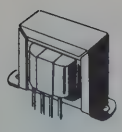
DEFLECTION YOKES

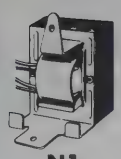
Refer to Stancor T.V. replacement guide for Application.

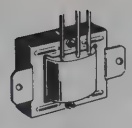
	Part No.	Coil Inductance in MH		Coil Resistance in Ohms		Max. Scan.	Case Diam.	Unit Length	Mtg. Type	Application
		Horizontal	Vertical	Horizontal	Vertical					
a	DY-1A	8.3	50	13.5	66	53°	3 1/8	3	DY	Multi-Purpose
	DY-2A	10.3	50	14.5	66	70°	3 1/8	2 3/4	DY	Multi-Purpose
	DY-8A	8.5	50	14.5	52.5	70°	3 1/8	2 3/4	DY	Multi-Purpose
	DY-9A	13.5	50	17.5	53.5	70°	3 1/8	2 3/4	DY	Multi-Purpose
	DY-10A	30.0	3.5	45	3.5	70°	3 1/8	2 3/4	DY	Multi-Purpose
	DY-11A	20.0	50	31	50	70°	3 1/8	2 3/4	DY	Multi-Purpose
	DY-12A	30.0	50	22	50	70°	3 1/8	2 3/4	DY	Multi-Purpose
b	DY-13A	12.5	48	15	52	90°	3 1/2	3	DY	Muntz
	DY-14A	30.0	3.5	45	3.5	70°	3 1/8	2 3/4	DY	RCA
	DY-15A	25.0	40.0	35	50	70°	3 1/8	2 3/4	DY	Motorola
	DY-16A	20	44.0	26	45	90°	3 7/8	3 1/8	DY	Multi-Purpose
	DY-17A	12.0	42.0	20	43	90°	3 3/4	3	DY	G. E.
	DY-18A	14.5	41.5	18	50	70°	3 1/4	3 1/4	DY	Sylvania
	DY-19A	20.0	41.5	28	50	70°	3 1/4	3 1/4	DY	Sylvania
c	DY-20A	20.0	41.5	28	50	70°	3 1/4	3 1/4	DY	Sylvania
	DY-21A	14.5	3.1	10	3.5	70°	3 1/8	2 7/8	DY	RCA
	DY-22A	20	46.0	25	45	70°	3 1/8	2 7/8	DY	Hoffman
	DY-23A	20.0	45.0	27	43	90°	3 3/4	3 1/8	DY	RCA
	DY-24A	18.5	11.0	34	11.5	90°	4	2 3/4	DY	RCA
	DY-25A	24.0	11.0	46	11.0	90°	4	2 3/4	DY	Emerson
	DY-26A	19.0	11.5	34	16.5	110°	4 1/4	2 1/4	DY	RCA
	DY-27A	17.5	12.3	35.5	13.5	110°	4 1/4	2 1/4	DY	RCA
d	DY-28A	24	3.2	36	3.4	70°	3 1/4	2 7/8	DY	Motorola
	DY-29A	24	3.2	36	3.4	70°	3 1/4	2 7/8	DY	Motorola
	DY-30A	24	3.2	36	3.4	70°	3 1/4	2 7/8	DY	Motorola
	DY-31A	24	42	44.2	42	90°	4 1/4	3 1/4	DY	Motorola
	DY-32A	24	42	34	42	90°	4 1/8	3 1/4	DY	Motorola
	DY-33A	30.5	43	34	50	70°	3 3/4	2 1/2	DY	Philco
	DY-34A	30	47	45	42	90°	3 3/4	2 3/4	DY	Philco
e	DY-35A	20	45	28	45	90°	4	3	DY	Philco
	DY-36A	24	40	43	37	90°	3 1/2	4	DY	Emerson
	DY-37A	20	45	28	45	90°	4	3 1/4	DY	Emerson
	DY-38A	20	34.4	38	34	110°	4 1/4	3 3/4	DY	Emerson
	DY-39A	13	40	22	41	90°	4	3 1/4	DY	Zenith
	DY-40A	12	40	17	39	110°	4 1/4	3 3/4	DY	G. E.
	DY-41A	13.3	41	20	54	70°	3 1/4	3	DY	RCA
	DY-42A	30.4	34	47.2	34	110°	4 1/4	3 3/4	DY	RCA
f	DY-43A	24	3.3	31	3	90°	4	3	DY	Motorola
	DY-44A	18.5	34	33	34	110°	4 1/4	2 1/8	DY	Westinghouse
	DY-45A	18.6	14.8	35	13.8	110°	4 1/4	3 3/4	DY	Admiral
	DY-46A	20	40	38	39	110°	4 1/4	3 3/4	DY	Olympic
	DY-47A	8.2	41	19.7	72	70°	3 1/2	2 1/2	DY	G. E.
	DY-48A	14	29	33	60	70°	3 1/2	2 1/2	DY	G. E.
	DY-49A	44	38	110	80	70°	3 3/8	2 7/8	DY	G. E.
	DY-50A	12	33	28	83	70°	3 3/8	2 3/8	DY	G. E.
g	DY-51A	18.6	15	38	17.2	110°	3 3/4	3	DY	Packard-Bell
	DY-52A	20.5	37.5	30	35	90°	3 1/4	3 3/4	DY	Westinghouse
	DY-53A	24	39	40	37.0	110°	3 1/8	3 3/8	DY	Philco
	DY-54A	24	40	40	37	110°	3 1/4	3 1/4	DY	Philco
	DY-55A	23.5	14.8	41	13.8	114°	3 1/2	3 3/4	DY	Magnavox
	DY-56A	15	40	29.5	39.5	110°	3 3/4	3 1/4	DY	Zenith
h	• DY-57AT	24	70	40	29	114°	3 1/4	2 3/4	DY	Multi-Purpose
	• DY-58AT	18.5	70	30	29	114°	3 1/4	2 3/4	DY	Multi-Purpose
	• DY-59AT	24	15	40	6	114°	3 1/4	2 3/4	DY	Multi-Purpose
	• DY-60AT	18.5	35	35	28	114°	3 1/4	2 3/4	DY	Multi-Purpose
	• DY-61AT	20	20	22	5.5	114°	3 1/4	2 3/4	DY	Multi-Purpose
	• DY-90AC	12	39	6.5	23	70°	6 7/8	4 1/4	DY	Multi-Purpose

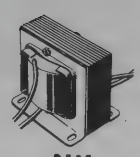
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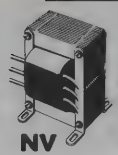
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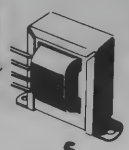

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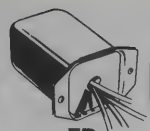

N1


N2


NH


NV


S


TD


TS

STANCOR
COMMERCIAL
t.v. replacement

VERTICAL DEFLECTION OUTPUT TRANSFORMERS: Refer to Stancor T.V. replacement guide for Application.

	Part No.	Turns Ratio Pri./Sec.	Primary Impedance#	D.C. Res. In Ohms Pri.	D.C. Res. In Ohms Sec.	Height Overall	Base Area	Mtg. Ctrs.	Mtg. Type	Shpg. Wt. In Lbs.
a	A-8112/VO-83	10:1	18,000 Ω @ 12 DCMA	1300	10	2	1 3/4 x 3 1/4	2 13/16	A	1.0
	A-8113/VO-84	8:8:1	16,500 Ω @ 10 DCMA	700	12	2	1 3/4 x 3 1/4	2 13/16	A	1.0
	A-8115/VO-85	10:1	19,000 Ω @ 13 DCMA	600	7	3 1/16	2 1/2 x 2 1/2	1 19/32 x 2	NV	2.5
	A-8123/VO-87§	11.4:1	17,000 Ω @ 20 DCMA	1200	11	2	1 3/4 x 3 1/4	2 13/16	A	1.2
	A-8140/VO-88	44:1	11,000 Ω @ 20 DCMA	400	0.3	3 1/16	2 1/2 x 2 1/2	1 19/32 x 2	NV	2.5
	A-8141/VO-89§	18:1	30,000 Ω @ 10 DCMA	1650	4.5	2 1/4	3 3/4 x 2 1/8	3 1/8	A	1.5
	A-8142/VO-90	8:1	19,000 Ω @ 13 DCMA	540	10.5	2 5/8	2 1/4 x 3	2 3/8 x 1 5/8	NH	2 1/2
	A-8143/VO-91	10:1	14,000 Ω@ 15 DCMA	625	14	2 1/4	2 1/4 x 3 5/8	3 1/8	A	2
	A-8144/VO-92	9:1	9,500 Ω @ 30 DCMA	540	15	2 1/4	1 3/4 x 3 5/8	3 1/8	A	1 1/2
b	A-8145/VO-93	9:1	11,000 Ω @ 19 DCMA 6,000 Ω @ 15 DCMA	540	14	2 5/8	2 1/4 x 2 1/2	3	N1	2
	A-8146/VO-94§▲	6.9:1	4,700 Ω @ 50 DCMA	375	10	2	1 7/8 x 3 1/4	2 13/16	A	1 1/2
	A-8147/VO-95§	6:1	3,200 Ω @ 40 DCMA 6,000 Ω @ 15 DCMA	300	9	2	1 3/4 x 3 1/4	2 13/16	A	1
	A-8148/VO-96§▲	8:1	4,700 Ω @ 50 DCMA	375	6.5	2	1 7/8 x 3 1/4	2 13/16	A	1 1/2
	A-8149/VO-97§	6.9:1	11,500 Ω @ 20 DCMA	330	8.5	2	1 5/8 x 3 1/4	2 13/16	A	1
	A-8150/VO-98§	9:1	11,000 Ω @ 19 DCMA	450	11.3	2	3 3/4 x 2 3/16	3 5/16	N2	1.7
	A-8151/VO-99	7.5/15:1	8,500 Ω @ 19 DCMA	580	6.7	2 1/4	3 3/4 x 2 1/4	3 1/8	N1	1.7
c	VO-100§◆	9.2:1	7,500 Ω @ 30 DCMA	360	14.0	2 1/8	3 5/8 x 1 7/8	3 1/8	A	1 1/2
	VO-101§	12:1	16,000 Ω @ 15 DCMA	675	6.8	2 1/4	3 5/8 x 1 3/4	3 1/8	A	1 1/2
	VO-102§	6.5:1	6,700 Ω @ 25 DCMA	275	10	2 5/8	4 x 2 1/4	3 5/16	A	2 1/2
	VO-103§	16:1	10,000 Ω @ 15 DCMA	530	5.5	2	3 1/4 x 1 1/2	2 13/16	A	1 1/2
	VO-105§	44.5:1	24,000 Ω @ 15 DCMA	740	.8	2	3 1/4 x 1 1/2	2 13/16	A	1 1/2
	VO-106	35.5:1	35,000 Ω @ 0 DCMA	1400	3.8	1 5/8	2 7/8 x 1 1/2	2 3/8	A	1
	VO-108§	9:1	10,000 Ω @ 25 DCMA	350	10.3	2	3 1/4 x 2	2 13/16	A	1.3
	VO-109	Multi-Ratio 5:1 to 50:1	40 MA Max.	- -	—	2	3 1/4 x 2	2 13/16	Q	1.3
	VO-110	16:1	18,000 Ω @ 20 DCMA	1670	7.0	2	2 x 3 1/4	2 13/16	A	1.3
	VO-111	18-1	20,000 Ω @ 20 DCMA	1425	7.5	2	2 x 3 1/2	2 13/16	A	1.3
	VO-112	8:1	7,000 Ω @ 30 DCMA	384	3.5	2 1/4	3 5/8 x 2 1/8	3 1/8	A	1.8
d	VO-113§	15:1	13,000 Ω @ 20 DCMA	1435	19.7	2 5/16	1 3/4 x 2 15/16	2 3/8	S	1.3
	VO-114	6:1	5,000 Ω @ 30 DCMA	250	6.0	2	3 1/4 x 1 5/8	2 13/16	A	1
	VO-115§	12:1	7,000 Ω @ 35 DCMA	360	2.4	2 5/16	3 3/4 x 1 7/8	3 1/8	A	1.4
	VO-116	18:1	32,000 Ω @ 15 DCMA 11,000 Ω @ 30 DCMA	1500	5.3	2 5/16	3 3/4 x 1 13/16	3 1/8	A	1.5
	VO-117	13:1	9,500 Ω @ 25 DCMA 8,000 Ω @ 50 DCMA	275	4.0	2 5/16	3 3/4 x 2 3/16	3 1/8	A	2.0
	VO-118	8:1	9,000 Ω @ 35 DCMA 3,000 Ω @ 70 DCMA	350	4.0	2 5/16	3 3/4 x 2	3 1/8	A	1.6
	VO-119§	8:1	6,000 Ω @ 30 DCMA 4,500 Ω @ 60 DCMA	385	8.0	2 5/16	3 3/4 x 1 7/8	3 1/8	A	1.5
	VO-120§	7.5:1	7,800 Ω @ 35 DCMA 5,000 Ω @ 70 DCMA	235	6.0	2 5/16	3 3/4 x 2 1/16	3 1/8	A	1.8
e	VO-122§	6.5:1	3,500 Ω @ 45 DCMA 2,000 Ω @ 65 DCMA	145	4.0	2 5/16	3 3/4 x 1 7/8	3 1/8	A	1.5
	VO-123◆	7:1	5,300 Ω @ 35 DCMA 2,000 Ω @ 70 DCMA	180†	4.0	2 5/16	3 3/4 x 2	3 1/8	A	1.6
	VO-126§	14.5:1	6,000 Ω @ 40 DCMA 1,800 Ω @ 80 DCMA	260	1.4	2 5/16	3 3/4 x 2	3 1/8	A	1.6
	VO-127§	16:1	10,500 Ω @ 20 DCMA 8,000 Ω @ 40 DCMA	460	3.4	2 5/16	3 3/4 x 2	3 1/8	A	1.6
	•VO-128§▲	17:1	20,000 Ω @ 20 DCMA 4,800 Ω @ 45 DCMA	2250	8.0	2	2 x 3 1/4	2 13/16	A	1
	•VO-129§▲	11:1	6,000 Ω @ 50 DCMA 4,000 Ω @ 75 DCMA	430	4.5	2 3/16	2 x 3 3/4	3 1/8	A	1.6
	•VO-700C†	10:1	7,500 Ω @ 32 DCMA	370	20	2 5/16	2 3/8 x 3 3/4	3 1/8	A	1.6

VERTICAL BLOCKING-OSCILLATOR TRANSFORMERS

	Part No.	Turns Ratio Pri./Sec.	Height Overall	Base Area	Mounting Centers	Mounting Type	Shpg. Wt. In Lbs.
f	A-8111/VBO-194	1:4.2	1 3/8	1 1/2 x 2 1/2	2	A	0.4
	A-8121/VBO-195	1:4.2	1 3/4	1 1/2 x 2 5/16	1 15/16	TD	0.4
	A-8122/VBO-196	1:4.2	1 9/16	1 3/16 x 1 3/16	1 13/64	TS	0.3
	A-8125/VBO-198	1:4.2	1 3/16	2 3/16 x 1 1/4	1 3/4	A	0.4
	A-8126/VBO-199	1:1.5	1 3/4	1 1/2 x 2	1 3/4	S	0.5
	VBO-200	1:1.5	1 3/8	1 1/2 x 2 1/2	2	A	0.5
	VBO-201	1:3.33	1 3/16	2 3/16 x 1 1/4	1 3/4	A	0.4

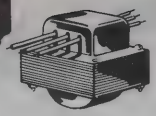
•New part No. †For color T.V. ▲Has vertical blanking winding. ◆Has screen grid tap. §Autoformer.

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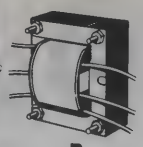
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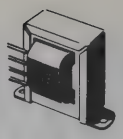
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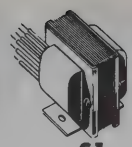

M2


M4


NV


R


S


S1


S2


TA

AUTO RADIO VIBRATOR TRANSFORMERS Exact Duplicate for 6 Volt D.C. Primary.

	Part No.	Original Part No.	Trade Name	D.C. Volts at Filter Input	D.C. MA.	Mtg. Type	Recommended Buffer Cap. (mfd.)	Height Overall	Base Area	Shpg. Wt. In Lbs.
a	P-6471	25B472533 D71014	Motorola (408, 508, etc.) Colonial-Detrola No. 8072	235	70	TA	0.006	3	2 3/8 x 2 3/16	2.0
	P-6476	D70267 C70267	Colonial-Detrola No. 7070 Col.-Mot.-Det. No. 8030	220	53.5	TA	0.008	2 5/8	2 27/32 x 2 5/32	2.0
	P-6477	25C500189	Motorola	150	50	M2	0.03	2	1 7/8 x 2 1/4	1.0
	P-6478	25C501644	Motorola	225	70	R	0.02	2 1/4	2 3/16 x 2 5/8	1.5
	P-6480	65-0347	Philco	225	70	R	0.0033	2 3/16	2 1/4 x 2 5/8	1.5
	P-6481	32-8313-1	Philco	250	60	M4	0.0068	2 1/4	2 3/16 x 2 5/8	1.5
	P-6490	C 291787-1	Bendix (Ford Model 5B8F)	265	52	R	0.006	2 1/8	2 3/16 x 2 5/8	1.5
	P-6499	1220163[1]	United Motors (Delco)	250	60	TA	0.006	3 7/32	2 5/8 x 2 1/2	2.3
	Exact Duplicate For 12 Volt D.C. Primary									
b	P-6482	6084	United Motors (Delco)	250	60	TA	.004	3 1/4	2 11/16 x 2 11/16	2.5
	P-6489	6067	United Motors (Delco)	250	60	R	.004	2 3/16	2 3/16 x 2 5/8	2.0
	P-6493	*25C535794	Motorola	275	75	S1	(See Footnote)	2 3/4	2 3/8 x 2	1.7
	P-6494	32-8592-1	Philco	245	70	R	0.0047	2 3/16	2 5/8 x 2 1/8	1.5
	P-6495	*25K535795	Motorola	275	75	S1	(See Footnote)	2 3/4	2 3/8 x 2 1/8	1.7
	P-6497	7265604[2]	United Motors (Delco)	250	55	S2	.007[3]	2 9/16	2 1/4 x 2	1.8

*2 buffer capacitors used 0.5 mfd. and 0.04 mfd. as in original circuit.

[1]17261386 and 7262956 replaced by P-6499
[2]7269118 replaced by P-6497
[3]+15K—1W. Res.

UNIVERSAL VIBRATOR TRANSFORMERS With 6 Volts D.C. Primary

	Part No.	Secondary A.C. Volts	D.C. Volts *At Filter Input	D.C. M.A.	Recommended Buffer Cap.	Mtg. Type	Height Overall	Base Area	Mtg. Ctrs.	Shpg. Wt. In Lbs.
c	P-6491	188-0-188	200	40	0.003 mfd.	S	2 1/4	3 1/8 x 2 1/8	2 13/16	1.5
	P-4062	300-0-300	260	65	0.006 mfd.	NV	3 1/8	2 1/2 x 2 5/8	2 x 2	2.3
	P-4063	320-0-320	285	75	0.006 mfd.	NV	3 1/8	2 1/2 x 2 3/4	2 x 2 1/4	2.8
	P-6131	370-0-370	330	100	0.007 mfd.	NV	3 1/2	2 7/8 x 2 7/8	2 1/4 x 2 1/4	3.5

WIDTH AND LINEARITY CONTROLS

	Stancor No.	Application	Ind. in Mh.	Res. in Ohms	AGC Ind. in Mh.	AGC Res. in Ohms
d	RTC-8628†	Width or Linearity Coil	2.5-17.	24	—	—
	RTC-8629†	Width or Linearity Coil	15.-60.	55	—	—
	WC-1,A*	Width Coil	.05-50.	.53	—	—
	WC-2,A*	Tapped Linearity Coil	.55-4.6	8.3	—	—
	WC-4,A*	Width Coil	.17-.61	1.0	—	—
	WC-5,A*	Width or Linearity Coil	4.-39.	32.	2.7-7.6	19.5
e	WC-6,A*	Tapped Linearity Coil	1.3-4.1	5.6	—	—
	WC-7,A*	Width Coil	.5-3.5	2.3	—	—
	WC-8,A*	Width Coil	1.-10.	8.0	—	—
	WC-9,A*	Width Coil with Keyed Winding	3.2-9.	28.	.16-.7	1.
	WC-10,A*	Width Coil with AGC	2.6-7.5	12.	4.-28.	32.
	WC-11▲	Tapped Width Coil	2.3-11.8	10.	—	—
	WC-12§	Width Coil with AGC	4.-30.	27.	.075-80.	2.
f	WC-13§	Width Coil with AGC	4.-30.	27.	.185-1.82	3.
	WC-14,A*	Width Coil	45.-215.	130.	—	—
	WC-15▲#	Width Coil with AGC	3.1-21.	18.8	.39-2.4	2.4
	WC-16,A*	Width Coil with Tapped AGC	1.5-11.	9.	9.-24.	49.5
	WC-17▲	Tapped Width Coil	47.-110.	175.	—	—
	WC-18,A*	Width Coil	4.-29.	29.	—	—

*Available for either 5/16" or 7/16" Mounting hole. Use suffix "A" for 7/16" hole.
†Adapter supplied for either 5/16" or 7/16" Mounting hole.
▲Only for 7/16" Mounting hole.
§For 1 3/4" Mounting Centers equipped with slider.
#Shipped without core, use original core.

COLOR DEGAUSSING COIL:

Catalog No. — **DGC-100**

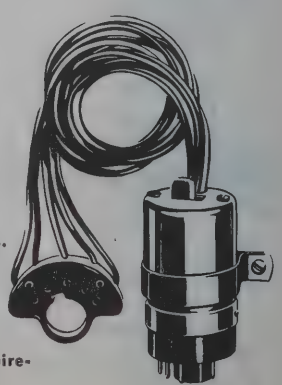
With 10-foot Line Cord and In-Line Switch

C.R. TUBE BOOSTER:

Catalog No. — **P-8192**

(For parallel heaters only)

- **No connections to solder.**
- **HI-LO switch provides two levels of brilliance.**
- **Does not require AC line connections.**
- **Measures only 3½" high, 1½" in diameter.**
- **Does not change CR tube space requirements.**


CRTB

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SPRAGUE PULSE TRANSFORMERS AND DECADE INDUCTORS

TRY

HUGHES-PETERS

FIRST,

IT IS

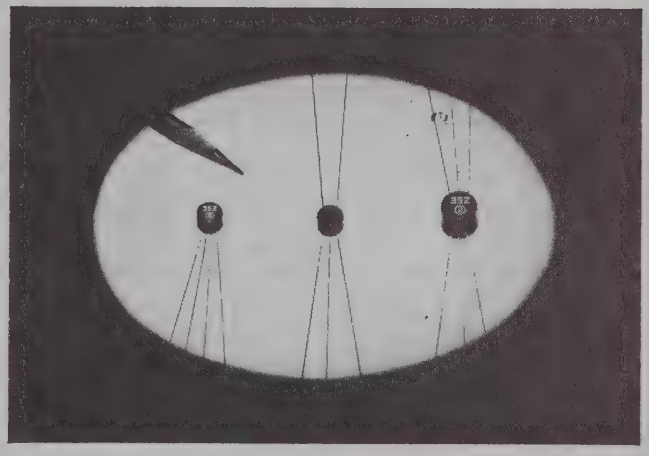
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IN STOCK

TYPE 35Z SCR PULSE TRANSFORMERS

- Designed Specifically for SCR Triggering Applications Where the SCR's are Controlling Power in a Resistive Load
- Improved Electrical Characteristics, More Mechanical Strength with Fully Molded Case
- Small 'Pancake' Style Design with Radial Leads
- Pulse Transformers are Designed with Increased Leakage Inductance to Minimize Gate Circuit Unbalance and are Suitable for Operating Two SCR's Back-to-Back
- Decreased Coupling Capacitance Minimizes Likelihood of False Triggering of the SCR's Due to Line Transients
- Some Units Rated for 220 Volt A-C Line Operation, Others for 550 Volt Lines
- For Complete Technical Data, Refer to the Latest Issue of Sprague Engineering Bulletin No. 40225.2
- Call Your Sprague Industrial Distributor for Current Prices

DIMENSIONS	
Size Code	Diameter x Thickness
A	.500" x .500"
B	.687" x .600"
C	.562" x .500"



Cat. No.	Replaces	Size Code	Turns Ratio	MIN. L_P (μH)	MAX. L_L (μH)	MAX. C_C (pF)	60 Cycle Dielectric Test (Volts RMS)	MAX. 60 cy. A-C Line Voltage
35ZH901	31Z382	B	1:1	10,000	50	75	1000	220
35ZM900		A	1:1:1	700	300	25	1000	220
35ZM903		A	1:1:1	700	300	25	2200	550
35ZM904	31Z204	C	1:1:1	3,000	20	50	1000	220
35ZM922		A	1:1	700	350	25	1000	220
35ZM923		A	1:1	700	350	25	2200	550
35ZM930	31Z286	C	1:1:1	3,000	25	50	1000	220

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REM-66-6526

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POWERSTAT® *Variable Transformers now*

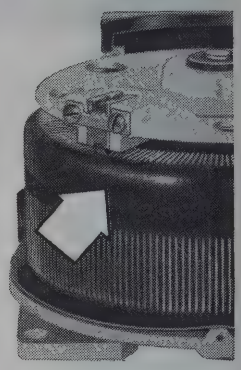
New epoxy-coated POWERKOTE Coils make the POWERSTAT line the most outstanding value in variable transformers today. *Without increase in price, size or weight,* only POWERSTAT Variable Transformers give an average of 20% higher current ratings, 10:1 greater overload capability, longer life, greater resistance to fungus, salt spray and other contaminating atmospheres. POWERKOTE Coil commutator bars are embedded in place preventing steady-state operating temperature and severe overloads from distorting the commutator. Foreign particles cannot collect between bars.

POWERSTAT Variable Transformers are designed to deliver continuously adjustable voltage from a-c power lines. They introduce no waveform distortion and feature rugged construction, precious metal plated commutators, excellent regulation, high efficiency and conservative ratings. All manually operated types listed in the charts except the 10B-12, EN116B-EN216B and EN117B-EN217B Series are available with motor drives if desired. Motor-driven speeds are 5, 15, 30 or 60 seconds for full range travel on all except types having -4, -5, or -6 suffixes which do not offer the 5-second speed. Single types in the 117B-217B, 126-226 and 136B-236B Series are also offered with 2- or 3-wire cord-plug sets. 1156D-1256D Series types are available in ratings to 244 kva.

HIGHER RATINGS

HIGHER OVERLOAD CAPABILITIES

LONGER LIFE



RATINGS AND SPECIFICATIONS

10B-12 SERIES

INPUT		OUTPUT						
			Const. Current Load		Const. Impedance Load			
Volts	Cycles	Volts	Max. Amps.	Max. KVA	Max. Amps.	Max. KVA	TYPE	Ship. Wt. Lbs.
Single Phase								
120	60	0-132	1	0.13	—	—	2PF10	3½
120	50/60	0-120	2.25*	0.27	3‡	0.36	10B	2½
120	60	0-132	2.25*	0.30	—	—		
240	50/60	0-240	0.7*	0.17	0.9‡	0.22	12	2½
240	50/60	0-264	0.5**	0.13	—	—		
240	50/60	0-240	2.25*	0.54	3‡	0.72	10B-2	6
240	60	0-264	2.25*	0.59	—	—		
480	50/60	0-480	0.7*	0.34	0.9‡	0.43	12-2	6
480	50/60	0-528	0.5**	0.26	—	—		
Three Phase								
120	50/60	0-120	2.25*	0.47	3‡	0.62	10B-2	6
120	60	0-132	2.25*	0.51	—	—		
240	50/60	0-240	0.7*	0.29	0.9‡	0.37	12-2	6
240	50/60	0-264	0.5**	0.23	—			
240	60	0-240	2.25*	0.94	3‡	1.2	10B-3	8½
480	50/60	0-480	0.7*	0.58	0.9‡	0.75	12-3	8½
480	60	0-528	0.5**	0.46	—	—		

21-22 SERIES

Single Phase								
120	50/60	0-120	4.5	0.54	6.5	0.78	21	6
120	50/60	0-140	4.5	0.63	—	—		
240	50/60	0-240	2.5	0.60	3.75	0.90	22	6
240	50/60	0-280	2.5	0.70	—	—		
240	50/60	0-240	4.5	1.1	6.5	1.6	21-2	13½
240	50/60	0-280	4.5	1.3	—	—		
480	50/60	0-480	2.5	1.2	3.75	1.8	22-2	13½
480	50/60	0-560	2.5	1.4	—	—		
Three Phase								
120	50/60	0-120	4.5	0.94	6.5	1.4	21-2	13½
120	50/60	0-140	4.5	1.1	—	—		
240	50/60	0-240	2.5	1.0	3.75	1.6	22-2	13½
240	50/60	0-280	2.5	1.2	—	—		
240	50/60	0-240	4.5	1.9	6.5	2.7	21-3	19
240	60	0-280	4.5	2.2	—	—		
480	50/60	0-480	2.5	2.1	3.75	3.1	22-3	19
480	60	0-560	2.5	2.4	—	—		

116B-216B and 117B-217B SERIES†

INPUT		OUTPUT						
			Const. Current Load		Const. Impedance Load			
Volts	Cycles	Volts	Max. Amps.	Max. KVA	Max. Amps.	Max. KVA	TYPE	Ship. Wt. Lbs.
Single Phase								
120	50/60	0-120	9	1.1	12	1.4	116B	12
120	50/60	0-140	9	1.3	—	—		
120	60	0-120	12	1.4	15	1.8	117BT	12
240	50/60	0-240	3.5	0.84	5	1.2	216B	12
240	50/60	0-280	3.5	0.98	—	—		
240	60	0-240	5	1.2	7	1.7	217BT	12
240	50/60	0-240	9	2.2	12	2.9	116BT-2	24
240	50/60	0-280	9	2.5	—	—		
240	60	0-240	12	2.9	15	3.6	117BT-2	24
480	50/60	0-480	3.5	1.7	5	2.4	216BT-2	24
480	50/60	0-560	3.5	2.0	—	—		
480	60	0-480	5	2.4	7	3.4	217BT-2	24
Three Phase								
120	50/60	0-120	9	1.9	12	2.5	116BT-2	24
120	50/60	0-140	9	2.2	—	—		
120	60	0-120	12	2.5	15	3.1	117BT-2	24
240	50/60	0-240	3.5	1.5	5	2.1	216BT-2	24
240	50/60	0-280	3.5	1.7	—	—		
240	60	0-240	5	2.1	7	2.9	217BT-2	24
240	50/60	0-240	9	3.7	12	5.0	116BT-3	36
240	60	0-280	9	4.4	—	—		
240	60	0-240	12	5.0	15	6.2	117BT-3	36
480	50/60	0-480	3.5	2.9	5	4.2	216BT-3	36
480	60	0-560	3.5	3.4	—	—		
480	60	0-480	5	4.2	7	5.8	217BT-3	36

EN116B-EN216B and EN117B-EN217B SERIES

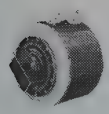
Single Phase								
120	50/60	0-120	7.5	0.90	12	1.4	EN116B	15
120	50/60	0-140	7.5	1.0	—	—		
120	60	0-120	10	1.2	14.5	1.7	EN117B	15
240	50/60	0-240	3	0.72	4.5	1.1	EN216B	15
240	50/60	0-280	3	0.84	—	—		
240	60	0-240	4.4	1.1	5.8	1.4	EN217B	15
240	50/60	0-240	7.5	1.8	12	2.9	EN116B-2	28
240	50/60	0-280	7.5	2.1	—	—		
240	60	0-240	10	2.4	14.5	3.5	EN117B-2	28
480	50/60	0-480	3	1.4	4.5	2.2	EN216B-2	28
480	50/60	0-560	3	1.7	—	—		
480	60	0-480	4.4	2.1	5.8	2.8	EN217B-2	28
Three Phase								
120	50/60	0-120	7.5	1.6	12	2.5	EN116B-2	28
120	50/60	0-140	7.5	1.8	—	—		
120	60	0-120	10	2.1	14.5	3.0	EN117B-2	28
240	50/60	0-240	3	1.2	4.5	1.9	EN216B-2	28
240	50/60	0-280	3	1.5	—	—		
240	60	0-240	4.4	1.8	5.8	2.4	EN217B-2	28
240	50/60	0-240	7.5	3.1	12	5.0	EN116B-3	39
240	60	0-280	7.5	3.6	—	—		
240	60	0-240	10	4.2	14.5	6.0	EN117B-3	39
480	50/60	0-480	3	2.5	4.5	3.7	EN216B-3	39
480	60	0-560	3	2.9	—	—		
480	60	0-480	4.4	3.7	5.8	4.8	EN217B-3	39

*Rating when mounted on metal panel. On bracket or nonmetallic panel, derate 10B Series to 1.75 amp., 12 Series to 0.5 amp.
‡Rating when mounted on metal panel. On bracket or nonmetallic panel, derate 10B Series to 2.5 amp., 12 Series to 0.75 amp.
†Also available with open construction. Suffix U when ordering.
**0.7 amp. maximum in range from 0 to line voltage when mounted on metal panel.

THE SUPERIOR ELECTRIC COMPANY

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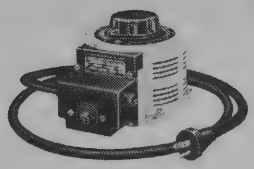
with POWERKOTE COILS



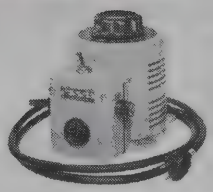
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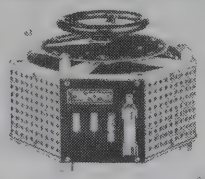
TYPE 21



TYPE 3PN126

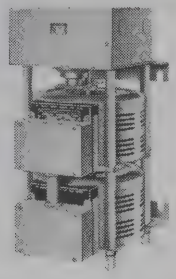


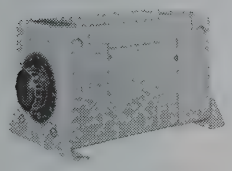
TYPE 116B



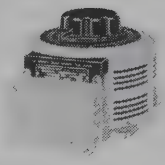
TYPE 1156D

TYPE 15MD136BT-2





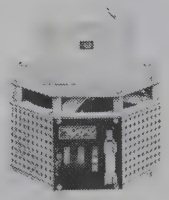
TYPE EN216B-2



TYPE 136BT



TYPE 146



TYPE 5MB1156D

RATINGS AND SPECIFICATIONS

126-226 SERIES†

INPUT		OUTPUT					TYPE	Ship. Wt. Lbs.
			Const. Current Load		Const. Impedance Load			
Volts	Cycles	Volts	Max. Amps.	Max. KVA	Max. Amps.	Max. KVA		
Single Phase								
120	50/60	0-120	15	1.8	20	2.4	126	17
120	50/60	0-140	15	2.1	—	—		
240	50/60	0-240	7.5	1.8	10	2.4	226	17
240	50/60	0-280	7.5	2.1	—	—		
240	50/60	0-240	15	3.6	20	4.8	126-2	32
240	50/60	0-280	15	4.2	—	—		
480	50/60	0-480	7.5	3.6	10	4.8	226-2	32
480	50/60	0-560	7.5	4.2	—	—		
Three Phase								
120	50/60	0-120	15	3.1	20	4.2	126-2	32
120	50/60	0-140	15	3.6	—	—		
240	50/60	0-240	7.5	3.1	10	4.2	226-2	32
240	50/60	0-280	7.5	3.6	—	—		
240	50/60	0-240	15	6.2	20	8.3	126-3	49
240	60	0-280	15	7.3	—	—		
480	50/60	0-480	7.5	6.2	10	8.3	226-3	49
480	60	0-560	7.5	7.3	—	—		

136B-236B SERIES†

Single Phase								
120	50/60	0-120	22	2.6	28	3.4	136B	25
120	50/60	0-140	22	3.1	—	—		
120	50/60	0-120	44	5.3	56	6.7	136B-2§	52
120	50/60	0-140	44	6.2	—	—		
240	50/60	0-240	10	2.4	13	3.1	236B	25
240	50/60	0-280	10	2.8	—	—		
240	50/60	0-240	22	5.3	28	6.7	136B-2	52
240	50/60	0-280	22	6.2	—	—		
480	50/60	0-480	20	4.8	26	6.2	236B-2	52
480	50/60	0-560	20	5.6	—	—		
Three Phase								
120	50/60	0-120	22	4.6	28	5.8	136B-2	52
120	50/60	0-140	22	5.3	—	—		
240	50/60	0-240	10	4.2	13	5.4	236B-2	52
240	50/60	0-280	10	4.8	—	—		
240	50/60	0-240	22	9.1	28	11.6	136B-3	76
240	60	0-280	22	10.7	—	—		
480	50/60	0-480	10	8.3	13	10.8	236B-3	76
480	60	0-560	10	9.7	—	—		

146-246 SERIES†

Single Phase								
120	50/60	0-120	30	3.6	35	4.2	146	38
120	50/60	0-140	30	4.2	—	—		
120	50/60	0-120	60	7.2	70	8.4	146-2§§	76
120	50/60	0-140	60	8.4	—	—		
240	50/60	0-240	15	3.6	19	4.6	246	38
240	50/60	0-280	15	4.2	—	—		
240	50/60	0-240	30	7.2	35	8.4	146-2	76
240	50/60	0-280	30	8.4	—	—		
480	50/60	0-480	15	7.2	19	9.1	246-2	76
480	50/60	0-560	15	8.4	—	—		

146-246 SERIES† (contd.)

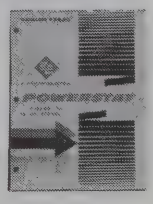
INPUT		OUTPUT					TYPE	Ship. Wt. Lbs.
			Const. Current Load		Const. Impedance Load			
Volts	Cycles	Volts	Max. Amps.	Max. KVA	Max. Amps.	Max. KVA		
Three Phase								
120	50/60	0-120	30	6.2	35	7.3	146-2	76
120	50/60	0-140	30	7.3	—	—		
240	50/60	0-240	15	6.2	19	7.9	246-2	76
240	50/60	0-280	15	7.3	—	—		
240	50/60	0-240	30	12.5	35	14.5	146-3	115
240	60	0-280	30	14.5	—	—		
480	50/60	0-480	15	12.5	19	15.8	246-3	115
480	60	0-560	15	14.5	—	—		

1156D-1256D SERIES†

Single Phase								
120	50/60	0-120	50	6.0	55	6.6	1156D	82
120	50/60	0-140	50	7.0	—	—		
120	50/60	0-120	100	12.0	110	13.2	1156D-2P	169
120	50/60	0-140	100	14.0	—	—		
120	50/60	0-120	150	18.0	165	19.8	1156D-3P	272
120	50/60	0-140	150	21.0	—	—		
240	50/60	0-240	28	6.7	28	6.7	1256D	82
240	50/60	0-280	28	7.8	—	—		
240	50/60	0-240	50	12.0	55	13.2	1156D-2S	156
240	50/60	0-280	50	14.0	—	—		
240	50/60	0-240	56	13.4	56	13.4	1256D-2P	169
240	50/60	0-280	56	15.7	—	—		
240	50/60	0-240	84	20.2	84	20.2	1256D-3P	272
240	50/60	0-280	84	23.5	—	—		
240	50/60	0-240	100	24.0	110	26.4	1156D-4PS	361
240	50/60	0-280	100	28.0	—	—		
480	50/60	0-480	28	13.4	28	13.4	1256D-2S	156
480	50/60	0-560	28	15.7	—	—		
480	50/60	0-480	56	26.9	56	26.9	1256D-4PS	361
480	50/60	0-560	56	31.4	—	—		
Three Phase								
120	50/60	0-120	50	10.4	55	11.4	1156D-2D	155
120	50/60	0-140	50	12.1	—	—		
240	50/60	0-240	28	11.6	28	11.6	1256D-2D	155
240	50/60	0-280	28	13.6	—	—		
240	50/60	0-240	50	20.8	55	22.9	1156D-3Y	230
240	60	0-280	50	24.2	—	—		
240	50/60	0-240	100	41.6	110	45.7	1156D-6Y	507
240	50/60	0-280	100	48.5	—	—		
480	50/60	0-480	28	23.3	28	23.3	1256D-3Y	235
480	60	0-560	28	27.2	—	—		
480	50/60	0-480	56	46.6	56	46.6	1256D-6Y	507
480	60	0-560	56	54.3	—	—		

†Also available with open construction. Suffix U when ordering.
§Requires also one paralleling choke type T5000.
§§Requires also one paralleling choke type T6053.

COMPLETE LITERATURE on all standard and special use POWERSTATS is available on request. Specify whether 50/60 cycle, 400/800 cycle or complete file is desired.





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POWERSTAT® *Variable Transformers*

NOW WITH POWERKOTE* COILS

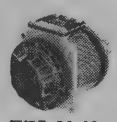
*PATENT PENDING

40-VOLT SERIES

Meet high current, low voltage requirements of low voltage power supplies and a wide range of transistor circuit applications. Manually-operated and motor-driven single, 2- and 3-gang single phase types available.



TYPE 10B-40

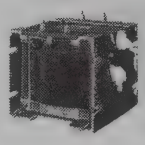


TYPE 21-40

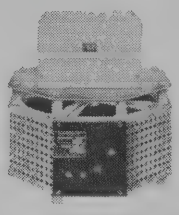
LINE CORRECTORS

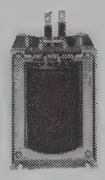
Used to correct line voltage variations to maintain a constant output voltage or to supply a limited range of output voltage from a stable a-c source. Manually operated and motor-driven types available.





TYPE LC2106D





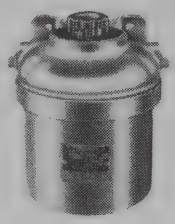
TYPE 5MLC2115E

OIL-COOLED AND EXPLOSION-PROOF

Oil-cooled units substantially increase ratings above equivalent air-cooled types and provide a measure of safety. Explosion-proof models are Underwriters' Laboratories listed for Class 1, Group D service. Both are manually operated only.



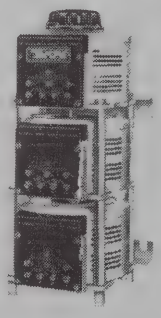
OIL-COOLED
TYPE 0-116B



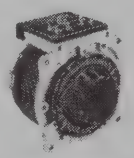
EXPLOSION-PROOF
TYPE X-116

LW136B SERIES

Have three windings. Connections can be made for operation as a source of adjustable low output voltage, a line voltage corrector or a limited range variable transformer. Manually operated and motor-driven, open and enclosed construction types available. Full connections and ratings on request.



TYPE LW136B-3



TYPE LW136BU

40-VOLT SERIES

INPUT		OUTPUT						
			Const. Current Load		Const. Impedance Load			
Volts	Cycles	Volts	Max. Amps.	Max. KVA	Max. Amps.	Max. KVA	TYPE	Ship. Wt. Lbs.
Single Phase								
40	60	0-40	7	0.28	9	0.36	10B-40	3½
			18	0.72	22	0.88	21-40	6
			25	1.0	30	1.2	116BU-40	11

LINE CORRECTOR SERIES

INPUT		OUTPUT				
Volts	Cycles	Volts	Max. Amps.	Max. KVA	TYPE	Ship. Wt. Lbs.
Used as Line Correctors — SINGLE PHASE						
95-135	50/60	115	17.5	2.0	LC2102D	55
95-135	50/60	115	52	6.0	LC2106D	80
95-135	50/60	115	130	15.0	LC2115E	200
195-255	50/60	230	32.5	7.5	LC2207D	85
205-250	50/60	230	120	27.5	LC2228E	205
400-520	50/60	460	15	6.9	LC2407D	85
400-520	50/60	460	40	18.4	LC2418E	205
Used as Line Correctors — THREE PHASE						
195-255	50/60	230	25	10.0	LC3210YD	211
195-255	50/60	230	38	15.0	LC3215YD	226
195-255	50/60	230	50	20.0	LC3220YD	241
195-255	50/60	230	113	45.0	LC3245YE	615
195-255	50/60	230	175	70.0	LC3270DE	795
400-520	50/60	460	16	12.7	LC3412YD	200
400-520	50/60	460	22	17.5	LC3417YD	215
400-520	50/60	460	33	26.3	LC3425YD	230
400-520	50/60	460	66	52.6	LC3450YE	580
400-520	50/60	460	100	79.7	LC3475YE	630
420-500	50/60	460	131	104	LC34100YE	630

When units of the LC series are used as limited range adjustable transformers, the input voltage is the output voltage shown in the above chart and the output voltage is the input voltage shown in the above chart.

OIL-COOLED

INPUT		OUTPUT				
Volts	Cycles	Volts	Max. Amps.	Max. KVA	TYPE††	Ship. Wt. Lbs.
120	50/60	0-120	15	1.8	0-116B	32
120	50/60	0-140	15	2.1		
120	50/60	0-140	30	4.2	0-1126	100
240	50/60	0-240	6	1.4	0-216B	32
240	50/60	0-280	6	1.7		
240	50/60	0-280	18	5.0	0-1226	105

††Other Types available on special order

EXPLOSION-PROOF

120	50/60	0-120	7.5	0.90	X-116	47
120	50/60	0-140	7.5	1.0		
120	50/60	0-140	12	1.7	X-1126	142
240	50/60	0-240	3	0.72	X-216	47
240	50/60	0-280	3	0.84		
240	50/60	0-280	6	1.7	X-1226	142

LW136B SERIES

INPUT		OUTPUT‡‡				
Volts	Cycles	Volts	Max. Amps.	Max. KVA	TYPE	Ship. Wt. Lbs.
Single Phase						
120/240	50/60	15-0-15	35	0.52	LW136B	25
120/240/480	50/60	30-0-30	35	1.0	LW136B-2	52
120/240	50/60	45-0-45	35	1.6	LW136B-3	76
120/240	50/60	0-30	25	0.75	LW136B	25
120/240/480	50/60	0-60	25	1.5	LW136B-2	52
120/240	50/60	0-90	25	2.2	LW136B-3	76
Three Phase						
120/240	50/60	0-30	25	1.3	LW136B-2	52
120/240	50/60	0-30	43.3	2.2	LW136B-3	76
120/240	50/60	0-52	25	2.2	LW136B-3	76
240/480	60	0-35	43.3	2.6	LW136B-3	76
240/480	60	0-60	25	2.6	LW136B-3	76

‡‡ LW136B Series ratings are for use as low voltage isolated output transformer.

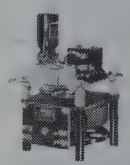
HIGH FREQUENCY POWERSTAT® VARIABLE TRANSFORMERS



TYPE 5-1011



TYPE 1HMD07CKI



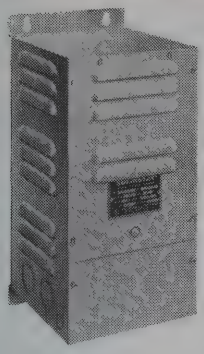
TYPE AM1HMS07U

Standard types designed to meet applicable military specifications are available: manually operated and motor-driven types for 28, 120, 240 and 480 volt, 400/800 cycle single and three phase operation in ratings from 56 VA to 8.7 KVA; manually operated types for 115 volt, 400/800 cycle single phase service with outputs of 0-28 volts, 2.5, 5 or 8 amperes and 0-5 volts, 6 or 12 amperes; manually operated types for 400/1600 cycle service as limited range variable transformers, low voltage output variable transformers or line correctors.

THE SUPERIOR ELECTRIC COMPANY

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SOLIDSTAT® Variable Voltage Controls



TYPE CSR106

- SOLID-STATE VOLTAGE CONTROL
- 6, 12 AND 24 KVA MODELS
- 120, 240 AND 480 VOLT TYPES

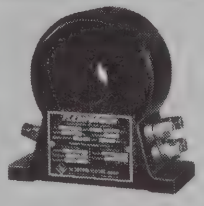
Solid-state, semiconductor variable a-c voltage controls for all loads from unity power factor to zero power factor lagging inductive load. Operating on a closed-loop, error-detector principle, they can be controlled by a potentiometer, by a current feedback sensing circuit or by a voltage sensing circuit. Any load from zero up to the full rating can be controlled with an efficiency of 98% or higher. Have unique lock-out overload protection circuit. Provide instantaneous response and are insensitive to line or load voltage changes.

INPUT		OUTPUT			TYPE	APPROXIMATE NET WEIGHT (POUNDS)
VOLTS*	FREQUENCY (CYCLES)	VOLTS	MAX. AMPS AT MAX. VOLTS	MAX. KVA		
120	60	0-115	50	6.0	CSR106	16
240	60	0-230	50	12.0	CSR212	16
480	60	0-470	50	24.0	CSR424	18
120	60	0-115	100	12.0	CSR112	34
240	60	0-230	100	24.0	CSR224	34
480	60	0-470	100	48.0	CSR448	38

*208 and 277 volt types available on special order.

FLEXIFORMER® Packaged Transformer Primaries

● A SOURCE OF A-C VOLTAGE ● A CURRENT TRANSFORMER ● 150 VA AND 1000 VA TYPES

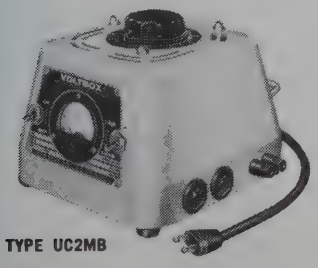


TYPE TP150

These "do-it-yourself" transformers are essentially self-contained toroidal primary coils encased in durable high impact plastic. Colored SUPERIOR 5-WAY Binding Posts for connections are integrally mounted. When used as a source of a-c voltage, the center opening permits hand-threading the correct number of secondary winding turns to obtain the desired output voltage. When used as a current transformer, the FLEXIFORMER winding is shunted by an ammeter which indicates the current flow in a conductor hand-threaded through the center opening. Can be used as portable units or permanently mounted. Request free copy of "Experiments Using FLEXIFORMER Packaged Transformer Primary."

TYPE	AS A SOURCE OF A-C VOLTAGE			AS A CURRENT TRANSFORMER		
	NOMINAL PRIMARY VOLTS	VOLTS PER SECONDARY TURN	MAXIMUM VA	INPUT/ OUTPUT RATIO	MAXIMUM PRIMARY AMPERES	MAXIMUM SECONDARY AMPERES
TP150	120	0.3	150	400/1	400	1.0
TP1000	120	0.75	1000	160/1	800	5.0
TP152	240	0.3	150	800/1	400	0.5
TP1020	240	0.75	1000	320/1	800	2.5

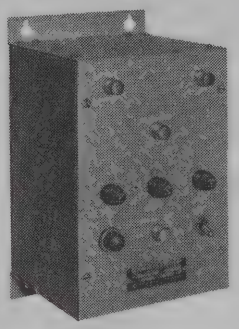
VOLTBOX® A-C Power Supply



TYPE UC2MB

Compact versatile instrument containing all the necessary components for tests involving a-c voltage: POWERSTAT Variable Transformer, direct reading voltmeter, three output receptacles; two SUPERIOR 5-WAY Binding Posts, "on-off" switch, line-load meter switches, fuse and 6-foot cord-plug. Designed for 50/60 cycle service. Type UC1MB ratings are 120 volt input and 0-140 volt, 9 ampere, 1.3 KVA output; type UC2MB ratings are 240 volt input and 0-280 volt, 3.5 ampere, 0.98 KVA output. Other types available on special order.

STABILTEMP Proportioning Temperature Coupler

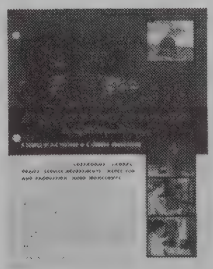


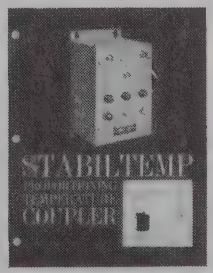
TYPE PTC5

Maintains voltage needed to keep electric furnaces and ovens at correct temperature when incorporated into systems using commercially available current proportioning temperature controllers. Use with cataloged motor-driven 120 or 240 volt, 50/60 cycle single phase POWERSTAT Variable Transformers. Voltage is regulated at any point within the range of the POWERSTAT as determined by the controller current command signal regardless of variations in line voltage or load current. Type PTC5 rated for 5 milliampere maximum command signal; user provides resistors for 20 or 50 milliampere signals.

REQUEST BULLETINS AND DATA SHEETS giving complete information on any products described on these pages.





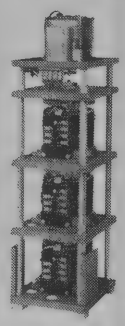


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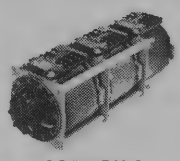
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STACO,® Adjust-A-Volt® VARIABLE AUTO-TRANSFORMERS



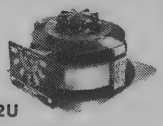














Industries widest selection of adjustable variable auto-transformers designed to deliver variable output voltages with high efficiency, reliability and minimum maintenance. Ratings from .165 to 265 KVA. Bench and panel mounting. Manual or motor driven. Single or ganged assemblies. Military designs, specials, 36 volt types. All Adjust-A-Volts feature zero wave form distortion with high voltage resolution, and regulation with conservative ratings. Design features rugged mechanical construction and precious metal-plated commutators.

Brush design provides smooth flow of input current and voltage and ease of brush replacement which is seldom required. All Adjust-A-Volts operate on 50/60 cycle current except certain SQ models which are 60 cycle*. Operation is permissible at 50% of rated power output. Bench models are housed in grey wrinkle painted die-cast aluminum cases equipped with pilot light, switch, line cord, and an output receptacle. Write for complete catalog.

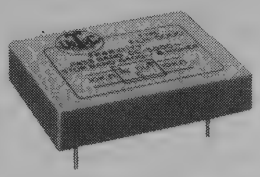
MFR. MODEL NO.	MAX. KVA	INPUT VOLT.	OUTPUT VOLTS	OUTPUT AMPS	DESCRIPTION	SIZE	WGT. LBS.	PRICE
100BU	.165	120	0-132/0-120	1.25	Panel type for panels to ¼" thick	2-3/32 x 2-13/16"	2	$ 8.50
PA-1	.165	120	0-132	1.25	Portable; fused w/switch; pilot light, line cord	3⅞ x 3⅞ x 3½"	3	16.00
175BU	.23	120	0-132/0-120	1.75	Panel type for panels to ¼" thick	2-3/32 x 2-13/32"	2	9.00
PA-175	.23	120	0-132	1.75	Portable; fused w/switch; pilot light, line cord	3⅞ x 3⅞ x 3½"	3	16.50
250BU	.33	120	0-132/0-120	2.5	Panel type for panels to ¼" thick	2-1/16 x 2-13/16"	2.5	10.00
T21U	.33	120	0-140/0-120	2.4	Panel type for panels to ⅜" thick	3¼ x 3¼ x 3-15/16"	3	16.50
300BU	.42	120	0-140/0-120	3.0	Panel type for panels to ½" thick	3-11/16 x 4"	4	13.50
PA-3	.42	120	0-140	3.0	Portable; fused w/switch; pilot light, line cord	6¼ x 6⅛ x 5½"	5	19.50
375BU	.53	120	0-140/0-120	3.75	Panel type for panels to ½" thick	3¾ x 3¾ x 3¼"	5	14.00
PA-375	.53	120	0-140	3.75	Portable; fused w/switch; pilot light, line cord	6½" x 6⅛ x 6½"	6	19.50
T51U	.84	120	0-140/0-120	6.0	Panel type for panels to ⅜" thick	4½ x 4½ x 3-15/16"	7	20.00
500BU	1.05	120	0-140/0-120	7.5	Panel type for panels to ½" thick	5-11/16 x 5"	8	20.00
SQ500BU	1.05	120	0-140/0-120	7.5	Panel type for panels to ½" thick	4½ x 4½ x 3-15/16"	9	18.00
500B	1.05	120	0-140	7.5	Enclosed; fused w/switch & pilot light, line cord	7¼ x 6½"	9	26.00
3PN500B	1.05	120	0-140	7.5	Enclosed; 3 prong plug & outlet, fused w/switch, pilot light	7¼ x 6½"	10	33.00
T101U	1.4	120	0-140/0-120	10.0	Panel type for panels to ½" thick	5¾ x 5¾ x 4-1/16"	12.5	34.00
T1500U	2.1	120	0-140/0-120	15.0	Panel type for panels to ½" thick	6⅛ x 6⅝ x 4⅜"	16	34.00
1500B	2.1	120	0-140/0-120	15.0	For panels to ½" or bench use, enclosed	8-1/16 x 8¼"	17	46.00
3PN1500B	2.1	120	0-140	15.0	Enclosed, 2 blade & U blade, receptacle, fuse	9 x 8¼"	17	56.00
SQ510BU	1.2	120	0-120	10.0	Panel type for panels to ½" thick	4¼ x 4¼ x 3-15/16"	9	18.00
510BU	1.2	120	0-120	10.0	Panel type for panels to ½" thick	5-11/16 x 5"	9	20.00
3PN510B	1.2	120	0-120	10.0	Enclosed, 3 prong plug & outlet, receptacle, fuse	7¼ x 6½"	9	35.00
520BU	.84	240	0-280/0-240	3.0	Panel type for panels to ½" thick	5-11/16 x 5"	9	22.00
SQ520BU	.84	240	0-280/0-240	3.0	Panel type for panels to ½" thick	4¼ x 4¼ x 3-15/16"	9	20.00
520B	.84	240	0-280	3.0	Enclosed, fused with switch, pilot light, line cord	5-11/16 x 5"	9	29.00
3PN520B	.84	240	0-280	3	Enclosed, 2 blade & U blade, receptacle,fuse	7¼ x 6½"	9	33.00
530BU	.96	240	0-240	4	Panel type for panels to ½" thick	5-11/16 x 5"	9	23.00
SQ530BU	.96	240	0-240	4	Panel type for panels to ½" thick	4¼ x 4¼ x 3-15/16"	9	20.00
3PN530B	.96	240	0-240	4	Enclosed, 2 blade & U blade, receptacle, fuse	7¼ x 6½"	9	35.00
F1500B	2.1	120	0-140	15	With fuse & conduit box, panel or bench use	9 x 8¼"	17	50.00
1520B	2.5	240	0-280	9	Panel type to ½" panel or bench use	8-1/16 x 8¼"	17	46.00
F1520B	2.5	240	0-280	9	With fuse & conduit box, panel or bench use	9 x 8¼"	17	50.00
3PN1520B	2.5	240	0-280	9	Enclosed, 2 blade & U blade, receptacle, fuse	9 x 8¼"	17	56.00
1500BD	2.1	120	0-140	15.0	Cased; output voltmeters, cord, receptacle; fused	9½ x 8¼"	17	75.00
1520BD	2.5	240	0-280	9.0	Cased; output voltmeters, cord, receptacle; fused	9½ x 8¼"	17	75.00
2500BU	3.5	120	0-140/0-120	25	Panel type for panels to ½" thick	8-3/16 x 7⅝ x 5-21/32"	17	50.00
F2500BU	3.5	120	0-140/0-120	25	Panel type for panels to ½" thick with fuse	8-3/16 x 7⅝ x 5-21/32"	17	55.00
2500B	3.5	120	0-140/0-120	25	Enclosed; with junction box	9-9/16 x 7⅝ x 5-21/32"	17	55.00
F2500B	3.5	120	0-140/0-120	25	Enclosed; with junction box and fuse	9-9/16 x 7⅝ x 5-21/32"	17	61.00
2520BU	2.8	240	0-280/0-240	10	Panel type for panels to ½" thick	8-3/16 x 7⅝ x 5-21/32"	17	50.00
F2520BU	2.8	240	0-280/0-240	10	Panel type for panels to ½" thick with fuse	8-3/16 x 7⅝ x 5-21/32"	17	55.00
2520B	2.8	240	0-280/0-240	10	Enclosed with junction box	9-9/16 x 7⅝ x 5-21/32"	17	55.00
F2520B	2.8	240	0-280/0-240	10	Enclosed with junction box with fuse	9-9/16 x 7⅝ x 5-21/32"	17	61.00
T501U	7.0	120	0-140	50	For panels to ⅝" thick or bench use	12½ x 12½ x 5½"	5.2	127.00
T501U-25	14	240	0-280	50	Panel type to ⅝" thick or bench use 2 stack	12½ x 12½ x 14⅝"	120	281.00
T501U-2P	14.0	120	0-140	100	Panel type to ⅝" thick or bench use 2 stack	12½ x 12½ x 14⅝"	120	289.00
T501U-2D	12	120	0-140	50	Panel type to ⅝" thick or bench use 2 stack	12½ x 12½ x 14⅝"	120	281.00
T501U-3P	21	120	0-140	150	Panel type to ⅝" thick or bench use 3 stack	12½ x 12½ x 20¾"	181	460.00
T502U	7.8	240	0-280/0-240	28	Panel type to ⅝" thick or bench use	12½ x 12⅝ x 5½"	52	127.00
175BU-36	0.22	36	0-36	6	Panel type for panels to ¼" thick	2-13/16 x 2⅝"	3.5	11.00
375BU-36	0.55	36	0-36	15	Panel type for panels to ½" thick	3¾ x 3¾ x 2⅞"	6	16.00
500BU-36	0.9	36	0-36	25	Panel type for panels to ½" thick	5-11/16 x 5	10	23.00
THREE PHASE TYPES								
100BU-3	.52	240	0-240UG	1.25	3 stack panel type for panels to ¼" thick	3⅞ x 7⅜"	6	40.00
175BU-3	.73	240	0-240UG	1.75	3 stack panel type for panels to ¼" thick	3⅞ x 7⅜"	6	44.00
250BU-3	1.04	240	0-240UG	2.5	3 stack panel type for panels to ¼" thick	3⅞ x 9½"	7.5	44.00
T21U-3	1.15	240	0-280UG/0-240	2.4	3 stack panel type for panels to ⅜" thick	3¼ x 3¼ x 11-31/32"	12	52.00
300BU-3	1.25	240	0-240UG	3	3 stack panel type for panels to ½" thick	3⅞ x 3⅞ x 12-⅜"	13	62.50
375BU-3	1.6	240	0-240UG	3.75	3 stack panel type for panels to ½" thick	3¾ x 3¾ x 11⅝"	15	65.00
T51U-3	2.9	240	0-280UG/0-240UG	6	3 stack panel type for panels to ⅜" thick	4½ x 4½ x 12-3/32"	21	69.00
510BU-2	2.1	120	0-120	10	2 stack panel type for panels to ½" thick	5-11/16 x 10-9/16"	18	50.00
510BU-3	4.2	240	0-240UG	10	3 stack panel type for panels to ½" thick	5-11/16 x 15½"	28	69.00
500BU-3	3.6	240	0-280UG/0-240UG	7.5	3 stack panel type for panels to ½" thick	5-11/16 x 15½"	28	68.00
500B-3	3.6	240	0-280UG/0-240UG	7.5	3 stack panel type for panels to ½" thick	7¼" x 16¾"	28	85.00
500B-2	1.8	120	0-140/0-120	7.5	2 stack panel type for panels to ½" thick	7¼ x 11⅞"	18	59.00
500BU-2	1.8	120	0-140/0-120	7.5	2 stack panel type for panels to ½" thick	5-11/16 x 10-9/16"	18	49.00
1500B-2	3.6	12	0-140	15	2 stack panel type for panels to ½" thick	8-1/16 x 12-15/32"	39	96.00
1500B-3	7.3	240	0-280UG	15	3 stack panel type for panels to ½" thick	8-1/16 x 15-15/32"	60	147.00
2500BU-2	6	120	0-140/0-120	25	2 stack panel type for ½" panel thickness	8-3/16 x 7⅝ x 10-1/16"	43	118.00
2500B-2	6	120	0-140/0-120	25	2 stack bench type, enclosed, with terminal cover	9-9/16 x 7⅝ x 10-1/16"	46	129.00
2500B-3	12	240	0-28UG/0-240UG	25	2 stack bench type, enclosed, with terminal cover	9-9/16 x 7⅝ x 14-⅞"	66	187.00
2500BU-3	12	240	0-28UG/0-240UG	25	2 stack panel type for ½" panel thickness	8-3/16 x 7⅝" x 14⅞"	66	171.00
1520B-3	8.7	480	0-560UG	9	3 stack bench type, enclosed, with terminal board	8-1/16 x 15-15/32"	60	147.00
2520BU-3	9.7	480	0-560/0-480UG	10	3 stack panel type for ½" panel thickness	8-3/16 x 7⅝ x 14-⅞"	68	171.00
2520B-3	9.7	480	0-560UG/0-480UG	10	3 stack bench type, enclosed with terminal cover	9-9/16 x 7⅝ x 14⅞"	71	187.00

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NEW

TRANSFORMERS, FILTERS, MAGAMPS, HIGH Q COILS

NEW UTC "FLATS"* ELECTRIC WAVE FILTERS



Manufactured & Guaranteed to MIL-F-18327B by Full Environmental Testing

These filters meet today's need for flat component configurations, have excellent attenuation characteristics and are ruggedized to Grade 4, MIL-F-18372B. Straight pin terminals and flat construction make these units ideally suited for printed circuit applications. These filters are hermetically sealed in flat metal cases shielded to reduce hum pickup. FP-A case: 2 x 2 x 2½" h., 2.5 oz. FP-B case: 2 x 1½ x ⅜" h., 2 oz. **Stock price: $42.00 each net.**

FHH-200: Flat package high pass filter, source and load 10K ohms. Units are within 1 db up to 300 cycles 3 db ± 1 db at 200 cycles, and have an attenuation of at least 40 db at frequencies below 140 cycles. FP-A case. Mil Type: FR4RX33YY.

FLH-600: Flat package low pass filter, source and load 10K ohms. Units are within 1 db from DC to 450 cycles, 3 db ±1 db at 600 cycles, and have an attenuation of at least 40 db at frequencies above 800 cycles. FP-A case. Mil Type: FR4RX11YY.

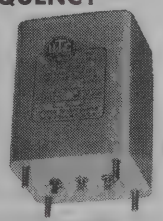
FLH-5000: Flat package low pass filter, source and load 10K ohms. Units are within 1 db from DC to 4.2 KC, 3 db ± 1 db at 5 KC, and have an attenuation of at least 43 db at frequencies above 6400 cycles. FP-B case. Mil Type: FR4RX11YY.

FLL-3500: Flat package low pass filter, source and load 600 ohms. Units are within 1 db from DC to 3 KC, 3 db ± 1 db at 3500 cycles, and have an attenuation of at least 40 db at frequencies above 4500 cycles. FP-A case. Mil Type: FR4RX11YY.

FLL-18000: Flat package low pass filter, source and load 600 ohms. Units are within 1 db from DC to 15 KC, 3 db ± 1 db at 18 KC, and have an attenuation of at least 43 db at frequencies above 23 KC. FP-A case. Mil Type: FR4RX11YY.

FLL-50000: Flat package low pass filter, source and load 600 ohms. Units are within 1 db from DC to 42 KC, 3 db ± 1 db at 50 KC, and have an attenuation of at least 43 db above 64 KC. FP-B case. Mil Type: FR4RX11YY.

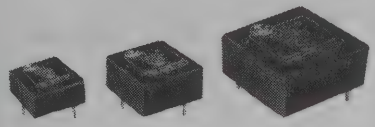
NEW, LLP-15, STANDARD LOW FREQUENCY LOW PASS FILTER



Manufactured & Guaranteed to MIL-F-18327B By Full Environmental Testing

The LLP-15 low frequency low pass filter has a loss of less than 3 db at 15 cycles and attenuation of more than 40 db at 30 cycles. Source and load impedance 100K ohms. MIL Type FR4RX11FA. **Dim:** 2 1/16 x 2 5/16 x 3 1/8" h., 1½ lbs. **Price: $60.00 net.**

NEW "FE,* FI,* FO"* MINIATURE INDUCTORS



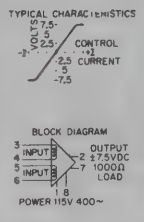
Manufactured & Guaranteed to MIL-T-27B by Full Environmental Testing

FE, FI, FO miniature inductors are ideal for transistor and printed circuit applications, having both pin terminals and a molded flat construction. These units are symmetrical toroids providing maximum Q in minimum size. The FE and FI inductors are adjusted at 1 V, 1 KC. The FO units are adjusted at 1 V, 400 cycles. All units are adjusted to a tolerance of ±1%. The ma DC Max shown is for approximately 5% drop in inductance. The temperature stability is unequalled from −55°C to +100°C. For AC level limitations, a general rule of thumb would be to consider the maximum AC current approximately equal to the maximum DC current rating. However, for specific applications, contact UTC with exact level, frequency, and Q requirements to determine suitability of part in application. All FE, FI, FO inductors are equally well suited for vacuum tube application. All units Mil Type: TF5RX20ZZ.

Type No.	Ind. Hy, (0 DC)	ma DC Max.	DCR Max.	Price Net
FE-.02	.0200	50	5.1	7.80
FE-.05	.0500	30	12	7.80
FE-.1	.100	22	22	8.10
FE-.5	.500	10	122	8.70
FE-1	1.00	7	250	9.60
FE-2	2.00	5	500	10.50
FI-.04	.0400	50	4.3	8.10
FI-.1	.100	30	11	8.40
FI-.25	.250	20	27	8.70
FI-.5	.500	14	60	9.00
FI-1	1.00	10	110	9.60
FI-4	4.00	5	430	10.80
FO-.1	.100	60	4.2	9.00
FO-.5	.500	25	23	9.60
FO-1	1.00	18	43	9.90
FO-2	2.00	12	92	10.50
FO-5	5.00	8	240	11.70
F-10	10.0	6	440	13.50

NEW LINE OF SOLID STATE "MAS"* PUSH-PULL MAGNETIC AMPLIFIERS





The "MAS" magamps operate on an input of 115 V 400 cycles with an output of ±7.5 V DC, 1000 ohm load and have 2 isolated control inputs. These magnetic amplifiers afford a **power gain of approximately 30,000.** The power input and output are also completely and individually isolated. The "MAS" magamps are manufactured to MIL-T-27B standards. Units are housed in a hermetically sealed steel case with plug-in octal compressed glass terminals. The "MAS" magamps are 3 inches high with a 1½ inch diameter and weighs approximately ½ pound.

The "MAS" magamps have many advantages over other active circuit elements such as tubes, transistors: • Long life and years of maintenance free operation due to magnetic characteristics and solid state elements. • Ruggedness can withstand high shock, vibration, radiation, and moisture. • Reliability — can withstand 10 times overloads and operate into short without damage.

Possible applications include: • Control Amplifier • Photocell • SCR Controls • Strain Gauge Amplifier • Meter Preamps • Thermocouple • Differential Amplifier • Signal mixing, summing, integration • Hydraulic Servo Valve Driver • Servo Motor • Linear Amplifications of Transducer Signals.

Type Number	Winding Number	Input Resistance Ohms	Trans-resistance Ohms	Nominal DC μamps 5V DC Output 1000 Ω Load	Price Net
MAS-400	1	45	2.5×10^4	200	135.00
	2	45	2.5×10^4	200	
MAS-410	1	500	8.0×10^4	60	135.00
	2	500	8.0×10^4	60	
MAS-420	1	1000	12.5×10^4	40	135.00
	2	100	4.0×10^4	125	

NEW "PIL"* AUDIO TRANSFORMERS



Manufactured & Guaranteed to MIL-T-27B by Full Environmental Testing

These units are the smallest audio transformers available. The DO-T type structure incorporated overcomes inherently poor electrical characteristics usually found in miniature audio transformers. These ultraminiature PIL transformers are engineered to provide top electrical performance. All units are subjected to a 500 volt dielectric strength test, instead of the usual 100 volts, for higher safety margins and reliability.

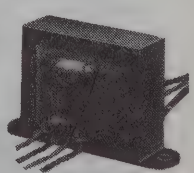
Units are designed to a field-proven, ruggedized construction with a completely rigid cylindrical bobbin eliminating wire movement and stress. The turns are circular, effecting uniform wire lay and eliminating corner stress. The leads are rigidly anchored to the coil wire terminal board fashion, eliminating the use of tape, and brought out through strain relief. The units are terminated in weldable and solderable, insulated Gold plated Dumet leads. **Dim:** 5/16" dia. x 3/16" h., 1/20 oz.

All units are metal encased to Grade 4. Units made to Class S are available on special order. U. S. Patent No. 2,949,591.

Type No.	MIL Type	Pri Imp	Unbal D.C. ma In Pri	Sec Imp	Pri DCR	Max Mw Level	±3 db Fre Range @ 1 Mw	Net Price
PIL-50	TF4RX17YY	500 CT	3	500 CT	40	100	800 cps-250KC	7.20
PIL-70	TF4RX13YY	10K CT	1	500 CT	530	100	800 cps-250KC	7.50
PIL-75	TF4RX13YY	10K CT	1	2K CT	530	100	800 cps-250KC	7.50

CHANNEL FRAME FILAMENT/TRANSISTOR TRANSFORMER

For high intensity display and precision work lamps. Primary 115V 50/60 Cycles — Test Volts RMS: 1500. Taps on primary to modify secondary nominal voltage, −6%, +6%, +12%.



Type No.	Secondary	W	D	H	M	Lbs.	Net Price
FT-16	11VCT-2.5A or 5.5VCT-5A	3¾	2⅛	2 5/16	3⅛	1½	5.85

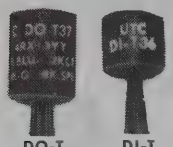
 *UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1965 United Transformer Corp., New York, N. Y.

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TRANSISTOR TRANSFORMERS *Hermetically sealed to MIL-T-27B*

DO-T* AND DI-T* TRANSISTOR TRANSFORMERS



DO-T DI-T
(Actual Size)

Revolutionary transistor transformers hermetically sealed to MIL-T-27B specs. Plastic insulated solderable leads, firmly anchored to withstand 10 pound pull. Ideal for printed circuits. DO-T: 5/16" dia. x 13/32" long, wt., 1/10 oz. DI-T: 5/16" dia. x 1/4" long, wt., 1/15 oz. these compact units provide frequency response, high efficiency and low distortion. U.S. Pat. No. 2,949,591

DO-T Type	DI-T Type	Net Each	Application	Pri. Imped., Ohms	Sec. Imped. Ohms
DO-T1	DI-T1	$6.00	a	20K/30K, 0.5 ma	800/1200
DO-T2	DI-T2	5.40	b	500/600, 3 ma	50/60
DO-T3	DI-T3	5.40	b	1K/1.2K, 3 ma	50/60
DO-T4	.....	5.40	b	600, 3 ma	3.2
DO-T5	DI-T5	5.40	b	1.2K, 2 ma	3.2
DO-T6	.....	6.00	b	10K, 1 ma	3.2
DO-T7	.....	6.60	c	200K	1K
DO-T8	DI-T8	4.80	d•	3.5 hys. @ 2 ma	2.5 hys.‡‡
DO-T9	DI-T9	6.60	e	10K/12K, 1 ma	500/600 CT
DO-T10	DI-T10	6.60	f	10K/12.5K, 1 ma	1.2K-1.5K CT
DO-T11	DI-T11	6.60	f	10K/12.5K, 1 ma	2K/2.5K CT
DO-T12	.....	5.70	b	150/200 CT, 10 ma	12/16
DO-T13	.....	5.70	b	300/400 CT, 7 ma	12/16
DO-T14	.....	6.00	b	600/800 CT, 5 ma	12/16
DO-T15	.....	6.00	b	800/1070 CT, 4 ma	12/16
DO-T16	.....	6.00	b	1K/1330 CT, 3.5 ma	12/16
DO-T17	.....	6.00	b	1.5K/2K CT, 3 ma	12/16
DO-T18	.....	6.30	b	7.5K/10K CT, 1 ma	12/16
DO-T19	DI-T19	6.00	b	300 CT, 7 ma	600
DO-T20	DI-T20	6.00	b	500 CT, 5.5 ma	600
DO-T21	DI-T21	6.00	b	900 CT, 4 ma	600
DO-T22	DI-T22	6.00	b	1500 CT, 3 ma	600
DO-T23	DI-T23	6.90	a	20K/30K CT, .5 ma	0.8K/1.2K CT
DO-T24	.....	7.50	c	200K CT	1K CT
DO-T25	DI-T25	7.20	a	10K/12K CT, 1 ma	1.5K/1.8K CT
DO-T26	DI-T26	5.70	d†	6 hys. @ 2 ma	4.5 hys.‡‡
DO-T27	DI-T27	4.80	d‡	1.25 hys. @ 2 ma	0.9 hy.‡‡
DO-T28	DI-T28	4.80	d§	0.3 hy. @ 4 ma	0.1 hy.‡‡
DO-T29	.....	5.70	b	120/150 CT, 10 ma	3.2/4
DO-T30	.....	5.70	b	320/400 CT, 7 ma	3.2/4
DO-T31	.....	6.00	b	640/800 CT, 5 ma	3.2/4
DO-T32	.....	6.00	b	800/1K CT, 4 ma	3.2/4
DO-T33	.....	6.00	b	1060/1330 CT, 3.5 ma	3.2/4
DO-T34	.....	6.00	b	1.6K/2K CT, 3 ma	3.2/4
DO-T35	.....	6.30	b	8K/10K CT, 1 ma	3.2/4
DO-T36	DI-T36	7.50	a	10K/12K CT, 1 ma	10K/12K CT
DO-T37	DI-T37	7.80	a	2K/2.5K CT, 3 ma	8K/10K Split
DO-T38	DI-T38	7.80	a	10K/12K CT, 1 ma	2K/2.4 Split
DO-T39	.....	7.80	a	20K/30K CT, .5 ma	1K/1.5K Split
DO-T40	.....	8.40	a	40K/50K CT, .25 ma	400/500 Split
DO-T41	DI-T41	7.50	a	400/500 CT, 8/6 ma	400/500 Split
DO-T42	.....	7.50	a	400/500 CT, 8/6 ma	120/150 Split
DO-T43	DI-T43	7.50	a	400/500 CT, 8/6 ma	40/50 Split
DO-T44	DI-T44	7.50	a	80/100 CT, 12/10 ma	32/40 Split
DO-T45	.....	7.80	a	1K/1.25K CT, 3.5 ma	16K/20K Split
DO-T46	.....	8.40	c	100K CT	500 CT
DO-T47	.....	8.10	a	9K/10K, 1 ma	9K/10K CT
DO-T48	.....	7.80	a	8K/10K, 1 ma	1.2K/1.5K CT
DO-T49	.....	7.80	d§§	Series—.075 hys @ 10 ma, 10.5Ω Parallel—.018 hys @ 20 ma, 2.6Ω	
DO-T50	.....	5.70	d§§	Series—20 hys @ 1 ma, 5100Ω. Parallel—5 hys @ 2 ma, 1275Ω	
DO-T51	DI-T51	7.80	a	2K/2.5K CT, 3 ma	2K/2.5 K split
DO-T52	DI-T51	7.80	a	4K/5K CT, 2 ma	8K/10K CT
DO-T400	.....	6.60	h	28V, 380-1 KC	6.3 V, 60 ma
DO-T410	.....	7.80	h	28V, 380-1 KC	Two 6.3 V, 30 ma
DO-T420	.....	7.80	h	28V, 380-1 KC	28 V, 10 ma
DO-TSH	DI-TSH	.90		High mu shield and cover; 25 db	

•630 ohms. †2100 ohms. ‡100 ohms. §25 ohms.
‡‡DI-T primary impedance. §§2 Wdgs.
a—Interstage; b—Output; c—Input; d—Inductor; e—Driver or Output; f—Driver; g—matching; h—Power Unit.

NEW
DI-T200* SERIES TRANSISTOR TRANSFORMERS



These revolutionary transistor transformers embody the same rugged reliable construction afforded by the unique winding techniques and physical construction found in the DO-T & DI-T transformers. DI-T200 series differ by having straight pin, 1" long, .017 d. Dumet wire, gold plated leads.
To MIL-T-27B, size 5/16 x 3/8", wt. 1/15 oz. U.S. Pat. No. 2,949,591

Type No.	Application	Pri. Imped., Ohms	Sec. Imped., Ohms	Net Each
DI-T225	Interstage	80 CT 100 CT	32 Split 40 Split	$8.40
DI-T230	Output or Matching	300 CT	600 Split	7.20
DI-T235	Interstage	400 CT 500 CT	40 Split 50 Split	8.40
DI-T240	Interstage or Output (Ratio 2:1:1)	400 CT 500 CT	400 Split 500 Split	8.40
DI-T245	Output or Matching	500 CT 600 CT	50 CT 60 CT	6.90
DI-T250	Output or Mixing	500 CT	600 CT	7.20
DI-T255	Output or Matching	1,000 CT 1,200 CT	50 CT 60 CT	6.90
DI-T260	Output	1,500 CT	600 CT	7.20
DI-T265	Isolation or Interstage	2,000 CT 2,500 CT	8,000 Split 10,000 Split	8.70
DI-T270	Output or Driver	10,000 CT 12,000 CT	500 CT 600 CT	7.80
DI-T273	Output or Driver	10,000 CT 12,500 CT	1,200 CT 1,500 CT	7.80
DI-T276	Interstage or Driver	10,000 CT 12,000 CT	2,000 CT 2,400 CT	7.80
DI-T278	Interstage or Driver	10,000 CT 12,500 CT	2,000 Split 2,500 Split	8.70
DI-T283	Isolation or Interstage	10,000 CT 12,000 CT	10,000 CT 12,000 CT	8.40
DI-T288	Interstage or Driver	20,000 CT 30,000 CT	800 CT 1,200 CT	8.10
DI-T204	Split Inductor (2 wdgs)	Series: .1 hy @ 4 ma DC, 25Ω Parallel: .025 hy @ 8 ma DC, 6Ω		6.00
DI-T208	Split Inductor (2 wdgs)	Series: .9 hy @ 2 ma DC, 105Ω Parallel: .2 hy @ 4 ma DC, 26Ω		6.00
DI-T212	Split Inductor (2 wdgs)	Series: 2.5 hy @ 2 ma DC, 630Ω Parallel: .6 hy @ 4 ma DC, 157Ω		6.00
DI-T216	Split Inductor (2 wdgs)	Series: 4.5 hy @ 2 ma DC, 2300Ω Parallel: 1.1 hy @ 4 ma DC, 575Ω		6.90
DI-T200SH	Drawn Hipermalloy shield provides 15 to 20 db shielding through side of case			.75

NEW PIL* ULTRAMINIATURE AUDIO INDUCTORS

The new PIL series constitutes the smallest audio inductors available. These units are metal encased, ruggedized manufactured and guaranteed to MIL-T-27B. They are MIL Type TF4RX-20YY. Physical construction is that of the PIP (DO-T, DI-T) units shown on this page.

Type No.	Connection	Ind.Hys. Min @ IV, 1KC	DC ma	DCR Ohms
PIL-5	Series	.12	0	43
	Parallel	.03	0	10.7
	Series	.10	10	
	Parallel	.025	10	
PIL-8	Series	.32	0	115
	Parallel	.08	0	28
	Series	.16	10	
	Parallel	.06	10	
PIL-12	Series	.8	0	300
	Parallel	.2	0	75
	Series	.4	5	
	Parallel	.15	5	



5/16" Dia. x 3/16" high Wt. 1/20 oz.

PIP* SERIES TRANSISTOR PULSE TRANSFORMERS

UTC's PIP series of subminiature transistor type pulse transformers is designed to give a maximum of component density in equipments, their configuration being especially compatible with transistors. The design is based on the UTC DO-T and DI-T series to impart exceptional reliability. PIP-1 through PIP-9 have a ratio of 4:4:1, PIP-10 through PIP-12 have a ratio of 5:3:1. All units are checked and adjusted in a transistor test circuit to give the required pulse width.

Hermetically sealed, manufactured & guaranteed to MIL-T-20138B by full environmental testing . . . all units, completely METAL CASED, MIL type TP6RX4410CZ. See UTC page 6 for other miniature pulse transformers.

All Units Individually Adjusted to Parameters Shown in Table

U.S. Pat. No. 2,949,591

5/16" Dia. x 3/16" high
Weight 1/20 oz.



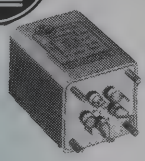
Type No.	APPROX. DCR, OHMS 1-Brn 2-Rd	3-Org 4-Yel	5-Grn 6-Blu	BLOCKING OSCILLATOR PULSE Width μSec.	Rise Time	% Over Shoot	Droop %	% Back Swing	COUPLING CIRCUIT CHARACTERISTICS P Width μSec.	Volt Out	Rise Time	% Over Shoot	Droop %	Back Swing	Imp. in, out,	Net Each
PIP-1	.18	.20	.07	.05	.02	0	0	37	.05	9	.018	0	0	12	50	$6.00
PIP-2	.47	.56	.17	.1	.025	0	0	25	.1	8	.02	0	0	5	50	6.00
PIP-3	1.01	1.25	.37	.2	.030	2	0	15	.2	7	.035	0	0	5	100	6.00
PIP-4	1.5	1.85	.54	.5	.05	0	0	15	.5	7	.06	0	0	0	100	6.00
PIP-5	2.45	3.1	.9	1	.08	0	0	14	1	6.8	.15	0	0	5	100	6.00
PIP-6	3.0	3.7	1.1	2	.10	0	0	15	2	6.6	.18	0	2	10	100	6.00
PIP-7	4.9	6.05	1.8	3	.20	0	0	14	3	6.8	.20	0	2	10	100	6.00
PIP-8	8.0	9.7	2.9	5	.30	0	0	3	5	7.9	.22	0	13	25	200	6.00
PIP-9	13.1	15.9	4.7	10	.35	0	5	12	10	6.5	.4	0	15	20	200	6.00
PIP-10	.55	.41	.15	.1	.01	0	0	20	.1	8	.01	0	0	5	140/50	6.00
PIP-11	2.9	2.2	.82	1	.02	4	4	6	1	6.6	.05	0	6	12	280/100	6.00
PIP-12	9.4	7.1	2.6	5	.05	0	12	12	5	8	.09	2	12	25	560/200	6.00
PIP-100	Transistor pulse transformer kit, consisting of PIP-1 thru PIP-9 in plastic case.															51.00
PIP-SH	Drawn Hipermalloy shield and cover for PIP's provides 20 to 30 db shielding.															.90

UTC PAGE 2. *UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1965 United Transformer Corp., New York, N. Y.

© U.C.P., Inc.

TRANSISTOR TRANSFORMERS *Hermetically sealed to MIL-T-27B*

TRANSISTOR SUPPLY TRANSFORMERS



Primary 115V. 50/60 cycles (tapped on H-143 thru H-146 for dual secondary voltages). DC ratings are approximate, based on silicon bridge rectifier (except H-141, H-142 also shown F.W.CT.). Choke input DCV is based on 10% voltage drop in choke. Condenser value, C, is in 1000 mfd. H-141, H-142, H-147 listing under "Secs in parallel" is single winding. All units MIL type TF4RX02.

Type No.	Sec. V Rms	Sec. A Rms	Sec. in Parallel: Choke DCV	Input DCA	Cond. DVC	Input DCA	C	Sec. in Series: Choke DCV	Input DCA	Cond. DVC	Input DCA	C	MIL Case	Net Each
H-141	20 CT	.3	16.5	.3	26	.2	.2						EB	$10.20
			8	.43	12	.3	.5							
H-142	20 CT	.6	16.5	.6	26	.4	.4						EA	12.90
			9	.85	13	.6	1							
H-143	17/21.5 17/21.5	1.5 1.5	14/17.5	3	18.5/25	2	1	28/35	1.5	43/56	1	.5	HA	18.60
H-144	17/21.5 17/21.5	4 4	14/17.5	8	18.5/25	5	2	28/35	4	43/56	2.5	1	LA	30.00
H-145	17/21.5 17/21.5	9 9	14/17.5	18	18.5/25	12	6	28/35	9	43/56	6	4	RC-175	45.90
H-146	34/43 34/43	4.5 4.5	28/35	9	43/56	6	4	56/70	4.5	85/110	3	1	UTC Pg. 9	45.90
H-147	10	20	8.2	20	10	13	12						KA	27.00

UNIVERSAL TRANSISTOR SUPPLY TRANSFORMERS

Low Voltage DC Supply
Telephone Supply
Bias Supply
Battery Chargers
Plating Rectifiers

UTC universal transistor supply transformers are high reliability units in drawn MIL cases. Primary tapes can modify nom. AC voltages by −6%, +6%, and +12%. The capacitor following the rectifier affects the DC voltage.

PRIMARY 115 VOLTS, 50/60 CYCLES
NOMINAL SEC. VOLTS, 8.25 to 40.5

Type No.	MIL DC Range	Indust. DC Range	MIL CASE	Net Each
H-915	6V-.065A to 53V-.02A	6V-.085A to 53V-.025A	AH	$11.70
H-925	6V-.22A to 53V-.07A	6V-.28A to 53V-.085A	AJ	12.90
H-935	6V-1.2A to 53V-4A	6V-1.52A to 53V-.48A	FA	14.40
H-94	6V-3A to 53V-1A	6V-3.8A to 53V-1.2A	HA	19.80
H-95	6V-7.5A to 53V-2.5A	6V-9A to 53V-3A	KA	28.80
H-96	6V-18A to 53V-6A	6V-23A to 53V-7.5A	OA	48.00

PRIMARY 115 VOLTS, 50/60 CYCLES
NOMINAL SEC. VOLTS, 16.5 TO 81

H-965	12V-1.5A to 106V-.5A	12V-1.9A to 106V-.6A	HA	20.40

NEW 400-CYCLE MET* TYPES

PRIMARY 115 VOLTS, 400 CPS.
NOMINAL SEC., 8.25-40.5 VOLTS

MET 455	6V-1.2A to 53V-.4A	6V-1.52A to 53V-.48A	AJ	$12.90
MET 465	6V-3A to 53V-.4A	6V-3.8A to 53V-1.2A	FA	14.40
MET 475	6V-7.5A to 53V-2.5A	6V-9A to 53V-3A	HA	20.40

400 CYCLE MOLDED TYPES



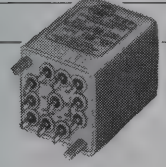
Primary 105/115 Volts 380-1000 Cycles. Sec: 6.3 VCT 2500V RMS Test

MOLDED 400 CYCLE TYPE TF5SX01ZZ

Type No.	Sec. Amp.	L In.	W In.	H In.	Wt. Lbs.	Net Each
H-101	3.5	1 25/32	1 31/32	2	.3	$14.10
H-102	5.5	1 3/4	2	2 1/4	.44	15.00
H-103	10	2 5/16	2 1/8	2 1/2	.8	17.40
H-104	25	2 7/8	2 1/2	3 1/32	1.5	21.90
H-118	.3	Sub ounces mold see pg. 10				9.00

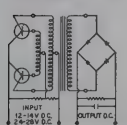
TRANSISTOR INVERTER TRANSFORMERS

High reliability (layer insulated) types providing high efficiency in small size. Units are in drawn MIL cases. Circuit details supplied with transformer. With 6 V. input instead of 12 V., output voltage is halved, current rating remains the same.



FOR 12/14 OR 24/48 VOLT BATTERY

Type No.	DC output, when used in circut shown	MIL Case	Net Each
H-97	250V.-60MA	AH	$14.70
H-98	375V.-100MA	AJ	15.90
H-99	425V.-175MA	FA	20.40
H-100	550V.-200MA	GB	21.00



IMMEDIATE DELIVERY ON ALL ITEMS FROM STOCK

NEW MET* 400-CYCLE SERIES

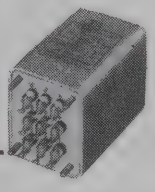
Type No.	MIL Type	Sec. Volt	Amps. (MIL)	Amps. (Indust.)	Sec. Test V.RMS	MIL Case	Net Each
MET-410#	TF4SX01YY 400 cy. pri.	6.3	.6	.75	500	RC-25	$ 7.80
MET-420	TF4SX01AH 3800-1000 cy.‡	6.3CT	2	2.5	1500	AH	9.60
MET-430±	TF4SX01FA 400 cycles§	12.6CT 12.6	2 2	2.5 2.5	1500	FA	18.00
MET-435	TF4SX01FA 380-1000 cy.‡	6.3CT	10	12	2500	FA	12.00
MET-440	TR4SX01GB 380-1000 cy.‡	6.3CT 6.3CT	6 6	7 7	2500	GB	15.00

†Two MET-430's, Scott-connected, provide 26v., 2-phase from 115 v., 3-phase 400 cps input. Replaces former No. H-139. ‡105/115/125 v. primary. §57.5/99.7/115 v. primary. #Replaces former No. H-140.

HERMETIC SEALED TRANSISTOR/FILAMENT SUPPLY TRANSFORMER

Primary: 105/115/210/220 volts, 50/60 cycles, except H-130, H-137, H-138, H-104 (115v.) and H-131 (115/220v.) Suited to 400/100 cycle service. H-128: 6½" x 5½" x 7¾" h. (wt. 34 lbs.) H-129: 6½" x 5½" x 7¾" h. (wt. 28 lbs.)

METAL CASED TF4 TYPE



MIL T-27B RATINGS IN REGULAR TYPE, INDUSTRIAL RATINGS IN BOLD TYPE

Type No.	MIL Type	Sec. Volts	Amps. (MIL)	Amps. (Indust.)	Sec. Test V. RMS	MIL Case	Net Each
H-119	TF4RX01AH	6.3CT	.3	.38	1500	AH	$ 8.40
H-120	TF4RX01GB	2.5	10	12	4000	GB	13.80
H-121	TF4RX01JB	2.5	10	12	10000	JB	18.00
H-122	TF4RX01KB	2.5	20	26	10000	KB	21.00
H-123	TF4RX01NB	2.5	5	7.5	10000	NB	36.00
		2.5	5	7.5			
		2.5	10	15			
H-124	TF4RX01FB	5	3	3	2000	FB	12.00
H-125	TF4RX01KB	5	10	12	10000	KB	21.00
H-126	TF4RX01LA	5	20	25	10000	LA	27.00
H-127	TF4RX01NA	5	20	30	21000	NA	45.00
	Term. Opp. Mtg.						
H-128	TF4RX01YY	5	60	75	21000		81.00
	Term. Opp. Mtg.						
H-129	TF4RX01YY	5	10	12	21000		90.00
	Term. Opp. Mtg.	5	10	12			
		5	20	24			
H-130	TF4RX01AJ	6.3CT	.6	.75	1500	AJ	9.00
H-131	TF4RX01FB	6.3CT	2	2.5	2500	FB	12.00
H-132	TF4RX01JA	6.3CT	6	7	2500	JA	19.20
		6.3CT	6	7			
H-133	TF4RX01HB	6.3CT	7	8	2500	HB	15.00
H-134	TF4RX01HA	6.3CT	10	12	2500	HA	16.80
H-135	TF4RX01JB	10 CT	10	13	2500	JB	21.00
H-136	TF4RX01LA	14, 12, 11 CT	10	14	2500	LA	27.00
H-137	TF4RX01EB	6.3	.6	.75	1500	EB	12.00
		6.3	.6	.75			
H-138	TF4RX01GA	12.6	2	2.5	1500	GA	19.50
		12.6	2	2.5			
		400 CYCLE TYPE					
H-139*	TF4RX01FA	12.6CT	2	2.5	1500	FA	18.00
	Pri. 400 cyc. 57.5,99.7,115V	12.6	2	2.5			
H-140	TF4RX01YY	6.3	.6	.75	500	RC-25	7.80
	Pri. 400 Cyc.					UTC Pg. 5	

*Two H-139's Scott connected provide 26 volt two phase from 115V. three phase 400 cycle input.

 *UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1965 United Transformer Corp., New York, N. Y.

TRANSISTOR TRANSFORMERS
(Commercial Types)
& M-S Transformers & Inductors

TRANSISTOR TRANSFORMERS *(Commercial Type)*

NEW CAT★ TRANSISTOR IMPEDANCE TYPES

All units in RC-50 case. Frequency range, ±2 db, 50-15,000 cps. Power level 1 watt except CAT-15, 5 watts.

UTC Type	Application	Imped. Ohms	Primary Unbal. Ma DC	Secondary Imped., Ohms	Net Each
CAT-15	Output	48/12 spl.	750•	16 spl./8/4	$8.10
CAT-20	Istg./outp.	500/125 spl.	20	16/4 split	7.80
CAT-25	Isol./outp.	500/125 spl.	20	500/125 spl.	7.80
CAT-30	Input/istg.	500/125 spl.	20	2K/500 split	7.80
CAT-40	Istg./outp.	10K/2.5K spl.	8	2K/500 split	7.80

•Balance. ★Trade mark.

CHANNEL FRAME FILAMENT/TRANSISTOR TRANSFORMERS
Pri. 115 V. 50/60 Cycles—Test Volts RMS: 1500

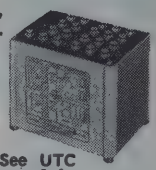
Type No.	Secondary	W	D	H	M	Lbs.	Net Each
FT-1	2.5 VCT-3A	2 7/8	1 5/8	1 11/16	2 3/8	3/4	$4.05
FT-2	6.3 VCT-1.2A	2 7/8	1 5/8	1 11/16	2 3/8	3/4	3.90
FT-3	2.5 VCT-6A	3 5/16	1 7/8	2	2 13/16	1	4.50
FT-4	6.3 VCT-3A	3 5/16	1 7/8	2	2 13/16	1	4.50
FT-5	2.5 VCT-10A	3 3/4	2 1/8	2 5/16	3 1/8	1 1/2	4.65
FT-6	5 VCT-3A	3 3/4	2 1/8	2 5/16	3 1/8	1 1/2	4.65
FT-7	7.5 VCT-3A	3 3/4	2 1/8	2 5/16	3 1/8	1 1/2	4.65
FT-8	6.3 VCT-8A	4	2 1/2	2 5/8	3 5/16	2 1/2	5.40
FT-10	24 VCT-2A or 12V-4A	4	2 5/8	2 11/16	3 5/16	2 1/2	5.55
FT-11	24 VCT-1A or 12 V-2A	3 3/4	2 1/8	2 5/16	3 1/8	1 1/2	4.95
FT-12	36 VCT-1.3A or 18 V-2.6A	4	2 5/8	2 5/8	3 5/16	2 1/2	5.55
	Taps on pri. of FT-13, FT-14 & FT-15 to modify sec. nominal V, −6% +6%, +12%						
FT-13	26 VCT-.04A	2 1/8	1 3/8	1 1/4	1 3/4	1/4	$4.20
FT-14	26 VCT-.25A	2 7/8	1 5/8	1 11/16	2 3/8	3/4	4.50
FT-15	48VCT-1A	4	2 1/2	2 5/8	3 5/16	2 1/2	6.30

TRANSISTOR/FILAMENT TRANSFORMERS
Pri. 115 x 50/60 Cycles; Bridge Rectifier
S-77, S-78 & S-79 Tapped For Dual Secondary Voltages

UTC Type	DCV	DCA	Case No. See Page 11	Net Each
S-75	5.2/14	1.2/.4	G-1	6.00
S-76	10/26	4/1.4	G-4	9.00
S-77	14/56	3/1	G-5	10.20
S-78	28/110	9/3	G-10	30.00
S-79	32/120	3/1	G-7	18.00

CIRCUIT DEVELOPMENT TRANSFORMERS FOR TRANSISTORS

The UTC LABoratory circuit development transformers aid the designer in selecting optimum impedances for best power and distortion results from his transistor circuit.



See UTC page 8 for dimensions
Terminal board as shown above

LAB-5
20 Cycles to 20kc
Up to 50mw Continuous

Pri Imp. Ω	Sec. Imp. Ω
125	125
200 split	200 split
500 split	500 split
2000 split	2000 split

Net Each: $48.00

LAB-10 units in LS-1 case

LAB-20 units in LS-3 case

LAB-10
20 Cycles to 20kc
Up to 1W Continuous

Pri. Imp. Ω Range	Pri. to Sec. Ratio	Sec. Imp. Ω Range
1900 Ω to 14,400 Ω	20:1 or 10:1	19 Ω to 36 Ω
925 Ω to 7600 Ω	10:1 or 5:1	37 Ω to 76 Ω

Net Each: $30.00

LAB-20
20 Cycles to 20kc
Up to 50W Continuous

Pri. Imp. Ω	Sec. Imp.
6, 12, 24, 40, 54, 70,	4, 8, 16, 64

Net Each: $60.00

TRANSISTOR/FILAMENT SUPPLY TRANSFORMERS
Primary 115 volts 50/60 cycles

Type No.	Sec. V RMS	Sec. A RMS	In Parallel: Choke in DCV	Choke in DCA	C in DCV	C in DCA	In Series: Choke in DCV	Choke in DCA	C in DCV	C in DCA	Case No. See Pg. 9	Net Each
CG-30	17/21.5	1.5	14/17.5	3	18.5/25	2	28/35	1.5	43/56	1	RC-112	$18.90
	17/21.5	1.5										
CG-31	34/43	4.5	28/35	9	43/56	6	56/70	4.5	85/110	3	RC-175	42.00
	34/43	4.5										
CG-32	6.3VCT	1.2									RC-62	10.50

FILAMENT/TRANSISTOR SUPPLY TRANSFORMERS

Primary 105, 115, 210, 220, 230 volts, 50/60 cycles, except CG-34 . . . 105, 115, 220, 230. These transformers may be used on 25 to 43 cycles if 220 volt primary is used on 110 volts. Secondary voltage is simultaneously reduced to half.



RC CASE
See Pg. 9

Type No.	Sec. Volts C.T.	Sec. Amp.	Working Voltage	Sec. Test Volts RMS	Case No. See Page 9	Net Each
CG-33	6.3	4	500	2000	RC-75	$ 9.00
CG-34	2.5	10	2500	6000	RC-112	10.20
CG-35	6.3	6	500	2000	RC-87	9.60
CG-36	6.3/6.3	5/5	500	2000	RC-100	13.50
CG-120	2.5	10	5000	11000	RC-125	15.00
CG-121	5	25	5000	11000	RC-150	18.00
CG-122	7.5/6.3	10	1500	4000	RC-125	15.00
CG-124	10	10	1500	4000	RC-150	15.00
CG-125	14/12/11	10	1500	4000	RC-150	18.00
CG-126	14/11/10 14/11/10	10	1500	4000	RC-152	24.00

MILITARY STANDARD TRANSFORMERS AND INDUCTORS

Hermetically Sealed To MIL-T-27B Specifications

Made and guaranteed to meet MIL-T-27B by full environmental testing.

FILAMENT, POWER, PLATE TRANSFORMERS

Primary 105/115/125 v., 54/66 cycles. Current ratings are for high voltage secondary DC, choke input filter. For condenser input, reduce by 70%. All units are MIL grade 4, ruggedized; equally usable where grade 1 is specified. Electrostatically shielded.

UTC Type	MS No.	MIL Type TF4RX-	Secondary Rating	MIL Case	Net Each
N-583A	90016-2	01EB002	2.5 v.-3 a.; 1000 WV	EB	$10.20
N-584A	90017-2	01GB003	2.5 v.-10 a.; 1000 WV	GB	14.10
N-585A	90018-2	01FB004	5 v.-3 a.; 1000 WV	FB	11.10
N-586A	90019-2	01HB005	5 v.-10 a.; 1000 WV	HB	15.30
N-587A	90020-2	01FB006	6.3 v.-2 a.; 1000 WV	FB	11.10
N-588A	90021-2	01GB007	6.3 v.-5 a.; 1000 WV	GB	12.90
N-589A	90022-2	01JB008	6.3 v.-10 a.; 1000 WV	JB	17.70
N-590A	90023-2	01KB009	6.3 v.-20 a.; 1000 WV	KB	22.50
N-591A	90024-2	01JB012	2.5 v.-10 a.; 6300 WV	JB	18.00
N-592A	90025-2	01KB013	5 v.-10 a.; 6300 WV	KB	21.00
N-593A	90026-2	03HA001	200-100-0-100-200, 70 ma;	HA	20.70
N-594A	90027-2	03JB002	6.3/5 v.-2 a.; 6.3 v.-3 a. 325-0-325, 70 ma;	JB	22.35
N-595A	90028-2	03KB006	6.3/5 v.-2 a.; 6.3 v.-4 a. 325-0-325, 150 ma;	KB	25.35
N-596A	90029-2	03LB003	5 v.-3 a.; 6.3 v.-5 a. 400-0-400, 175 ma;	LB	27.30
N-597A	90030-2	03MB004	5 v.-3 a.; 6.3 v.-8 a. 450-0-450, 250 ma;	MB	33.90
N-598A	90031-2	02KB001	5 v.-3 a.; 6.3 v.-8 a. 350-0-350, 250 ma	KB	19.80
N-599A	90032-2	02LB002	550-0-550, 250 ma	LB	26.85
N-600A	90036-2	02NB003	800-0-800, 250 ma	NB	37.50

AUDIO TRANSFORMERS

Frequency response 300-10,000 cps, ±2 db. Split 600-ohm units provides for 600 ohms CT and 1500 ohms. Electrostatic shielding provided on W-784, W-785 and W-786. No. W-783 has center-tapped secondary for 90K CT or 22.5K CT. All units in AJ case. Wt., 0.6 lb.

UTC Type	MS No.	MIL Type TF1RX-	#	Pri. Ohms	Pri. DC Ma., Unbal.	Sec. Ohms	Net Each
W-783	90000-1	15AJ001	a	10K CT	10	90K spl.	$15.90
W-784	90001-1	16AJ002	b	600 spl.	.....	4/8/16	14.70
W-785	90002-1	10AJ001	c	600 spl.	.....	135K CT	14.10
W-786	90003-1	16AJ001	d	600 spl.	.....	600 spl.	14.10
W-787	90004-1	13AJ001	e	7.6K/4.8K	40	600 spl.	12.75
W-788	90005-1	13AJ002	f	7.6K/4.8K	40	4/8/16	12.90
W-789	90006-1	13AJ003	g‡	15K CT	10	600 spl.	12.45
W-790	90007-1	13AJ004	g+	.24K CT	20†	600 spl.	12.90
W-791	90008-1	13AJ005	g#	60K CT	20+	600 spl.	12.45

Use: a—PP plates to pp grids, 15 dbm level. b—Line to VC, 2 watts. c—Line to pp grids, 15 dbm. d—Line to line, 15 dbm. e—Plate to line, 2 watts. f—Plate to VC, 2 watts. g—PP plates to line. †Balanced. ‡2 watts. +1 watt. #0.5 watt.

INDUCTORS

Two windings for series or parallel connection. Inductance shown for series connection. All but Z-847 are standard MIL case types. Rated 3500 WVDC, unless otherwise noted.

UTC Type	MS No.	MIL Type	Induct. Hy.	Ma DC	DCR Ohms	MIL Case	Net Each
Z-848•	90009-1	04FA001■	16	80	645	FA	$11.40
Z-849•	90010-1	04GA002■	25	80	670	GA	14.10
Z-850•	90011-1	04HA003■	40	80	1020	HA	21.30
Z-851†	90013-1	04HA005■	16	125	330	HA	16.50
Z-852†	90014-1	04JB006■	25	125	460	JB	24.30
Z-853	90037-1	04KA007■	40	125	535	KA	29.40
Z-854	75000-2	04LA009•	16	200	180	LA	31.50
Z-855	75001-2	04MA010•	25	200	210	MA	36.90
Z-856	75002-2	04NA012•	16	315	105	NA	43.20
Z-857	75003-2	04YY013•	25	315	150	YY	75.00

•1000 WVDC. †2000 WVDC. ■TF1RX-. •TF4RX.

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HERMETIC COMPONENTS *Hermetically sealed to MIL-T-27B*

HERMETIC AUDIO UNITS



RC-25 RC-50 FH SM

These extremely compact units are proved to specifications of MIL-T-27B. **Response & level ratings:** RC-25: Similar to Ouncers for case (1 13/32" x 6 1/64" x 1 7/16" h. 1.5 oz.). RC-50: Similar to ultra compact units for case (1 5/8" x 1 5/8" x 2 5/16" h. 8 oz.). SM: Similar to SSO units for case (1 1/16" x 1 1/2" x 2 9/32" h. 0.8 oz.). FH: 27/32" x 23/32" x 5/16", h. .8 oz.

UTC Type	Application	Pri. Imped., Ohms	Sec. Imped., Ohms	#	Net Each
H-1	Line to grid	50, 200 CT, 500 CT	50K	a	$9.00
H-2	Mike to grid	82, 50 ma	135K	a	9.90
H-3	Pl. to grid	15K	60K	a	7.80
H-4	Pl. to grid	15K, 4 ma	60K	a	7.80
H-5	Pl. to p-p	15K	95K CT	a	8.40
H-6	Pl. to p-p	15K, 4 ma	95K split	a	10.20
H-7	Pl. to line	20K CT, 4 ma	150/600	a	9.60
H-8	Mixing	150/600	600 CT	a	9.00
H-9	Input	150/600	1 meg.	a	9.00
H-10	Pl. to grid	10K	1 meg.	a	8.40
H-11	Reactor: 300 hys, 50 hys @ 3 ma, 600 ohms			a	7.50
H-12	Line to p-p	50, 200 CT, 500 CT	50K CT	a	9.60
H-13	Interstage	10K/2.5K split	2K//.5K split	a	9.00
H-14	Interstage	10K/2.5K split	4K/1K split	a	9.00
H-15	Tr. to line	1.5K CT	500/125 split	a	9.00
H-16	Tr. to V.C.	2K/4K CT	8/16	a	9.00
H-17	Tr. input	600/150 split	2K/500 split	a	8.70
H-18	Tr. interstage	10K CT	500/125 split	a	8.70
H-19A	Input*	250 CT/500 CT	50K/100 CT	b	16.50
H-20	Interstage	15K split	80K split	b	15.00
H-21	Pl. to p-p	15K, 8 ma	80K split	b	18.00
H-219	Tr. interstage	50K CT	500/125 split	a	9.00
H-22	Pl. to line	15K, 8 ma	50/200, 125/500	b	15.90
H-220	Tr. interstage	500/125 split	500/125 split	a	8.70
H-221	Tr. interstage	500/125 split	150/37.5 split	a	8.70
H-222	Split Inductor:	Series: 60 Mhy-80 ma, 4 ohms Parallel: 15 Mhy-160 ma, 1 ohm		a	6.00
H-224	Split Inductor:	Series: 1 Hy-20 ma, 60 ohms Parallel: .25 Hy-40 ma, 15 ohms		a	6.00
H-225	Tr. interstage	100/25 split	40/10 split	a	8.70
H-23	P-p to line	30K split	50/200, 125/500	b	16.20
H-24	Inductor: 250 hys. @ 5 ma†, 65 hys. @ 10 ma†	500 CT	125/500	b	10.80
H-25	Mixing			b	15.00
H-26	Interstage	10K/2.5K split	2K/500 split	b	15.00
H-27	Tr. to V.C.	500 CT	16/4 split	b	15.00
H-280	Interstage	200 CT	400 split	b	12.00
H-281	Tr. to V.C.§	48 CT	16, 8, 4	b	12.00
H-282	Tr. to V.C.††	20 CT	16, 8, 4	c	12.60
H-283	Mixing/ Matching	50, 125/150 200/250, 333 500/600	50, 125/150, 200/250, 333 500/600	b	17.40
H-284	Split Inductor:	Series: 4 Hys-50 ma, 100 ohms Parallel: 1 Hy-100 ma, 25 ohms		b	7.20
H-286	Split Inductor:	Series: 40 Hys-15 ma, 1000 ohms Parallel: 10 Hys-30 ma, 250 ohms		b	7.50
H-290	Shld. chopper	2500 e. s.	100K	b	19.80
H-291	Max. shld. chop.	2000/500 e. s.	312K	c	28.80
H-295	Shld. chopper	10K/2.5K e. s.	50K	f	18.00
H-30	Input	50	62,500	d	8.40
H-31	Pl. to grid	10K	90K	d	8.40
H-32	Pl. to line	10K, 3 ma	200	d	8.40
H-33	Output	30K, 1 ma	50	d	8.40
H-35	Inductor: 100 hys., 50 hys. @ 1 ma, 4400 ohms			d	6.90
H-36	Interstage	25K, 0.5 ma	1K	d	7.50
H-37A	Tr. output	500 CT	50	d	7.50
H-38	Interstage	10K CT, 2 ma	1.2K CT	d	7.50
H-39	Interstage	10K CT, 2 ma	2K CT	d	7.50
H-40A	Tr. output	500 CT	600 CT	d	7.50
H-41A	Tr. output	1500 CT	600 CT	d	7.50
H-42A	Isol./Tr. Inter.	10K CT	10K CT	d	8.40
FHA-15	Tr. Interstage	10K CT/2.5K split	200 CT/50 split	e	8.10
FHA-25	Tr. Interstage	20K CT/5K split	800 CT/200 split	e	8.10
FHI-3	Split Inductor:	Series: 60 Mhys-32 ma, 6 ohms Parallel: 15 Mhys-64 ma, 1.5 ohms		e	6.00
FHI-7	Split Inductor:	Series: 1 Hy-8 ma, 100 ohms Parallel: .25 Hy-16 ma, 25 ohms		e	6.00
FHI-11	Split Inductor:	Series: 2.4 Hys-2 ma, 160 ohms Parallel: .6 Hys-4 ma, 40 ohms		e	6.00

*Has 75 db shielding. †6000 ohms. ‡1500 ohms. §5 watts. ††10 watts.

#Case: a—RC-25. b—RC-50. c—RC-62. d—SM. e—FH. f—RC-37. (See above & pg. 9)

HERMETIC SEALED FILTER INDUCTORS TUBE and TRANSISTOR TYPE



METAL CASED TF4 TYPE H-70 thru H-79, H-164 thru H-173



MOLDED MIL TYPE TF5SX04ZZ H-105 thru H-109 & H-300

The multiple ratings for the "H" series of filter chokes suit these units for the complete gamut of military and industrial applications. Transistor supply units are swinging type to enhance regulation. H-79 terminals opposite mounting.

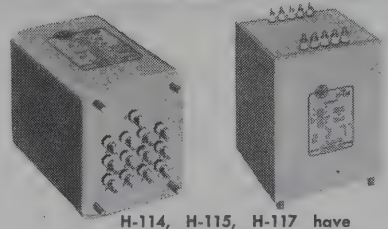
*Relates to ripple voltage, in input filter circuits only.

Type No.	Ind. Hys.	@	MA DC	Res. Ohms	Max. DCV* Ch. Input	Test V. RMS	MIL Case	Net Each
H-70	20		20	925	350	1000	AH	$ 7.20
H-71	20		40	350	500	2500	FB	8.40
H-72	13		70	215	500	2500	GB	9.00
H-73	11		100	150	700	2500	HB	11.40
H-74	11		150	135	700	2500	JB	12.90
H-75	11		200	90	700	2500	KB	17.40
H-76	11		200	85	1500	4500	LB	24.00
H-77	10		300	60	2000	5500	MB	27.00
H-78	7		400	48	2500	7000	OA	34.50
H-79	7		800	20	3000	9000	7x7x8	90.00
H-164 †	45‡		35	1.2		500	AG	6.60
(2 wdgs.) *	11.25‡		70	.295				
H-166 †	125‡		50	1.2		500	AH	7.50
(2 wdgs.) *	31‡		100	.3				
H-168 †	68‡		100	.8		750	AJ	8.40
(2 wdgs.)*	17‡		200	.2				
H170 †	.18		125	.6		1000	GB	10.20
(2 wdgs.) *	.045		250	.15				
H-171 †	9‡		.75A	.03		1000	JA	15.00
(2 wdgs.) *	2.25‡		1.5A	.0075				
H-172 †	70‡		.25A	.22		1000	HA	12.60
(2 wdgs.) *	17.5‡		.5A	.055				
H-173 †	90‡		.5A	.15		1000	KA	21.00
(2 wdgs.) *	22.5‡		1A	.038				

Type No.	Inductance Henries @ DC MA	DCR Ohms	Test Volts	L	W	H	Wgt. Lbs.	Net Each
H-105	2.5 @ 25 MA	225	1000	1 1/4	1 5/16	1 3/16	.1	$ 5.70
H-106	2.25 @ 60 MA	110	1000	1 9/16	1 5/16	1 1/16	.28	6.00
H-107	2 @ 120 MA	55	2500	2 1/16	1 1/16	1 13/64	.9	7.50
H-108	2 @ 220 MA	35	2500	2 7/16	2 1/16	2 1/32	1.7	9.60
H-109†	.2 @ 150 MA	.6	750	2 1/8	2 1/2	2 1/32	1.7	10.80
(2 wdgs.)*	.06 @ 250 MA	.15						
H-300 †	1 @ 5 MA	40	500	1	3/4	23/32	0.5	6.30
(2 wdgs.)*	.25 @ 10 MA	10						

†Split winding in series *Split winding in parallel
‡Rated in millihenries

HERMETIC SEALED POWER and PLATE TRANSFORMERS



H-114, H-115, H-117 have terminals opposite mounting.

Power transformers: primary 115V, 60 cycles suited to 50*-1000 cycles service. Plate transformers: primary 105/115/210/220 volts, 50/60 cycles. "L" ratings are choke input . . . "C" ratings are condenser input. H-80 thru H-197 MIL type TF4RX03, H-110 thru H-117 MIL type TF4RX02. The tapped high voltage winding provides either of two secondary voltages for greatest versatility. The power transformer listings indicate DC voltages and permissible currents for both choke and condenser input filters, as well as for military and industrial applications.

"W" suffix units designed for full wave center tap and full wave bridge application. Center tap of secondary may be disconnected from ground.

MIL-T-27B Ratings in Regular Type, **Industrial Ratings in Bold Type**

Type No.	HV Sec. C. T.	Approx. DC Volts	DC MA	Fil. Wdg.	Approx. DC Volts	DC MA	Fil. Wdg.	MIL Case	Net Each
H-80	450	C 240	30	6.3VCT-2A	C 215	38	6.3VCT-2.5A	FA	$12.90
H-81	500	L 170	95		L 160	110			
		C 270	55	6.3VCT-3A	C 245	75	6.3VCT-3A	HA	18.00
	550	L 200	85	5V-2A	L 180	105	5V-2A		
		C 310	50		C 280	65			
H-82	550	L 180	145		L 160	190			
		C 290	90	6.3VCT-4A	C 270	115	6.3VCT-4.5A	JB	20.40
	600	L 215	135	5V-2A	L 190	180	5V-2A		
		C 330	85		C 315	100			
H-83	600	L 215	165		L 200	210			
		C 315	100	6.3V-5A	C 320	120	6.3V-6A	JA	21.00
	670	L 250	150	5V-2A	L 230	200	5V-2A		
		C 400	90		C 380	110			
H-84	700	L 245	225		L 240	255			
		C 390	135	6.3V-5A	C 375	160	6.3V-6A	KA	26.40
	750	L 275	205	6.3V-1A	L 270	230	6.3V-1.5A		
		C 430	125	5V-3A	C 410	150	5V-4A		
H-85	700	L 245	300		L 230	370			
		C 390	190	6.3V-6A	C 355	230	6.3V-6A	LA	30.00
	750	L 270	280	6.3V-1.5A	L 250	350	6.3V-2A		
		C 425	170	5V-3A	C 395	210	5V-4A		
H-86	720	L 270	310		L 250	360			
		C 425	180	6.3V-6A	C 395	225	6.3V-7.5A	MB	30.90
	790	L 295	300	6.3V-2A	L 280	350	6.3V-2A		
		C 475	160	5V-3A	C 440	210	5V-4A		
H-87	730	L 245	420		L 230	515			
		C 390	275	6.3V-6A	C 390	300	6.3V-6A	NB	36.00
	800	L 275	400	6.3V-2A	L 275	480	6.3V-2A		
		C 440	250	5V-4A	C 430	290	5V-6A		
H-89	850	L 305	430		L 275	550			
		C 460	280	6.3V-8A	C 445	340	6.3V-10A	OA	49.50
	1050	L 400	400	6.3V-4A	L 370	500	6.3V-5A		
		C 600	260	5V-6A	C 575	320	5V-6A		
H-91	900	L 340	200	6.3V-5A	L 330	220	6.3V-6A	KA	27.00
	1000	L 390	190	6.3V-1A 5V-3A	L 385	195	6.3V-1.5A 5V-4A		
H-92	900	L 340	265	6.3V-6A	L 330	310	6.3V-8A	MB	33.00
	1050	L 400	240	6.3V-2A 5V-4A	L 395	290	6.3V-2A 5V-4A		
H-93	1000	L 370	300	6.3V-8A	L 340	390	6.3V-10A	OA	49.50
	1200	L 465	265	6.3V-4A 5V-6A	L 455	350	6.3V-5A 5V-6A		
H-194**	200	L 170	140	6.3V-3.5A	L 160	155	6.3V-4A	HA	21.00
		C 275	85		C 260	95			
	235	L 200	125		L 190	135			
		C 325	75		C 310	85			
H-195**	215	L 185	285	6.3V-5A	L 175	300			
		C 300	180		C 285	195	6.3V-6A	JA	24.00
	265	L 230	240		L 220	255			
		C 375	150		C 360	165			
H-196**	230	L 200	445	6.3V-5A	L 190	480			
		C 320	280	6.3V-1.5A	C 300	300	6.3V-6A	KA	30.00
	285	L 250	380		L 240	420	6.3V-2A		
		C 400	235		C 380	260			
H-197**	260	L 230	500	6.3V-6A	L 220	550			
		C 360	320	6.3V-2A	C 340	350	6.3V-7A	MB	42.00
	320	L 280	420		L 270	470	6.3V-2A		
		C 450	260		C 430	290			
H-198 Highly shielded Scope transformer	No CT 800 1600 2400	1000 2000 3000	5 5 5	1.25 V—.2A connected to one end of HV winding. 6.3 V—.6A 5.2 KV RMS test voltage				HA	27.00
H-110	1050	L 365	300		L 400			MB	27.00
	1200	L 430	275		L 385				
H-110W‡		L 730	210		L 280				29.70
		L 860	190		L 265				
H-111	1050	L 415	500		L 600			NA	33.00
	1200	L 480	450		L 550				
H-111W‡		L 830	350		L 420				36.00
		L 960	310		L 380				
H-112	1500	L 615	320		L 385			NA	36.00
	1900	L 790	275		L 330				
H-112W‡		L 1230	220		L 270				39.60
		L 1580	190		L 230				
H-113	2500	L 1050	310		L 375			†	54.00
	3000	L 1275	275		L 330				
H-114	2500	L 1050	475		L 525			‡	81.00
	3000	L 1265	425		L 475				
H-115	3500	L 1500	275		L 375			‡	81.00
	4400	L 1900	235		L 320				
H-117	5000	L 2125	950		L 1150			††	291.00
	6000	L 2550	850		L 1050				

*For 50 cycles, secondary current ratings reduced by 10%.
**DC ratings for bridge rectifier circuits.
†6x5⅛x6¾, ‡6¾x6½x8, ††11x11x14¾
‡ New full wave bridge rectifier types

IMMEDIATE DELIVERY ON ALL UTC STOCK ITEMS

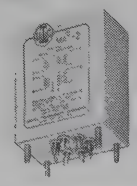
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HERMETIC COMPONENTS *Hermetically sealed to MIL-T-27B*

MAT* MAGNETIC AMPLIFIERS FOR SERVO MOTOR APPLICATIONS

VACUUM TUBE TYPE



The MAT 1-4 Magnetic Amplifiers are exceptionally stable units designed for the control of 2 phase, 115V., 400 cycle servo motors. They are compact . . . hermetically sealed . . . maanetically shielded . . . and meet MIL-T-27B and MIL-E-5400 Specifications. The output is sinusoidal, amplitude variable, and phase reversible. Control is provided by a dual triode such as 12AU7 operating with a plate voltage of 115 volts, 400 cycles, or higher. The signal to the triode grids can be polarity reversible DC or phase reversible 400 cycles with or without suppressed carrier modulation. These units eliminate DC power requirements as well as temperature sensitive dry disc rectifiers. The high input impedance provides minimum loading on sensing elements and high power gain. Ringing at low load level has been reduced to a minimum through high internal damping factors. The power output figures are conservative . . . power gain of the *Magnetic Structure* is approximately 40 . . . response time approximately 7.5 milliseconds. The maximum null voltage is 3 volts RMS. For single phase supply voltage the load capacitor should effect 90° phase shift with motor load . . . for 3 phase, 30° phase shift.

Type No.	MAT-1	MAT-2	MAT-3	MAT-4
230 Volt Supply				
Power output	4 W.	8 W.	11 W.	18 W.
RL, ohms	3300	1600	1200	720
CL, mfd., approx.	.2	.3	.5	.7
115 Volt Supply				
Power output	2 W.	4 W.	6 W.	9 W.
RL, ohms	6500	3300	2200	1450
CL, mfd.	.13	.2	.3	.45
Reson. Freq.	40 cyc.	35 cyc.	35 cyc.	20 cyc.
Log-Decr.	.18	.23	.03	.65
Cont. Wdg. Res.	6200 ohms	8450 ohms	4750 ohms	5650 ohms
Case, Length, in.	1¼	1½	1¾	2⅛
Width, In.	1 15/16	2⅛	2½	3⅛
Height, In.	2⅝	2¾	2 15/16	3⅜
Mtg. Dim., In.	13/16 x 1½	1 x 1⅝	1⅛ x 1⅞	1½ x 2½
Studs, stainless	4-40	6-32	8-32	8-32
Cutout, in.	1	1	1	1
Unit Weight, lbs.	.67	1.1	1.7	2.75
Net Each	**$27.00**	**$30.00**	**$36.00**	**$39.00**

MAT-5 115V.-400 cyc. to 460 VCT; provides 230V. 48 MA DC or 460V. 24 MA DC. RC-37 Case (UTC pg. 9). MIL type TF4SY02YY. **Net Each $10.80**

MAT-6 Input . . . 10,000 ohms pri. . . . 1:15 C.T. ratio . . . phase shift under 1°. . . . RC-25 case (UTC pg. 5). MIL- type TF4RX10YY. **Net Each $9.00**

TRANSISTOR TYPE

UTC transistor MAT units are identical to their vacuum tube counterparts, but designed for low impedance control. The input transformer may be chosen by impedance ratio rather than precise rated impedance.

Type No.	MAT-7	MAT-8	MAT-9	MAT-10	MAT-60
Power output	4 W.	8 W.	11 W.	18 W.	50 W.
RL, ohms	3300	1600	1200	720	260
CL, mfd approx.	.2	.3	.5	.7	.7
Cont. Wind. Res.	38Ω	52Ω	30Ω	36Ω	50
Case Length, In.	2 5/16	2½	2¾	2 23/32	MIL MB
Width, In.	1 13/16	2¼	2½	2 23/32	
Height, In.	1 17/32	1 11/16	2	2¼	
Mtg. Dim., In.	1⅜ x 1⅞	1 13/16 x 2	1 15/16 x 2⅜	2⅜ x 2⅜	60 cycle type
Studs, stainless	4-40	6-32	8-32	8-32	
Cutout, In.	1	1	1	1	
Weights, lbs.	.65	1.1	1.7	2.75	
Net Each	**$25.80**	**$28.80**	**$34.50**	**$37.50**	**$54.00**

MAT-11 115V.-400 cyc. to two 28 Volt .2A windings for 56 VCT-.2A or 28 V- .4 A. RC-37 (UTC pg. 9) case. MIL type. TF4SY02YY. **Net Each $10.05**

MAT-65 115V. 60 cyc. to 8.5 VCT @ 500 ma & 63 VCT @ 300 ma. FA case. MIL Type TF4SX02FA. **Net Each 12.60**

ULTRASHIELDED POWER-LINE ISOLATION TRANSFORMERS

Simlates battery operation for critical circuits requiring extreme isolation from power line.



HIT*

Designed to give the ultimate in isolation, for line-powered equipment, which formerly could only be obtained from battery power. The effective capacity coupling between primary and secondary windings is less than 0.1 MMFD.

For this purpose shields are individually terminated to allow maximum flexibility. Input and output terminals are brought out on opposite sides of a special housing in order to maintain the excellent isolation between line and load.

MIL-T-27B Ratings in Regular Type
Industrial Ratings in Bold Type
Primary 115 V 50/60 Cycles

Type No.	Power Watts	Power Watts	Case Size	Net Each
HIT-1	50	**60**	4 1/32 x 4 1/32 x 3 1/32"	**$33.00**
HIT-15	120	**150**	5 1/32 x 5 x 3 1/2"	**39.00**
HIT-2	160	**200**	5 17/32 x 5 17/32 x 4 17/32"	**48.00**
HIT-3	400	**480**	8 x 6 17/32 x 5 17/32"	**69.00**
HIT-4	1000	**1200**	9 x 7 1/2 x 7 1/2"	**120.00**
HIT-450†	80	**100**	4 1/32 x 4 1/32 x 3 1/32"	**33.00**

†Primary, 115v. 400 cps. Secondary, 115 volts.

PRECISION MINIATURE WIDE APPLICATION PULSE TRANSFORMERS

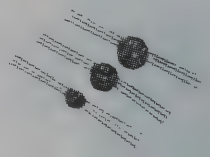
UTC miniature, wound core, pulse transformers are individually precision adjusted in standard test circuits to close tolerances. They are high reliability units, hermetically sealed by vacuum molding and suited for service from −70° C. to +130° C. Wound core structure provides excellent temperature stability (unlike ferrite). Designs are high inductance type to provide minimum of droop and assure true pulse width. H-45 thru H-57 ratio 1:1:1. H-60 thru H-69 ratio 4:4:1. Others ratio 5:3:1.

See PIP pulse units on UTC page 1

ALL UNITS INDIVIDUALLY ADJUSTED TO PARAMETERS SHOWN IN TABLES

TRANSISTOR PULSE TRANSFORMERS

Type No.	APPROX. DCR, OHMS 1-2	3-4	5-6	BLOCKING OSCILLATOR PULSE Width μ Sec.	Rise Time	% Over Shoot	% Droop	% Back Swing	COUPLING CIRCUIT CHARACTERISTICS P Width μ Sec.	Volts Out	Rise Time	% Over Shoot	% Droop	% Back Swing	Imp. in, out, ohms	Net Each
H-60	.124	.14	.05	.05	.016	0	0	30	.05	9.3	.012	0	0	20	50	$ 6.60
H-61	.41	.48	.19	.1	.016	0	0	30	.1	8.2	.021	0	0	15	50	6.60
H-62	.78	.94	.33	.2	.022	0	0	18	.2	7.4	.034	0	5	12	100	6.60
H-63	1.86	2.26	.70	.5	.027	2	10	20	.5	7.5	.045	0	20	25	100	6.60
H-64	3.73	4.4	1.33	1	.033	0	12	25	1	7	.078	0	15	23	100	6.60
H-65	6.2	7.3	2.22	2	.066	0	15	25	2	6.6	.14	0	10	20	100	7.50
H-66	10.2	12	3.6	3	.087	0	18	30	3	6.8	.17	0	10	20	100	7.50
H-67	14.5	17.5	5.14	5	.097	0	23	28	5	7.9	.2	0	18	28	200	7.50
H-68	42.3	52.1	14.8	10	.14	0	15	28	10	6.5	.4	0	15	30	200	7.50
H-611	.426	.32	.132	.1	.018	8	0	12	.1	8.2	.02	0	0	30	140/50	6.60
H-641	5	3.6	1.4	1	.04	0	10	10	1	7	.07	0	20	30	280/100	6.60
H-671	21	16	6	5	.08	0	14	12	5	8	.2	0	25	30	560/200	7.50
H-69	Transistor pulse tranformer kit, consists of H-60 thru H-68 in plastic case.															60.00



Size & weight of H-60 thru H-68 same as H-45.

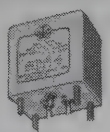
VACUUM TUBE PULSE TRANSFORMERS

Type No.	APPROX. DCR, OHMS 1-2	3-4	5-6	BLOCKING OSCILLATOR PULSE Width μ Sec.	Rise Time	% Over Shoot	% Droop	% Back Swing	COUPLING CIRCUIT CHARACTERISTICS P Width μ Sec.	Volts Out	Rise Time	% Over Shoot	% Droop	% Back Swing	DIMENSIONS Imp.in, out, ohms	L In.	W In.	Wt. Grams	Net Each
H-45	3	3.5	4	.05	.022	0	20	10	.05	17	.01	20	0	35	250	3/8	3/8	1	$ 6.75
H-46	5.5	6.5	7	.10	.024	0	25	10	.10	19	.01	30	10	50	250	3/8	3/8	1	6.75
H-47	3.7	4.0	4	.20	.026	0	25	8	.20	18	.01	30	15	65	500	9/16	9/16	4	6.00
H-48	5.5	5.8	6	.50	.03	0	20	5	.50	20	.01	30	20	65	500	9/16	9/16	4	6.00
H-49	8	8.5	9	1	.04	0	20	10	1	24	.02	15	15	65	500	9/16	9/16	4	6.00
H-50	20	21	22	2	.05	0	20	10	2	27	.05	10	15	35	500	9/16	9/16	4	6.00
H-51	28	31	33	3	.10	1	20	8	3	26	.07	10	10	35	500	9/16	9/16	4	6.00
H-52	36	41	44	5	.13	1	25	8	5	23	.15	10	10	45	1000	9/16	9/16	4	6.00
H-53	37	44	49	7	.28	0	25	8	7	24	.20	10	10	50	1000	5/8	5/8	6	6.00
H-54	50	58	67	10	.30	0	20	8	10	24	.25	10	10	50	1000	5/8	5/8	6	6.30
H-55	78	96	112	16	.75	0	20	10	16	23	.40	5	15	20	1000	5/8	5/8	6	6.30
H-56	93	116	138	20	1.25	0	25	10	20	23	.6	5	10	10	1000	5/8	5/8	6	6.30
H-57	104	135	165	25	2.0	0	30	10	25	24	1.5	5	10	10	1000	5/8	5/8	6	6.30
H-461	9.6	6.4	2.5	.1	.025	0	0	8	.1	19	.02	3	5	20	700/250	3/8	3/8	1	6.75
H-501	30	20	7	2	.08	0	12	5	2	27	.06	12	15	35	1400/500	5/16	5/16	4	6.00
H-531	66	47	17	7	.32	0	12	3	7	24	.23	12	10	40	2800/1000	5/8	5/8	6	6.00
H-561	180	142	53	20	1.75	0	13	5	20	23	.7	5	10	10	2800/1000	5/8	5/8	6	6.30
H-58	Pulse transformer kit. Consisting of H-45 thru H-57 in a partitioned plastic case.																		75.00

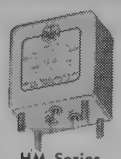
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ELECTRIC WAVE FILTERS *Manufactured to MIL-F-18327B*



BM & LM Series



HM Series

INTERSTAGE AND LINE FILTERS

Available in stock frequencies listed below (numerical part of type number is cutoff frequency in cps). Compact shielded cases hermetically sealed to MIL-T-27B specs. BMI, LMI, BML cases: 1 3/16" x 1 11/16" x 1 5/8" h.; wt., 6 oz. HMI, HML, LML cases: 1 3/16" x 1 11/16" x 2 1/2" h.; wt., 9 oz. The BMI filters are band pass interstage units designed to operate between a vacuum tube plate (or 10,000 ohms) and a grid. They provide a gain of 2 at center frequency. BTI units are same as BMI, but 10,000 ohms output.

BML band pass filters, similarly, work into a grid, but have an input impedance of 500/600 ohms. They provide a gain of 9.

HMI filters are high pass interstage units.

LMI filters are low pass interstage units.

HML filter are high pass with input and output impedance of 500/600 ohms.

LML filters are low pass filters with input and output impedance of 500/600 ohms.

LLP low frequency low pass filter, loss of less than 40 db at 20 cycles. Source & load 100K ohms.

UTC Type	Net Ea.	UTC Type	Net Ea.	UTC Type	Net Ea.
BMI-30	$36.00	LMI-200	$31.50	HMI-800	$31.50
BMI-50	30.00	LMI-400	31.50	HMI-1000	31.50
BMI-60	30.00	LMI-500	31.50	HMI-2000	31.50
BMI-90	30.00	LMI-800	31.50	HMI-3000	31.50
BMI-100	30.00	LMI-1000	31.50	BML-400	30.00
BMI-120	30.00	LMI-1500	31.50	BML-1000	30.00
BMI-150	30.00	LMI-2000	31.50	HML-200	39.00
BMI-200	30.00	LMI-2500	31.50	HML-300	39.00
BMI-240	30.00	LMI-3000	31.50	HML-500	39.00
BMI-300	30.00	LMI-4000	31.50	HML-1000	39.00
BMI-400	30.00	LMI-5000	31.50	LML-1000	31.50
BMI-500	30.00	LMI-10000	31.50	LML-1500	31.50
BMI-750	30.00	BTI-60	36.00	LML-2000	31.50
BMI-800	30.00	BTI-100	36.00	LML-2500	31.50
BMI-1000	30.00	BTI-120	36.00	LML-3000	31.50
BMI-1500	30.00	HMI-50	31.50	LML-4000	31.50
BMI-2000	30.00	HMI-100	31.50	LML-8000	31.50
BMI-3000	30.00	HMI-200	31.50	LML-10000	31.50
BMI-4000	30.00	HMI-300	31.50	LML-12000	31.50
BMI-5000	30.00	HMI-400	31.50	LLP-10	60.00
BMI-10000	30.00	HMI-500	31.50		
LMI-100	31.50				

NEW 400-CYCLE 115 V. LINE FILTERS

Intended for use on 115 v., 400 cps line to eliminate harmonic distortion.



UTC No. PLF-25 — Gives 150 v. output into 500 ohm load with ±1 db, 375-425 cps. Will attenuate 800 cycles by 30 db; 1200 cycles and higher by at least 50 db. MIL type, FR4RX11NB. Meets MIL-F-18327B. Size 4 5/16" w. x 5 1/16" d. x 5 1/2" h. Weight, 10 lbs. Net Each $66.00

UTC No. PLP-13 — Eliminates harmonic distortion, rejects 60 and 120 cycles, and gives zero phase shift at 400 cycles. Operating into 1000 ohm load, provides 115 v. output at 400 cycles, within ±1 db, 375-425 cycles. Attenuates 800 cycles by 15 db; 1200 cps by 45 db; above 1200 cps by at least 35 db; 120 cps by 20 db; and, 60 cps by 30 db. MIL type FR4RX22-LB; meets MIL-F-18327B specifications. Size, 3 11/16" w. x 4 5/16" d. x 4 1/2" h. Weight, 6½ lbs. Net Each $66.00

TELEGRAPH TONE CHANNEL FILTERS

IMMEDIATE DELIVERY ON ALL ITEMS



TGT CASE
1½ x 1½ x 2½
Mtg 1 1/16 x 1 1/16"
Screws 6-32
Weight .....8 oz.



TGR CASE
1½ x 1½ x 4¼
Mtg 1 1/16 x 1 1/16"
Screws 6-32
Weight ....15 oz.

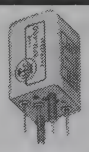
UTC band pass filters for mutiplex transmitting and receiving provide maximum stability in miniature sizes. Stock filters cover all standard transmit and receive bands. All units employ 7 terminal header matching subminiature 7 pin socket.

TGR (receiving) & TGT (transmitting) filters are 600 ohms in and out. They are down less than 3 db at ± 42.5 cycles from center frequency. TGR units are down more than 30 db at ± 170 cycles. Attenuation is greater than 15 db at adjacent channel crossover.

TGT units are down more than 16 db at ± 170 cycles. Attenuation is greater than 7.5 db at adjacent channel crossover. *All units are MIL type FR4RX-22YY.*

UTC Type	Net Each	Center Frequency (Cyc.)	UTC Type	Net Each
TGT-425	$42.00	425	TGR-425	$72.00
TGT-595	42.00	595	TGR-595	72.00
TGT-765	42.00	765	TGR-765	72.00
TGT-935	42.00	935	TGR-935	72.00
TGT-1105	36.00	1105	TGR-1105	63.00
TGT-1275	36.00	1275	TGR-1275	63.00
TGT-1445	36.00	1445	TGR-1445	63.00
TGT-1615	36.00	1615	TGR-1615	63.00
TGT-1785	33.00	1785	TGR-1785	60.00
TGT-1955	33.00	1955	TGR-1955	60.00
TGT-2125	33.00	2125	TGR-2125	60.00
TGT-2295	33.00	2295	TGR-2295	60.00
TGT-2465	30.00	2465	TGR-2465	57.00
TGT-2635	30.00	2635	TGR-2635	57.00
TGT-2805	30.00	2805	TGR-2805	57.00
TGT-2975	30.00	2975	TGR-2975	57.00
TGT-3145	30.00	3145	TGR-3145	57.00
TGT-3315	30.00	3315	TGR-3315	57.00

BPM



MINIFILTERS*



HPM & LPM

These units provide almost the same characteristics as the standard interstage units listed to the left, although extremely miniaturized. Hermetically sealed to MIL-T-27B specs. B type case: ¾" x ¾" x 1⅛" h.; wt., 1 oz. H and L cases: 1" x 1" x 1⅜" h.; wt., 2¼ oz. Cutoff frequencies in cps indicated by type number.

BPM units (BAND PASS) have 2:1 gain. Attenuation is approximately 2 db ±3% from center frequency, and 35 db per octave as shown. Input 10,000 ohms, output to grid, tapped for 10,000 ohms to provide for transistor circuits. For tube circuits continuity is on grid side, for transistor use continuity is on input side.

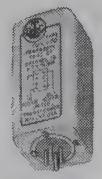
BPH units (BAND PASS) attenuation less than 3 db ±5% from center frequency, and 40 db per octave. Source and load 500 ohms.

HPM units (HIGH PASS) are down less than 6 db at cutoff frequency, and more than 30 db at .67 cutoff frequency, 40 db at .6 cutoff frequency. Input and output 10,000 ohms.

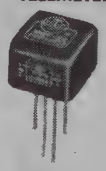
LPM units (LOW PASS) are down less than 6 db at cutoff frequency, and more than 30 db at 1.5 cutoff frequency, 40 db at 1.65 cutoff frequency. Input and output 10,000 ohms.

UTC Type	Net. Ea.	UTC Type	Net. Ea.	UTC Type	Net. Ea.
BPH-50000	$27.00	BPM-2500	$27.00	HPM-1500	$30.00
BPH-100000	27.00	BPM-3000	27.00	HPM-4000	30.00
BPM-400	27.00	BPM-3200	27.00	LPM-200	30.00
BPM-440	27.00			LPM-300	30.00
BPM-500	27.00	BPM-4000	27.00	LPM-500	30.00
BPM-600	27.00	BPM-4800	27.00	LPM-1000	30.00
BPM-750	27.00	BPM-5000	27.00	LPM-1500	30.00
BPM-800	27.00	BPM-6000	27.00	LPM-2000	30.00
BPM-1000	27.00	BPM-6400	27.00	LPM-3000	30.00
BPM-1200	27.00	BPM-8000	27.00	LPM-5000	30.00
BPM-1500	27.00	BPM-10000	27.00	LPM-6000	30.00
BPM-1600	27.00	BPM-20000	27.00	LPM-8000	30.00
BPM-1800	27.00	HPM-500	30.00	LPM-10000	30.00
BPM-2000	27.00	HPM-1000	30.00	LPM-15000	30.00

TELEMETERING BAND PASS FILTERS



TMN-.4 thru TMN-1.7
1 1/16 x 1 3/32 x 2"
Weight 3.5 oz.
TMN-2.3 thru TMW-70
2 3/32 x 2 3/32 x 1 3/8"
Weight 1.2 oz.



MNF-.4 thru MNF-5.4
1 3/16" Sq. x ½" high
Weight 1 oz.
MNF-7.35 thru MWF-70
2 3/32" Sq. x ½" high
Weight ⅓ oz.

Both TMN and TMW types are designed for 100 K input and output impedance and have an insertion loss of less than 6 db. Four pin hermetic header matches small Winchester socket.

TMN filters are down less than 3 db at ± 7.5% of center frequency. They are down more than 18 db at ± 25% of center frequency. Attenuation is greater than 40 db beyond 1.75 Fc and .58 Fc.

TMW filters are down less than 3 db at ± 15% of center frequency. They are down more than 20 db at ± 50% of center frequency. Attenuation is greater than 40 db beyond 2.5 Fc and .4 Fc.

MNF and MWF (Minifilter) provide same performance as filters described above but are extremely miniaturized. Slanted toward use with transistors. Pin terminals ideally suited for printed circuits.

UTC Type	Net Each	Center Frequ'cy KC	Band Width±	UTC Type	Net Each
TMN- .4	$39.00	.4	7½%	MNF- .4	$39.00
TMN- .56	39.00	.56	7½%	MNF- .56	39.00
TMN- .73	39.00	.73	7½%	MNF- .73	39.00
TMN- .96	39.00	.96	7½%	MNF- .96	39.00
TMN-1.3	39.00	1.3	7½%	MNF-1.3	39.00
TMN-1.7	39.00	1.7	7½%	MNF-1.7	39.00
TMN-2.3	39.00	2.3	7½%	MNF-2.3	39.00
TMN-3.0	39.00	3.0	7½%	MNF-3.0	39.00
TMN-3.9	39.00	3.9	7½%	MNF-3.9	39.00
TMN-5.4	39.00	5.4	7½%	MNF-5.4	39.00
TMN-7.35	39.00	7.35	7½%	MNF-7.35	39.00
TMN-10.5	42.00	10.5	7½%	MNF-10.5	42.00
TMN-14.5	42.00	14.5	7½%	MNF-14.5	42.00
TMN-22	42.00	22	7½%	MNF-22	42.00
TMN-30	42.00	30	7½%	MNF-30	42.00
TMN-40	42.00	40	7½%	MNF-40	42.00
TMN-52.5	42.00	52.5	7½%	MNF-52.5	42.00
TMN-70	42.00	70	7½%	MNF-70	42.00
TMW-22	42.00	22	15%	MWF-22	42.00
TMW-30	42.00	30	15%	MWF-30	42.00
TMW-40	42.00	40	15%	MWF-40	42.00
TMW-52.5	42.00	52.5	15%	MWF-52.5	42.00
TMW-70	42.00	70	15%	MWF-70	42.00

HIGH Q PRECISION INDUCTANCE DECADE

Invaluable instruments for design and experimental work with tuned circuits, wave filters, and equalizers. The low hum pickup toroid coils employ a new permalloy dust core which, combined with special winding methods, provides very high Q, excellent voltage and temperature stability, and high self resonance frequency. The inductance values are laboratory adjusted to better than 1% precision, with calibration noted on base.



DI CASE
Lenath .....4½"
Width .....4⅜"
Height .....2⅜"
Weight .....2 lbs.

Type No.	Induct. Henries	Optimum Range	Max. Q	Max. ACMA	Ins. Test Volts RMS	Net Each
DI-1	10 x .01	2-60 KC	200	500	500	$42.00
DI-2	10 x .1	.25-20 KC	200	150	500	54.00
DI-3	10 x 1	.25-10 KC	200	50	500	57.00
DI-4	10 x 10	.2-1.5 KC	100	15	500	72.00

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HIGH Q COILS & INDUCTORS

MINIDUCTORS *

All these ultracompact high Q units are grade 5, hermetically sealed to (MIL-T-27B). All give extra temperature stability rated at 1%, −55° C to +100° C.



MM—Ultraminiature epoxy molded toroidal inductors with pin terminals for printed circuit application. Maximum Q at 30 KC. 7/16 dia. x 1/4"; wt. .07 oz.
MH—Ultraminiature epoxy molded toroidal inductors similar to MM except maximum Q at 100 KC. Size & wt. as MM.
ML—Ultraminiature hipermalloy cased inductors with epoxy board and pin terminals for printed circuit application. Maximum Q at 800 cps to 2 KC, depending on inductance. 7/16 x 31/64 x 9/16"; wt. .2 oz.
MO—Miniature epoxy molded inductors with pin terminals for printed circuit application. Maximum Q at 600 cps to 1500 cps depending on inductance. 3/4 x 1 1/16 x 13/16"; wt. 1 oz.
MW—Miniature epoxy molded toroidal inductors with pin terminals for printed circuit application. Maximum Q at 5 to 10 KC. 23/32 dia. x 13/32"; wt. .25 oz.

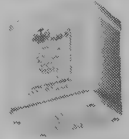
UTC Type	Induct., Hys.	Net Each	UTC Type	Induct., Hys.	Net Each	UTC Type	Induct., Hys.	Net Each
ML-0	.15	$ 8.40	MM-6	.03	$ 8.10	MO-2	2	$ 6.60
ML-1	.25	8.40	MM-7	.06	8.40	MO-5	5	6.60
ML-2	.40	8.40	MM-8	.12	8.40	MO-7.5	7.5	6.60
ML-3	.70	8.40	MH-1	.0006	8.10	MO-20	20	6.60
ML-4	1.4	8.40	MH-2	.0015	8.10	MO-50	50	7.20
ML-5	2.5	8.40	MH-3	.0025	8.40	MO-100	100	7.20
ML-6	4.0	8.40	MH-4	.006	8.40	MW-.05	.05	7.20
ML-7	6.0	8.40	MH-5	.01	8.70	MW-.10	.10	7.50
ML-8	10	8.40	MH-6	.015	8.70	MW-.25	.25	7.50
ML-9	25	8.70	MH-7	.025	9.00	MW-.5	.5	7.80
ML-10	60	9.90	MH-8	.04	9.00	MW-.75	.75	8.40
MM-1	.003	7.50	MO-.1	.1	6.30	MW-1	1	8.70
MM-2	.005	7.50	MO-.15	.15	6.30	MW-1.2	1.2	9.30
MM-3	.008	7.80	MI-.3	.3	6.30	MW-2	2	10.80
MM-4	.0125	7.80	MO-.5	.5	6.30	MW-3	3	11.70
MM-5	.02	8.10	MO-1	1	6.30	MW-5	5	13.50

HIGH Q TOROID INDUCTORS

Favorites for over fifteen years, UTC HQ Toroids are only excelled by the preferred new "M" series. As typical Q curves show, HQ coils are available for application from 100 cycles to 100 KC. Adjusted to 1%, the inductance is virtually independent of frequency, temperature, and vibration. Voltage stability is excellent, and shielding case assures 80 db coupling attenuation. Hermetically to MIL-T-27B. All units MIL type TF4RX-20YY.



HQA and HQC CASE
Diamter 1 13/16"
Height 1 3/16"
Mounting 1 1/8"
Screws 6-32
Cutout 5/16 x 1 3/16"
Weight 5 oz.



HBQ CASE
Length 2 5/8"
Width 1 5/8"
Height 2 5/8"
Mounting 1 11/64 x 2 11/64"
Screws 6-32
Cutout 5/16 x 1 1/8"
Weight 14 oz.

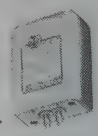


HQE CASE
Length 1 1/16"
Width 1/2"
Height 1 7/32"
Mounting 3/4"
Screws 4-40
Cutout 5/16 x 1/2"
Weight 1.5 oz.

Type No.	Inductance (O DC)	DC MA Max.	Net Each	Type No.	Inductance (O DC)	DC MA Max.	Net Each
HQA-1	5 mhy.	400	$7.50	HQB-1	10 mhy.	410	$15.00
HQA-2	12.5 mhy.	260	7.80	HQB-2	30 mhy.	240	15.30
HQA-3	20 mhy.	200	8.10	HQB-3	70 mhy.	170	15.90
HQA-4	30 mhy.	160	8.40	HQB-4	120 mhy.	120	16.80
HQA-5	50 mhy.	130	8.70	HQB-5	.5 hy.	60	17.40
HQA-6	80 mhy.	100	9.00	HQB-6	1 hy.	41	18.00
HQA-7	125 mhy.	85	9.00	HQB-7	2 hy.	30	18.90
HQA-8	200 mhy.	65	9.60	HQB-8	3.5 hy.	22	19.80
HQA-9	300 mhy.	50	9.60	HQB-9	7.5 hy.	16	21.00
HQA-10	.5 hy.	40	9.90	HQB-10	12 hy.	11	21.90
HQA-11	.75 hy.	35	9.90	HQB-11	18 hy.	9	22.80
HQA-12	1.25 hy.	26	10.80	HQB-12	25 hy.	8	24.00
HQA-13	2 hy.	20	11.40	HQC-1	1 mhy.	1350	15.60
HQA-14	3 hy.	16	12.90	HQC-2	2.5 mhy.	850	16.80
HQA-15	5 hy.	13	13.80	HQC-3	5 mhy.	600	18.00
HQA-16	7.5 hy.	10	15.00	HQC-4	10 mhy.	420	19.80
HQA-17	10 hy.	9	15.90	HQC-5	20 mhy.	300	24.00
HQA-18	15 hy.	8	16.80	HQE-1	5 mhy.	155	7.80
				HQE-2	10 mhy.	110	7.80
				HQE-3	50 mhy.	50	8.10
				HQE-4	100 mhy.	35	8.40
				HQE-5	200 mhy.	25	8.70

HERMETIC "M" TYPE TOROIDS

UTC permalloy dust toroids provide highest Q factor with miniaturized dimensions. Lab adjusted to 1% tolerance and sealed to MIL-T-27B specs. Magnetic case plus toroid provide 80 db shielding.

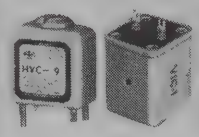


Type
MQA 40 at 500 cps, 160 at 5 kc, approx. 40 at 20 kc. SIZE (1 1/16" x 1 3/32" x 1 23/32" h.; wt. 4 oz.)
MQB 40 at 250 cps, 230 at 3 kc, approx. 40 at 20 kc. SIZE 1 3/16" x 2 3/16" x 2 13/16" h.; wt. 14 oz.
MQD 40 at 5 kc, 185 at 50 kc, approx. 40 at 300 kc. SIZE 1 1/16" x 1 3/32" x 1 23/32" h.; wt. 4 oz.
MQE 20 at 600 cps, 140 at 10 kc, approx. 40 at 40 kc. SIZE 1/2" x 1 1/16" x 1 7/32" h.; wt. 1.5 oz.

TQA units are similar to MQA but center tapped for oscillator application, etc. Net each: TQA-1 thru TQA-15, $1.50 more than MQA's; TQA-16, 14.70; TQA-17, 15.90; TQA-18, 17.40; TQA-19, 21.00; TQA-20, 23.40.

UTC Type	Ind., Hys.	Net Each	UTC Type	Ind., Hys.	Net Each	UTC Type	Ind., Hys.	Net Each
MQA-1	.007	$ 7.50	MQB-1	.010	$12.90	MQD-6	.020	$21.00
MQA-2	.012	7.80	MQB-2	.030	13.20	MQD-7	.030	22.80
MQA-3	.020	8.10	MQB-3	.070	13.50	MQE-0	.004	6.90
MQA-4	.030	8.40	MQB-4	.120	13.80	MQE-1	.007	7.20
MQA-5	.050	8.70	MQB-5	.50	14.10	MQE-2	.012	7.50
MQA-6	.070	9.00	MQB-6	1.0	14.40	MQE-3	.020	7.80
MQA-7	.120	9.30	MQB-7	2.0	14.70	MQE-4	.030	7.80
MQA-8	.20	9.60	MQB-8	3.5	15.00	MQE-5	.050	8.10
MQA-9	.30	9.90	MQB-9	7.5	15.90	MQE-6	.070	8.40
MQA-10	.50	10.20	MQB-10	12	16.80	MQE-7	.100	8.40
MQA-11	.70	10.50	MQB-11	18	18.00	MQE-8	.150	8.70
MQA-12	1.0	10.80	MQB-12	25	19.20	MQE-9	.250	8.70
MQA-13	1.5	11.10	MQB-13	40.0	21.00	MQE-10	.40	9.00
MQA-14	2.5	11.40	MQB-14	60.0	24.00	MQE-11	.60	9.00
MQA-15	4.0	12.00	MQD-0	.001	14.50	MQE-12	.90	9.30
MQA-16	6.0	12.90	MQD-1	.002	15.00	MQE-13	1.5	9.90
MQA-17	10.0	13.80	MQD-2	.003	15.60	MQE-14	2.0	10.80
MQA-18	15.0	15.00	MQD-3	.005	16.20	MQE-15	2.8	12.00
MQA-19	22.0	18.00	MQD-4	.007	16.80	MQE-16	4.0	13.50
MQA-20	35.0	20.70	MQD-5	.012	18.00			

VARIDUCTORS



HVC & HVV **VIC**

These variable inductors are ideal for use in tuned circuits, equalizers, oscillators, etc. TYPE HVC:—Gives highest Q and stability; adjustable −70% to +200% of mean value. Hermetically sealed to MIL-T-27B.

HVV Types: For precise matching; vernier inductance variation ±10% of nominal value. Offer high Q over a wide frequency range and high temperature stability.

VIC:—Adjustable −45% to +85% of mean value.

Size: HVC, TVC and HVV types, 1 1/8" lg. x 25/32" w. x 1 1/32" h.; weight 2 oz. VIC type, 1 11/32" lg. x 1 1/4" w. x 1 1/16" h.; weight 5 1/2 oz. HVC, TVC, U.S. Pat. No. 2,879,489; HVV, Pat. Pend.

TVC type inductors are identical to HVC units, but provide taps at 30% and 50% of total turns — ideal for oscillator circuits, etc. HVC & TVC, U. S. Pat. No. 2,879,489

UTC Type	Mean Hys.	DC Ma.	Net Each	UTC Type	Mean Hys.	DC Ma.	Net Each
HVC-1	.006	100	9.00	TVC-6	.6	15	11.10
HVC-2	.015	60	9.00	TVC-7	1.5	10	11.70
HVC-3	.040	40	9.00	TVC-8	4	7	11.70
HVC-4	.1	30	9.00	TVC-9	10	5	11.70
HVC-5	.25	20	9.00	TVC-10	25	3.5	12.90
HVC-6	.6	15	9.00	TVC-11	60	2	14.10
HVC-7	1.5	10	9.60	TVC-12	150	1.5	15.30
HVC-8	4	7	9.60				
HVC-9	10	5	9.60	VIC-1	.0085	75	6.60
HVC-10	25	3.5	9.90	VIC-2	.013	60	6.60
HVC-11	60	2	10.80	VIC-3	.021	50	6.60
HVC-12	150	1.5	12.00	VIC-4	.034	40	6.60
HVV-.006	.006	200	12.00	VIC-5	.053	35	6.60
HVV-.015	.015	120	12.00	VIC-6	.084	30	6.60
HVV-.04	.04	80	12.00	VIC-7	.13	25	6.60
HVV-.1	.10	50	12.00	VIC-8	.21	21	6.90
HVV-.25	.25	30	12.00	VIC-9	.34	18	6.90
HVV-.6	.6	20	12.00	VIC-10	.54	15	6.90
HVV-1.5	1.5	13	12.90	VIC-11	.85	12	6.90
HVV-4	4	6	12.90	VIC-12	1.3	10	7.20
HVV-10	10	4.5	12.90	VIC-13	2.2	8	7.20
HVV-25	25	3	13.20	VIC-14	3.4	7	7.20
HVV-60	60	2	14.40	VIC-15	5.4	6	7.50
HVV-150	150	1.3	15.90	VIC-16	8.5	5	7.50
				VIC-17	13	4	7.50
TVC-1	.006	100	11.10	VIC-18	21	3.5	7.80
TVC-2	.015	60	11.10	VIC-19	33	3	7.80
TVC-3	.040	40	11.10	VIC-20	52	2	8.40
TVC-4	.1	30	11.10	VIC-21	83	1.5	9.00
TVC-5	.25	20	11.10	VIC-22	130	1	12.00

LOW FREQUENCY HIGH Q COILS

MQL TYPES

All these units of MIL type TF4RX20YY induct value to 2% tolerance at 1v., 60 cycles. Exceptional Q and stability, inductance swing less than 3.5% from −55°C to +85°C. The case, sealed hermetically to MIL-T-27B is 1 13/16" dia. 2 1/2" h. Either transformer, parallel, series or center type connections are permitted due to dual windings to 4 terminals. Mounting 1 1/2" sq. with a 6-32 screw. Cutout 1 1/2" dia wt. 1 lb.

Type No.	Hys. (0 DC) Series	Parallel	Net Each	Type No.	Hys. (0 DC) Series	Parallel	Net Each
MQL-0	1	.25	$30.00	MQL-3	200	50	$30.00
MQL-1	10	2.5	30.00	MQL-4	400	100	31.50
MQL-2	20	5	30.00	MQL-5	2500	625	33.00



MQM TYPES

Designed for high Q at low frequencies. Structure provides exceptional stability, adjusted to 2% at 1V. 60 cycles. Inductance variation less than 2% from −55°C to +130°C. Made to MIL-T-27B, MIL type TF4SX20YY. Size 1 5/16" d x 1 5/8" h., cutout: 1" d., wt. 5 oz.

Type No.	Series Hy (0 DC)	Parallel Hy (0 DC)	Series DCRΩ ±20%	Net Each
MQM-2	2	.5	21	$12.60
MQM-16	16	4	143	12.60
MQM-40	40	10	368	12.60
MQM-300	300	75	3700	13.50
MQM-600	600	150	5720	13.50

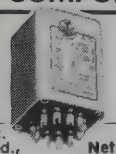
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HI-FI & BROADCASTING COMPONENTS

ULTRACOMPACT* HI-FI AUDIOS



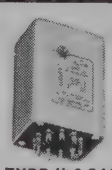
Small light weight, wide range units. Level +15 dbm except where otherwise noted. Top and bottom mounting. Die cast case, 1½" x 1½" x 2" h. Weight, ½ lb.

UTC Type	Application	Primary Impedance, Ohms	Sec. Imped., Ohms	#	Net Each
A-10	Input	50, 125/150, 200/250, 333, 500/600	50K split	a	$13.20
A-11	Shield. Input	50, 200, 500	50K CT	a	12.00
A-12	Input	Same as A-10	80K split	a	12.00
A-15	Interstage*	10K/2.5K split**	2K/500 sp.	c	9.90
A-16	Pl. to grid	15K	60K	a	9.90
A-17	Pl. to grid	15K, 8 ma	60K	c	12.00
A-18	Pl. to p-p	15K split	80K split	a	12.00
A-19	Pl. to p-p	15K, 8 ma	80K split	c	12.00
A-20	Mixing	Same as A-10	Same as pri.	d	14.40
A-21	Shield Mixing	50, 200/250, 500/600	Same as pri.	e	12.00
A-22	Tr. to line*	500 CT	500/125 spl.	c	9.90
A-23	Tr. to V.C.*	500 CT	16/4 split	c	9.90
A-24	Pl. to line	15K split	See A-10 pri.	f	12.90
A-25	Pl. to line	15K, 8 ma	See A-10 pri.	c	12.00
A-26	P-p to line	30K CT	See A-10 pri.	f	13.20
A-27	Input	100K split	See A-10 pri.	b	12.00
A-28	Tr. to V.C.	48 CT, 5 w.	16 (split), 8, 4	c	10.20
A-34		25K/6250 split	500/125 split	b	10.20
A-35	Transistor	10K/2.5K split	500/125 split	b	9.90
A-36	Interstage	500/125 split	150/37.5 split	c	9.60
A-37		500/125 split	50/12.5 split	c	9.60
A-38		100/25 split	40/10 split	c	9.30
A-39	line to transist.	600/150 split	2K/500 split	a	11.10
A-30	Inductor: 250 hys. @ 5 mat; 65 hys @ 10 ma‡				10.20
A-32 (2-wdgs.)	Split Filter Inductor	Series: 60 Hys @ 15 ma, 2000 ohms Parallel: 15 Hys @ 30 ma, 500 ohms			6.60
A-33	Hipermalloy shield fits A units 20 db				2.70
A-40	Power transformer: 115v 60 cycles to two 6.3 CT—.2A Secs.				9.90
A-41 (2-wdgs.)	Split Filter Inductor	Series: 240 Mhy @ .2A, 6 ohms Parallel: 60 Mhy @ .4A, 1.50 ohms			6.30
A-42 (2-wdgs.)	Split Filter Inductor	Series: 4 hys-50 ma, 100 ohms Parallel: 1 hy-100 ma, 25 ohms			6.60
A-43	Matching to 2 simult. lines or Tr	600/150 split	(2) 600/150 split g		14.10
A-44	l'stge/output	4K/1K split, 12 ma	600/150 spl.	b	9.90
A-45	Spkr. match	4, 8, 16	4 w. max lvl.	c	6.60
A-46	Chopper	10K/2.5K	50K		15.00
A-47	3-wdg. hybrd.	500/600CT	2 x 500/600CT ...		15.00

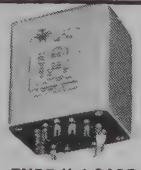
*+30 dbm. †6K ohms. ‡1.5K ohms. §2K ohms. ††500 ohms. **8 ma. #Frequency response (±2 db), cps: a—20-20,000. b—30-20,000. c—40-20,000. d—10-50,000. e—30-30,000. f—20-40,000. g—20-30,000.

HIPERMALLOY* TRANSFORMERS

Hipermalloy audio and power transformers are specifically designed for portable and compact service. High fidelity though light in weight and dependable. The frequency characteristic of the Hipermalloy audio units is uniform from 30 to 20,000 cycles. They incorporate a Hipermalloy nickel iron core and hum balanced coil structure. The rugged die cast case is of high conductivity alloy finished in grey, arranged for mounting with the terminals either up or down. DC in Primary shown is maximum unbalanced.



TYPE H-2 CASE
Length ..... 3 3/16"
Width ..... 2 13/16"
Height ..... 3½"
Mounting 2 x 2¾"
Screws ... 6-32
Cutout 2 1/16" dia.
Unit Wt. .5 lbs.



TYPE H-1 CASE
Length ..... 2⅜"
Width ..... 1 15/16"
Height ..... 3⅛"
Mount 1⅜ x 1 13/16"
Screws 6-32
Cutout 1¾" dia.
Unit Wt. .2 lbs.

LOW IMPEDANCE TO GRID AND MIXING TRANSFORMERS

Units Housed in Type H-1 Case

UTC Type	Application	Primary Imped. Ohms	Sec. Imped. Ohms	Level dbm	Net Each
HA-100	Line to grid	50, 125/150, 200, 250, 333, 500/600	60K split	+18	$17.40
HA-100X	As above but multiple alloy shields for low hum pick up			+16	17.40
HA-101	Line to grids	Same as HA-100	120K split	+18	22.20
HA-101X	As above but muliple alloy shields for low hum pickup		80K split	+16	18.00
HA-103A	Mike/mixer to grid	2.5, 5.5, 10, 15, 22, 30, 38, 60	60K split	+18	15.00
HA-108*	Mixing	Same as HA-100	Same as Pri	+20	19.80
HA-108X*	As above but multiple alloy shields for low hum pick up			+18	19.80
HA-130X	Line to grids.	30, 50, 200, 250	60K Split	+18	21.00

INTERSTAGE AUDIO TRANSFORMERS

Units Housed in Type H-1 Case, except HA-107: in H-2 Case

UTC Type	Application	Primary Imped. Ohms	Sec. Imped. Ohms	Level Mw.	Net Each
HA-104	Pl. to grids	15K split	95K	100	$15.00
HA-105	Pl. to grid	15K	60K	100	21.00
HA-106	Pl. to grids	15K split	135K	100	18.90
HA-107	Pl's. to grids	30K	80K	600	27.00
HA-137	Pl's. to grids	30K	68K	100	16.80

Continued on next column

LINEAR STANDARD* TRANSFORMERS



Guaranteed frequency response of ±1 db 20-20,000 cps, ±1 db 7-50,000 cps on high level units, make these ideal transformers for uniform frequency response and low distortion. High efficiency and dependability through shielding. Top and bottom mounting.

LOW LEVEL TRANSFORMERS

Type LS-1 case, 2⅝" x 3⅛" x 3¼" h. Suffix X indicates multiple alloy shield. Weight, 3 lbs.

UTC Type	Application	Pri. Imp., Ohms	Sec. mp., Ohms	Level, dbm	Net Each
LS-10	Input	50, 125/150, 200, 250, 333, 500/600	60K split	+19	$24.00
LS-10X	Input	As above	50K	+17	24.00
LS-12	Input	As above	120K split	+19	27.00
LS-12X	Input	As above	80K split	+17	24.00
LS-30	Mixing	As above	Same as pri.	+23	24.00
LS-30X	Mixing	As above	Same as pri.	+20	27.00
LS-19	Pl. to grids	15K	95K	+20	19.50
LS-21	Pl. to p-p	15K	135K split	+20	24.00
LS-40	Pl. to p-p	15K, 8 ma	135K split	+20	33.00
LS-25	P-P to p-p	30K split	50K split	+23	27.00
LS-27	Pl. to line	15K, 8 ma	See LS-10 pri.	+23	24.00
LS-50	Pl. to line	15K	See LS-10 pri.	+23	24.00
LS-51	P-p to line	30K split	See LS-10 pri.	+24	27.00
LS-14X	Lo-Z to grids	2.5, 5.5, 10, 15, 22, 30, 38, 60	50K	+17	24.00
LS-26	Line to grids	5K	60K	+23	27.00
LS-31	Line to line	30, 50, 200,250	See LS-10 pri.	+23	24.00
LS-32	Lo-Z to line	Same as LS-14X	See LS-10 pri.	+23	33.00
LS-68	Matching to 2 Simult. lines or Tr..	600/150 split	(2) 600/150 split	+15	24.00
LS-150	Line to line	4K	See LS-10 pri.	+23	21.00
LS-151	Line to line	16K	See LS-10 pri.	+26	21.00
LS-140	70 db hybrid	500/600 split	Same as pri.	+18	27.00
LS-141	Hybrid †	500/600 split	Same as pri.	+18	21.00

† Has 3 sets of coils.

HIGH LEVEL TRANSFORMERS

Sizes: LS-33, -34, -35, -47, -52, -54, -55, -56, -61, -63, 3½" x 4 7/16" x 4 3/16" h. (Wt., 7½ lbs.). LS-6L1, -6L4, -48, -58, -65, -666, -667, 5" x 5 13/16" x 4 1/16" h. (Wt., 15 lbs.). LS-691, 13" x 15¾" x 24" h. (Wt. 370 lbs.). LS-692, 13" x 15¾" x 28" h. (Wt. 520 lbs.).

UTC Type	Application	Pri. Imped., Ohms	#	Level Watts	Net Each
LS-33	Matching	50, 125/150, 200, 250, 333, 500/600	a	20	$24.00
LS-34	Matching	As above	a	40	33.00
LS-47	Driver	5K	i	20	24.00
LS-48	Driver	12K	j	40	60.00
LS-6L1	P-p output	9K	b	30	36.00
LS-6L4	P-p output	4,500/3,800	b	55	66.00
LS-58	P-p output	2.5K/1.5K	b	40	57.00
LS-52	P-p output	8000	b	20	24.00
LS-55	P-p output	5K/3K split	b	20	24.00
LS-61	P-p output	10K/6K split	b	20	24.00
LS-54	P-p output	8000	c	20	21.00
LS-57	P-p output	5K/3K split	c	20	21.00
LS-63	P-p output	10K/6K split	c	20	21.00
LS-56	P-p output	5K/3K split	d	20	27.00
LS-35	EL-34's†	5K CT 43% taps	e	35	24.00
LS-65	6550's†	3.3K CT 40% taps	e	60	42.00
LS-666	P-p transistor	8 split	f	50	21.00
LS-667	P-p transistor	8 split	e	50	21.00
LS-691	Modulation	10,400	g	1,000	600.00
LS-692	Modulation	4,750	h	2,500	930.00

† With feedback. #Secondary Impedance: a—1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125/150, 200/250, 333, 500/600 ohms. b—500, 333, 250/200, 125, 50, 30, 20, 10, 7.5, 5, 2.5, 1.2 ohms. c—30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. d—6K, 5K, 4K, 1.8K, 1.5K, 1K, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. e—4, 8, 16 ohms. f—500 ohms split. g—4.5K, 4K, 3.5K, 2.75K, 2K. h—2.5K, 2K, 1.75K, 1.5K, 1.25K. i—Pri./½ Sec. 3.2:1. j—Pri./½ Sec. 5.1:1.

Continued from bottom of previous column

PLATE TO LINE TRANSFORMERS

Units Housed in Type H-1 Case

UTC Type	Application	Prim. Imped. Ohms	Sec. Imped. Ohms	Level Mw	Net Each
HA-113	to multiple line	15K split	50, 125/150, 200, 250, 333, 500/600	125	$18.00
HA-114	Lo-Z to multi-line	30K		200	21.00
HA-133	to multi-line	15K split		160	21.00

OUTPUT TRANSFORMERS

Units Housed in Type H-2 Case

UTC Type	Application	Prim. Imped. Ohms	Sec. Imped. Ohms	Level Watts	Net Each
HA-134	P-p to line	5K/9.4K	50, 125/150, 200, 250, 330, 500/600	15	$16.80
HA-135	P-p to V.C.	3K/5K	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	18	16.80
HA-136	5881's screen-taps	6.6K	4, 8, 16	20	18.00

POWER TRANSFORMERS

Units Housed: HP-122 in Type H-1 Case; HP-123 in Type H-2 Case

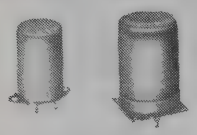
UTC Type	Application	Psi. Volt 50/60μ	Hi-Volt	Fil. Wind	Net Each
HP-122	Pre-amp	115	220-0-220 15 Ma	6.3 V.C.T.—.6A 6.3 V.C.T.—1.2A	$12.00
HP-123	Pre-amp or Tuner	115	275-0-275 35 Ma	6.3 V.C.T.—.6A 6.3 V.C.T.—2A	12.00

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COMMERCIAL GRADE COMPONENTS

DIMENSIONS, COMMERCIAL GRADE "RC" CASE



Performance insured during constant usage due to the ruggedness of this vacuum impregnated component with special sealing compound. Case, finished in light gray enamel, is ready for mounting on chassis. (All audio components linear).

Case No.	Base Dim.(Sq.)	Mounting Dim. (Sq.)	Ht., +1/8, −1/16	Cutout Dia.	Unit Wt. (Lbs.)
RC-37	1 3/8	1 1/8	1 5/8	1 1/4	.35
RC-50	1 5/8	1 3/16	2 1/4	1 1/2	1/2
RC-62	1 13/16	1 1/2	2 1/2	1 1/2	1
RC-75	2 3/16	1 13/16	2 7/8	1 7/8	1 1/2
RC-87	2 9/16	2 3/32	3 1/4	2	2 1/2
RC-100	3	2 3/8	3 3/4	2 5/8	3 1/2
RC-112	3 7/16	2 11/16	4 1/8	2 7/8	5
RC-125	3 3/4	3	4 1/2	3	6 1/2
RC-150	4 1/2	3 9/16	5 1/2	3 3/4	11
RC-152	5 1/8	4 1/8	5 1/2	4	15 1/2
RC-175	5 3/4	4 7/8	7	4	22

SWINGING INPUT AND FILTER INDUCTORS

UTC Type	Induct. Henries	DC MA	DC Res. Ohms	Test Volts	Case No.	Net Each
CG-40	10	200	110	1750	RC-112	$ 8.10
CG-44	30	100	400	1750	RC-100	6.90
CG-45	250	15	5000	1750	RC-87	6.00
CG-48C	75	50	2200	1750	RC-87	7.50
CG-100	12	150	110	2500	RC-125	9.00
CG-102	12	250	100	3000	RC-150	13.20
CG-104	10	350	90	5000	RC-152	15.00
CG-108	10	500	52	7000	RC-175	27.00
CG-1S	10	1000	40	9000	11 1/2 x 4 3/4 x 6 7/8 H. Wt., 40 lbs.	54.00
CG-101	25/5	150	110	2500	RC-125	9.00
CG-103	25/5	250	100	3000	RC-150	13.20
CG-105	25/5	350	90	5000	RC-152	15.00
CG-109	25/5	500	52	7000	RC-175	27.00
CG-111§	100/10mh	2.5a.	.6	1500	RC-87	11.40
(2 wdgs)‡	25/2.5mh	.5a.	.15			
CG-112§	40/10mh	6 a.	.24	1500	RC-112	12.60
(2 wdgs)‡	10/2.5mh	12 a.	.06			
CG-113§	7/1.75mh	17.5a.	.036	1500	RC-125	14.70
(2 wdgs)‡	1.8/.45mh	35 a.	.009			
CG-1C	25/5	1000	40	9000	11 1/2 x 4 3/4 x 6 7/8 H. Wt., 40 lbs.	54.00

§Split winding in series. †Wt., 40 lbs. ‡Split winding in parallel.

PLATE TRANSFORMERS

Primaries for 105, 115, 220, 230 volts; 50/60 cycles. For reduced power, secondary can be cut in half, using 220 v. primary on 110 volts; may be used on 25 to 43 cycles in this case. "W" suffix units designed for full wave center tap and full wave bridge application. Center tap may be disconnected from ground.

UTC Type	High Voltage	DC Volts	Case No.	Net Each
CG-300	625-515-0-515-625	500/400	RC-150	$16.20
CG-300W	625-515-0-515-625	1000/800	RC-150	17.70
CG-301	580-530-300-0-300-530-580	475/425/250	RC-152	24.00
CG-301W	580-530-300-0-300-530-580	950/850/500	RC-152	26.40
CG-302	950-750-0-750-950	760/610	RC-175	30.00
CG-302W	950-750-0-750-950	1520/1220	RC-175	33.00
CG-303	1500-1235-400-0-400-1235-1500	1250/1000 300	RC-175	36.00
CG-303W	1500-1235-400-0-400-1235-1500	2500/2000 600	RC-175	39.60

POWER AND BIAS TRANSFORMERS

Primary 115 volts, 50/60 cycles. DCMA is for choke input; reduce 70% for condenser input. Filament 1 is 5 volts, 3 amps., and Filament 2 is 5 volts, 2 amps., except as otherwise noted.

UTC Type	High Voltage	DC Ma	Filament 3	Filament 4	Case No.	Net Each
CG-422	435-365-0-365-435	125	6.3 VCT-3A	2.5 VCT-5A	RC-150	$21.00
	125-0-125	25				
CG-428	500-0-500 80-0-80	250 100	6.3 VCT-4A	6.3 VCT-3A, tapped 2.5 VCT-3A	RC-152	24.90
CG-429*	600-525-0-525-600	250	7.5 VCT-3A, tapped 6.3 VCT-4A		RC-152	24.90
CG-431†	500-400-0-400-500 80-0-80	500 100	6.3 VCT-5A	6.3 VCT-3A	RC-175	36.00
CG-315	Tapped for any DC voltage from 15 to 100 volts within 6%—250 MA				RC-125	14.40
CG-316	Tapped for any DC voltage from 75 to 400 volts within 6%—250 MA				RC-152	21.00

*Filament 2 is 6.3 VCT-3A. †Filament 1 is 5V-6A.

AUDIO UNITS

UTC Type	Use †	Pri. Imped., Ohms	Level	Case RC-	Net Each
CG-131	a	15K	+28 dbm	50	$ 9.90
CG-132	b	15K	+30 dbm	62	9.90
CG-133	c	30K CT	+32 dbm	75	10.50
CG-134	d	50, 200, 500	+30 dbm	50	9.00
CG-135	e	50, 200, 500	+30 dbm	50	9.90
CG-235	f	50, 200, 500	+28 dbm	75	12.00
CG-136	g	15K, 50, 200	+30 dbm	62	13.20
CG-137	h	50, 200, 500	+28 dbm	50	8.40
CG-140	i	15K	+30 dbm	50	7.80
CG-141	j	30K CT	+32 dbm	50	9.00
CG-233	k	30K CT	+35 dbm	87	9.00
CG-333	k	30K CT	+35 dbm	87	9.00
CG-433	k	5K CT	10 w.	100	9.90
CG-15	l	8K CT	20 w.	100	12.00
CG-16	l	3K/5K CT	20 w.	100	12.00
CG-19	l	6K/10K CT	20 w.	100	12.00
CG-710	l	14K/20K CT	20 w.	100	12.00
CG-216	l	9K CT	30 w.	125	13.80
CG-20	m	5K CT, 43% screen taps	25 w.	125	15.00
CG-21	m	3.3K CT, 40% screen taps	50 w.	150	24.00
CVP-1	n	3K/5K/6K/8K/10K/14K CT	12 w.	100	13.20
CVP-2	n	"	30 w.	125	14.40
CVP-3	n	"	60 w.	150	21.00
CVP-4	n	"	125 w.	152	24.00
CVP-5	n	"	300 w.	175	39.00
CVL-1	p	500	15 w.	87	9.00
CVL-2	p	500	40 w.	125	10.50
CVL-3	p	500	75 w.	150	15.00
CVM-0	q	Any Class B	12 w.	100	10.50
CVM-1	q	"	30 w.	125	13.80
CVM-2	q	"	60 w.	150	18.00
CVM-3	q	"	125 w.	152	21.00
CVM-4	q	"	300 w.	175	39.00
CVM-5	q	"	600 w.	†	105.00
CG-51AX	r	15K	5 w.	87	9.00
CG-53AX	r	3K/10K/ CT	20 w.	112	10.50
CG-59AX	r	50, 200, 500	20 w.	112	10.80

† 7" x 12" x 9"; Wt., 60 lbs. †a—Pl. to grid. b—Pl. to 2 grids. c—2 pl. to 2 grids. d—Input, humbucking. e—P-p input, humbucking. f—Input, mag. shielded. g—Dual input, humbucking. h—Mixing. i—Pl. to line. j—P-p to line. k—Driver. l—Output. m—Feedback output. n—Universal output. p—Universal matching. q—Universal modulator. r—Universal driver.

END CASTING UNITS

See note on "W" suffix units under plate transformers.

UCT Type	High Volt	DC Volt		L	W	H	Wt. Lbs.	Net Each
CG-304	1500-1235-0-1235-1500	1.25K	1K	14 5/8	8 1/2	10 3/8	100	$141.00
CG-304W†	1500-1235-0-1235-1500	2.5K	2K	14 5/8	8 1/2	10 3/8	100	156.00
CG-305	2400-1750-0-1750-2400	2K	1.5K	10 1/2	4 3/4	6 7/8	50	63.00
CG-305W†	2400-1750-0-1750-2400	4K	3K	10 1/2	4 3/4	6 7/8	50	69.00
CG-306	as above	2K	1.5K	13 7/8	8 1/2	10 3/8	100	150.00
CG-306W†	as above	4K	3K	13 7/8	8 1/2	10 3/8	100	165.00
CG-307	3500-3000-2400-0-2400-3000-3500	3K 2K	2.5K	13 5/8	8 1/2	10 3/8	90	138.00
CG-308	as CG-307	3K 2K	2.5K	15 1/8	8 1/2	10 3/8	125	162.00
CG-309	as CG-307	3K 2K	2.5K	21	10	13 1/4	253	360.00
CG-310	4600-4050-3500-0-3500-4050-4600	4K 3K	3.5K	17 1/4	10	13 1/4	150	309.00
CG-311	1500-1235-0-1235-1500	1.25K	1K	10 1/2	4 3/4	6 7/8	50	66.00
CG-311W†	1500-1235-0-1235-1500	2.5K	2K	10 1/2	4 3/4	6 7/8	50	69.00
CG-312	1800-1500-0-1500-1800	5K	1.25K	10 1/2	4 3/4	6 7/8	38	66.00

† Full Wave Bridge Rectifier types.

VARIPOWER * AUTOFORMERS

Simultaneous control of filament, plate and line voltage. Filament voltage control within 2 1/2%. Output voltage from 0 to 130 volts. 50/60 cycles. Taps at 25, 55, 75, 95, 100, 105, 110, 115, 120, 125, and 130 volts.

UTC Type	Watts Output	Case No.	Net Each	UTC Type	Watts Output	Case No.	Net Each
CVA-1	150	RC-112	$12.00	CVA-4	1000	RC-152	$21.00
CVA-2	250	RC-125	14.10	CVA-5	2000	RC-175	36.00
CVA-3	500	RC-150	18.00				

UTC PAGE 10. *UTC Trade Mark. All Product Lines or Type Designations are UTC Trade Marks. Specify by Trade Mark to assure UTC high quality and reliability. © 1965 United Transformer Corp., New York, N. Y.

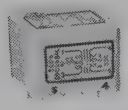
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MINIATURE, OUNCER, SUBOUNCER & SUB-SUBOUNCER UNITS

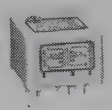
SUBOUNCER*& SUB-SUBOUNCER*AUDIO TRANSFORMERS
TRANSISTOR & TUBE TYPES HERMETICALLY SEALED

TO MIL-T-27B

UTC SSO-#P and SO-#P units are ideal miniaturized components having high efficiency and wide frequency response. Special nickel iron core materials and winding methods provide exceptional performance and reliability.



SO-#P UNIT
Dim. ¾x1x2 23/32"
Pin Length ¼"
Wt. .....05 lb.



SSO-#P UNIT
Dim. ¾x7/8x5/8"
Pin Length ¼"
Wt. .....04 lb.



SML-70
7/16x3 1/64x5/8"
Wt. .2 oz.

These units are vacuum molded to MIL Grade 5. They employ 50 mil deeply anchored pin terminals ideally suited for printed circuit and transistor application. Terminals are strong enough to support these light weight units.

The UTC SML-70 is an ultra miniature transformer providing high shielding, extremely low insertion loss with wide band response, 200 cycles to 20 kc. These units are provided with pin terminals (.025 dia.) strong enough to support the unit and are ideal for printed circuits.

PRINTED CIRCUIT AUDIO UNIT — HIPERMALLOY SHIELD CASE

Type No.	Application	Pri. Imp. ohms	Sec. Imp. ohms	Net Each
SML-70	Input or Chopper Service	200K	1K	$8.40

MIL TYPE: TF5RX16ZZ.

PRINTED CIRCUIT MOLDED TYPES TO MIL GRADE 5

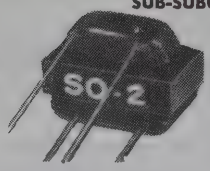
Type No.	Application	Pri. Imp. ohms	Sec. Imp. ohms	Net Each
SO-2P	Interstage/3:1	10K	90K	$6.90
SO-3P*	Plate to Line	10K	200	6.90
		25K	500	
SO-5P	Inductor: 40 hy at 1 ma, 2675 ohms, series; 4 hy at 4 ma, 670 ohms, parallel;			6.90
SO-7P*	Transistor	20K	800	6.60
	Interstage	30K	1200	
SO-8P	Transistor to PP Sec.	10K	2000 CT	7.50
SO-9P	PP Transistor to V.C.	500 CT	3.2	7.50
SO-14P	Transistor	80 CT	32 Split	7.80
	Interstage	100 CT	40 Split	
SO-15P	Tr. output	600 CT	600 Split	7.80
SO-17P	Inductor: 16 hy at 2 ma, 1.1K ohms, series; 4 hy at 4 ma, 275 ohms, parallel;			6.90

MIL TYPES: TF5RX13ZZ: SO-3P, SO-7P, SO-8P; TF5RX15ZZ: SO-2P; TF5RX17ZZ: SO-9P, SO-14P, SO-15P, SO-17P; TF5RX20ZZ: SO-5P.

SSO-3P	Plate to line	10K	200	$7.20
		25K		
SSO-5P	Inductor: 100 hy at 0 ma, 4.4K ohms, series; 25 hy at 0 ma, 1.1K ohms, parallel			6.90
SSO-8P	Transistor to pp sec.	10K	2000 CT	7.20
SSO-14P	Transistor	10K CT	200 CT	7.50
	Interstage	25K CT	500 CT	
SSO-15P	Transistor	20K CT	800 CT	7.50
	Interstage	30K CT	1200 CT	
SSO-19P	Output matching	500 CT	600 CT	7.20
SSO-20P	Output	1.5K CT	600 CT	7.20
SSO-21P	Crystal/Chopper	200K CT	1000 CT	8.10
SSO-22P	Interstage	10K CT	1500 CT	7.20
		12K CT	1800 CT	
SSO-23P	Inductor: 8 hy at 2 ma, 600 ohms, series; 2 hy at 4 ma, 150 ohms, parallel			6.90
SSO-24P	Inductor: 3.5 hy at 2 ma, 160 ohms, series; 0.9 hy at 4 ma, 40 ohms, parallel			6.90
SSO-25P	Transistor	10K CT	10K/	8.10
	Interstage		2.5K spl.	
SSO-27P	Tr. Output	4K CT 2.5 ma	600 spl.	8.10

MIL TYPES: TF5RX13ZZ: SSO-3P, SSO-8P, SSO-14P, SSO-15P, SSO-22P, SSO-25P, SSO-27P; TF5RX16ZZ: SSO-21P; TF5RX17ZZ: SSO-19P, SSO-20P; TF5RX20ZZ: SSO-5P, SSO-23P, SSO-24P.

SUB-SUBOUNCERS*AND SUBOUNCERS*



Lead mounted (channel available as separate item) miniature nickel iron core units for transistor or vacuum tube circuits. Plastic mounted leads. SSO Sub-Subouncers: Approx. 2 db, 140-10,000 cps; +20 VU except inputs +7 VU. (7/16" x ¾" x 43/64"; wt., .02 lb.) SO Subouncers: Approx. 2 db., 100-10,000 cps; +24 VU except inputs +10 VU. (19/32" x 43/64" x 7/8"; wt., .03 lbs.)

UTC SSO-	Net Each	Application	Pri. Imp., Ohms	Sec. Imp., Ohms	UTC SO-	Net Each
1	$4.50	Input	50/200	62.5K/250K	1	$3.60
2	4.80	Interstage	10K, .25 ma	90K	2	3.30
3	4.20	Pl. to line	10K/25K, 1.5 ma	200/500	3	3.30
4	3.90	Output	30K, 1 ma	50	4	3.30
5	3.90	Inductor:	50 hys. @ 1 ma	4400 ohms#	5‡	3.00
6	4.20	Output	100K, .5 ma	60	6	3.90
7	3.30	Tr. intrstg.	20K/30K†	80/1200	7	3.00
8	3.90	Tr. intrstg.	10K, 1 ma	2K CT	8	3.60
9	3.00	Tr. to V.C.	10K, 2 ma	16	.....	.....
.....	.....	Tr. to V.C.	500 CT	3.2	9	3.60
10	3.00	Tr. to V.C.	10K, 2 ma	3.2	.....	.....
.....	.....	Tr. to V.C.	2K/4K CT	8/16	10	3.60
11	3.00	Tr. Output	500/600§	50/60	.....	.....
.....	.....	Transist. Int.	400/500 CT	400/500 Split	11	4.20
12	3.00	Tr. Output	1K/1.2K††	50/60	.....	.....
.....	.....	Transist. Int.	400/500 CT	120/150 Split	12	4.20
13	4.50	Input	200K	1K	.....	.....
.....	.....	Transist. Int.	400/500 CT	40/50 Split	13	4.20
14	4.20	Tr. intrstg.	10K/25K CT	200/500 CT	.....	.....
.....	.....	Transist. Int.	80/100 CT	32/40 Split	14	4.20
15	4.20	Tr. intrstg.	20K/30K CT	.8K/1.2K CT	.....	.....
.....	.....	Tr. output	600 CT, 5 ma	600 Split	15	4.20
16	3.00	Tr. output	1.2K/1.5K††	3.2/4	.....	.....
.....	.....	Tr. intrstg.	2.5K CT, 4 ma	2500 Split	16	4.20
17	3.30	Output	10K/12.5K**	500/600 CT	.....	.....
.....	.....	Inductor: 16 hy at 2ma, 1.1K ohms, series; 4 hy at 4 ma, 275 ohms, parallel			17	3.30
18	3.30	Output	7.5K/9.4K CT	3.2/4	.....	.....
19	3.30	Matching	500 CT	600 CT	.....	.....
20	3.30	Output	1.5K CT	600 CT	.....	.....
21	4.80	Chopper	200K CT	1K CT	.....	.....
22	3.90	Tr. intrstg.	10K/12K CT	1.5K/1.8K CT	.....	.....
23	3.00	Inductor: 4 hys @ 5 ma, 650 ohms				
24	3.00	Inductor: 1.5 hys. @ 5 ma, 160 ohms				
25	5.10	Transist. Int.	10K/12K CT	10K/12 CT	.....	.....
26	5.10	Transist. Int.	40K/50K CT	400/500 Split	.....	.....
27	5.10	Tr. output	4K CT, 2.5 ma	600 Split	.....	.....
CH	.30	Mounting channel for any of above			CH	.30

†0.5 ma. ‡Resis., 2675 ohms. §3.5 ma. **2 ma. ††3 ma. #DC resis.

OUNCER*AUDIO UNITS
Standard and Plug-in Types





UTC ouncer components provide wide range ±1 db, 30 to 20,000 cps (except Nos. 0-14 and 0-15). In compact 7/8" dia. case. No. 0-16 has heavy shielding (case 1 1/16" dia.). P-16 has 9 pin plug (1 3/16" dia.). Wt., 4 oz. max.

UTC No.	Net Each	Application	Pri. Imped., Ohms	Sec.Imped., Ohms	UTC No.	Net Each
O-1	$7.80	Input	50, 200, 500	50K	P-1	$9.00
O-2	7.80	P-p input	50, 200, 500	50K CT	P-2	9.00
O-3	7.50	Input	7.5/30	50K	P-3	8.40
O-4	6.60	Pl. to grid	15K	60K	.....	.....
O-5	6.60	Pl. to grid	15K, 2 ma	60K	.....	.....
O-6	7.50	Pl. to p-p	15K	95K CT	P-6	8.40
O-7	7.50	Pl. to p-p	15K, 2 ma	95K CT	P-7	8.40
O-8	7.80	Pl. to line	15K	50, 200, 500	P-8	9.00
O-9	7.80	Pl. to line	15K, 2 ma	50, 200, 500	P-9	9.00
O-10	8.40	P-p to line	30K CT	50, 200, 500	P-10	9.00
O-11	7.80	Cryst. out.	50K	50, 200, 500	P-11	9.00
O-12	7.80	Mixing	50, 200, 500	50, 200, 500	P-12	9.00
O-13	6.30	Inductor	300 Hys-0 ma; 6000 ohms		.....	.....
O-14	7.50	50:1 input	200	500K	.....	.....
O-15	7.50	10:1 P/G	15K	1 meg.	P-15	9.00
O-16	10.20	Shld. input	250 CT	50K	P-16	11.40
O-17	1.50	Hipermalloy shield, 25 db, for Ouncers			.....	.....
O-18	7.80	Tr. intrstg.	10K split	2K split	.....	.....
O-19	7.80	Tr. intrstg.	10K split	4K split	.....	.....
O-20	6.30	Tr. to line	1.5K CT	500 split	.....	.....
O-21	5.40	Tr. to V.C.	2K/4K CT	8/16	.....	.....
O-22	5.40	Tr. to V.C.	500/400 CT	4/3.2	.....	.....
O-23	5.10	Inductor 7 Hys-3 ma; 230 ohms			.....	.....
O-24	5.10	Inductor 1.6 Hys-3 ma; 25 ohms			.....	.....
O-25	8.10	Transist. Input	600/150 split	2K/500 split	.....	.....
O-26	8.10	Transist. Int.	10K CT 4 ma.	10K CT	.....	.....
O-27	8.40	Transist. Int.	10K CT 4 ma.	500/125 split	.....	.....
O-28	8.40	Transist. Int.	50K CT. 2 ma.	500/125 split	.....	.....
O-29	8.70	Transist. Int. or chopper	100K CT 1 ma.	500/125 split	.....	.....
O-30	8.10	Transist. Int.	500/125 split	500/125 split	.....	.....
O-31	8.10	Transist. Int.	500/125 split	150/37.5 split	.....	.....
O-32	8.10	Transist. Int.	500/125 split	50/12.5 split	.....	.....
O-33	8.10	Transist. Int.	100/25 split	40/10 split	.....	.....
O-34	5.10	Split Inductor	Series: 60 Mhy-80 ma; 4 ohms Parallel: 15 Mhy-160 ma; 1 ohm		.....	.....
O-36	5.10	Split Inductor	Series: 1 Hy-20 ma; 60 ohms Parallel: .25 Hy-40 ma; 15 ohms		.....	.....
O-37	8.10	Tr. to line	4K/1K spl., 4 ma	650/150 split	....	....
O-38	5.10	Spkr. match	0, 4, 8, 16 ODC		....	....
O-BR	.21	Mounting U-bracket for ouncers				....

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AMATEUR & PUBLIC ADDRESS TRANSFORMERS "S"* SERIES

DIMENSIONS, SPECIAL SERIES TRANSFORMERS



G-1 thru G-4 G-5 thru G-12

UTC Special Series transformers are specifically designed for amateur and popular-priced PA service. These units are finished in a rich, commercial type medium gray enamel. A recessed terminal strip is provided, permitting above chassis or breadboard wiring in addition to standard chassis type.

G-CASE SIZES

Case	Height, In.	Width, In.	Depth, In.	Wt., Lbs.
G-1	1⅞	2 13/16	1¾	1
G-2	2 5/16	3⅜	1 15/16	1½
G-3	2½	3¾	2 5/32	2
G-4	2 15/16	4⅛	2 5/16	3
G-5	3¾	3⅛	4½	4½
G-7	4⅝	4⅝	5½	8
G-8	4⅝	5⅜	5⅜	12
G-9	5⅞	5⅜	6¾	21
G-10	5⅞	6⅛	6⅝	24
G-11	5⅞	6½	7⅜	31
G-12	10¼	7⅜	9¼	52

INPUT AND DRIVER TRANSFORMERS

Type UTC	Application	Ratio Pri. to Sec.	Level	Case	Net Each
S-1	Plate to grid	1:3½	+30 dbm	G-2	$4.80
S-2	Plate to p-p grids	1:4†	+30 dbm	G-2	6.00
S-3	Pl. to 1 or 2 grids	1:4†	+25 dbm	G-1	4.50
S-5	Line to grid, humbkg.	1:16	+30 dbm	G-2	5.10
S-6	Line to grid, compact	1:16	+25 dbm	G-1	4.50
S-8	Driver pl. to p-p	2.66:1, 5:1†	5 w.	G-3	6.60
S-9	Driver p-p to p-p	2.66:1, 3.6:1 5:1†	20 w.	G-4	8.70
S-10	Driver p-p to p-p	2.25:1 †	5 w.	G-3	6.60

†Center tapped.

MATCHING, OUTPUT AND MODULATION UNITS

UTC Type	Application	Pri. Imped., Ohms	†	Level, Watts	Case	Net Each
S-11	Pl. to line	15K	a	.25	G-2	$5.10
S-12	Line to V.C.	.5K/2K/4K	b	15	G-2	5.40
S-13	Line to V.C.	.5K/2K/4K	b	30	G-4	7.80
S-14	Output	2.5K/4K/7K/10K	c	10	G-2	6.60
S-15	PP output	4K/5K/10K CT	c	12	G-2	7.20
S-16	PP output	3K/6K/9/10K CT	c	30	G-4	8.40
S-17	PP output	3.8K/4.5/5K CT	c	55	G-5	12.00
S-18	Univ. modul.	Any Class B	d	12	G-3	7.20
S-19	Univ. modul.	Any Class B	d	30	G-4	9.30
S-20	Univ. modul.	Any Class B	d	55	G-5	15.00
S-21	Univ. modul.	Any Class B	d	110	G-7	21.00
S-22	Univ. modul.	Any Class B	d	250	G-9	33.00

†Secondary Impedance: a—200/500 ohms. b—2, 4, 8, 15 ohms. c—2, 8, 15, 500 ohms. d—Any Class C.

FILTER, SWINGING AND AUDIO INDUCTORS

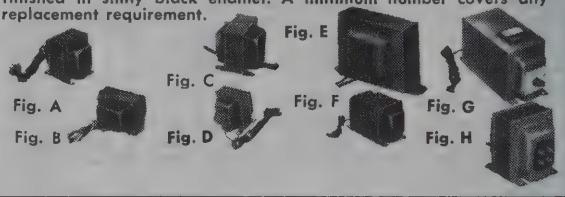
Type	Henries	Ma. DC	Ohms	Insul.	Case	Net Each
S-23§	300	5	5000	1500 v.	G-2	$4.50
S-24‡	500	3	6000	1500 v.	G-2	5.10
S-25	30	30	800	1500 v.	G-2	3.90
S-26	12	60	250	1500 v.	G-2	3.90
S-27	25	75	350	1500 v.	G-4	5.10
S-28	20	100	350	1500 v.	G-4	6.30
S-29	6	175	90	1500 v.	G-4	5.10
S-30†	4/20	175	90	1500 v.	G-4	5.10
S-31	6	225	100	2700 v.	G-5	6.90
S-32†	4/20	225	100	2700 v.	G-5	6.90
S-33	8	300	100	4000 v.	G-7	9.30
S-34†	4/20	300	100	4000 v.	G-7	9.60
S-35	8	400	60	5000 v.	G-8	12.00
S-36†	4/20	400	60	5000 v.	G-8	12.00
S-37	8	550	60	6000 v.	G-8	15.00
S-38†	4/20	550	60	6000 v.	G-8	15.00
S-80	50/10 Mhy	1.75A	.5	500 v.	G-1	3.90
S-81 (2Wdgs)	100/8 Mhy 25/2 Mhy	2.5A 5A	.6 .15	1500 v.	G-3	6.00

§Audio. ‡P.P. Audio C. T. †Swinging.

Information on components in this box listed on UTC page 12.

REPLACEMENT TYPE COMPONENTS

The shells and brackets of these vacuum sealed components are finished in shiny black enamel. A minimum number covers any replacement requirement.



FILAMENT TRANSFORMERS

Primary Tapped 105, 115 Volts, 50-60 Cy.

UTC Type	Secondary Volts	Secondary Current	Insulation	Case No.	Net Each
S-53	2.5 VCT	10 Amp	1500 V	G-3	$6.30
S-54	5 VCT	4 Amp	2500 V	G-3	5.70
S-55	6.3 VCT	3 Amp	1500 V	G-3	5.40
S-57	2.5 VCT	10 Amp	10000 V	G-5	9.00
S-58	2.5 VCT	20 Amp	10000 V	G-5	9.90
S-59	5 to 5.25 VCT	13 Amp	5000 V	G-5	9.30
S-60	5 to 5.25 VCT	22 Amp	10000 V	G-7	13.20
S-61	7.5 VCT tapped 6.3 VCT	10 Amp	3000 V	G-5	10.20
S-62	10 VCT	10 Amp	3000 V	G-5	9.30
S-63	14 VCT tapped 12 VCT & 11 VCT	10 Amp	5000 V	G-7	13.20

Type	Filament 1	Filament 2	Filament 3	Case	Net
‡S-64	2.5 VCT-5A	2.5 VCT-5A	5 VCT-6A	G-5	$10.80
‡S-67	5 VCT-6A	6.3 VCT-54		G-5	10.20
‡S-68	5 VCT-3A	6.3 VCT-4A	7.5 VCT-5A	G-5	10.50
‡S-70	6.3 VCT-5A	6.3 VCT-5A	.....	G-5	10.20
§S-71	2.5 VCT 6A	2.5 VCT-6A	2.5 VCT-12A	G-7	15.00
†S-72	5 VCT-3A	5 VCT-3A	5 VCT-6A	G-5	11.40

§Insulation 10,000 v. †Insulation 5000 v. ‡Insulation 3000 v.

COMBINED PLATE AND FILAMENT TRANSFORMERS

Primary 115 V., 50-60 Cy.

UTC Type	Voltage	DC V.	Rect. Fil.	Filament No. 1	Filament No. 2	Case No.	Net Each
S-39	490-400-0-400-490 175 ma	400/310	5V-3A	2.5 VCT-6A	6.3 VCT-4A	G-7	$16.50
S-40	525-425-0-425-525 250 ma	400/310	5V-3A	6.3 VCT-3A	6.3 VCT-3A	G-7	18.00
S-41	600-0-600 200 ma	475	5 V-3A	7.5 V tapped 6.3 V-3A	6.3 VCT-2A	G-7	18.00
S-42	600-525-0-525-600 300 ma	480/400	5 V-6A	7.5 V tapped 6.3 V-3A	6.3 VCT-3A	G-7	19.50

PLATE AND BIAS TRANSFORMERS

Primary 115 V. 50/06 Cycles

UTC Type	2.5 VCT-12A High Voltage	DC Voltages †	DC Ma	Case	Net Each
S-44	575-525-0-525-575	470/430	500	G-9	$25.80
S-45	900-750-0-750-900	750/620	200	G-8	21.00
S-46	1000-750-0-750-1000	820/600	300	G-9	24.00
S-47	1500-1250-1000-0-1000-1250-1500	1275/1050/825	300	G-10	33.00
S-48	1500-1250-1000-0-1000-1250-1500	1300/1075/850	500	G-11	39.00
S-49	2100-1800-1500-0-1500-1800-2100	1815/1540/1275	300	G-11	36.00
S-50	3000-2500-0-2500-3000	2625/2175	300	G-12	60.00
S-51	Any bias voltage from 15 to 100 ± 6%		200	G-5	12.00
S-52	Any bias voltage from 75 to 400 ± 6%		200	G-7	15.60

†Based on two section filter for 200 ma. and 300 ma. units. Single section filter for 500 ma. units, both choke input.

IMMEDIATE DELIVERY
ON ALL UTC STOCK ITEMS
AND SPECIAL CUSTOM BUILT UNITS TO YOUR SPECS.

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TRANSFORMERS FOR INDUSTRY WIDE APPLICATIONS

DOUBLE SHELL POWER TRANSFORMERS (FIG. B SEE PG. 11)

Rectifier filaments 5 volts, 3 amps except R-101, 2 amps.

UTC Type	High V.	DC Ma.	Amplifier Filament	Overall Height	Wt., Lbs.	Net Each
R-101	275-0-275	50	6.3 v. CT-2.7A	3"	2½	$ 8.70
R-102	350-0-350	70	6.3 v. CT-3A	3 5/8"	3½	10.20
R-103	350-0-350	90	6.3 v. CT-3.5A	3 15/16"	4½	10.35
R-104	350-0-350	120	6.3 v. CT-5A	3 7/8"	5½	11.10
R-105	385-0-385	160	6.3 v. CT-5A	4 5/16"	7	12.00

VERTICAL SHELL POWER TRANSFORMERS (FIG. C SEE PG. 11)

Rectifier filaments 5 volts, 3 amps., except R-110, 2 amps.

R-110	300-0-300	50	6.3 v. CT-2.7A	3¼"	2½	$ 8.70
R-111	350-0-350	70	6.3 v. CT-3A	3¼"	3½	10.20
R-112	350-0-350	120	6.3 v. CT-5A	4"	5½	11.10
R-113	400-0-400	200	6.3 v. CT-6A	4 5/8"	8	14.10

CHANNEL FRAME FILTER INDUCTORS (FIG. E SEE PG. 11)

Inductance Shown is at Rated D.C.M.A.—Test Volts RMS: 1500

Type No.	Induct. Hys.	Current	Resist. Ohms	Dimensions, in. W	D	H	M	Wt. Lbs.	Net Each
R-55	6	40MA	300	2 3/8	1 3/8	2		½	$1.65
R-14	8	40MA	250	2 7/8	1½	1 11/16	2 3/8	¾	1.95
R-15	12	30MA	450	2 7/8	1½	1 11/16	2 3/8	¾	1.95
R-16	15	30MA	630	2 7/8	1½	1 11/16	2 3/8	¾	1.95
R-17	20	40MA	850	3 5/16	1 5/8	2	2 13/16	1	2.25
R-18	8	80MA	250	3 5/16	1 5/8	2	2 13/16	1	2.52
R-19	14	100MA	450	3 3/4	1 7/8	2 5/16	3 1/8	1½	3.00
R-20	5	200MA	90	4 1/8	2¼	2 5/8	3 5/16	2½	3.60
R-21	15/3	200MA	90	4 1/8	2¼	2 5/8	3 5/16	2½	3.60
R-220	100/8 Mhy. 25/2 Mhy.	2.5A 5A	.6 .16	3¾	2	2 5/16	3 1/8	1½	4.20

PHOTOFLASH TRANSFORMERS

STANDARD 982

Can be used for either standard (Amglo type) or trigger (Sylvania type) multiple flash tubes. Circuit details included with transformer.



PF-6

PF-1 Primary for 115 volts, 50/60 cycles. Secondaries for power supply delivering 2200 volts DC to condenser up to 100 Mfd. Compound sealed in G-3 (Pg. 11) case 2⅛ x 2¾ (3¾ including flanges) x 2½ inches high. Weight 2 lbs. **Net Each $8.40**

PF-3 Trigger Transformer 15 KV peak. ⅞ O.D.x3 long. Weight 2 oz. **Net each: $6.00**

TRANSISTOR TYPE

PF-6

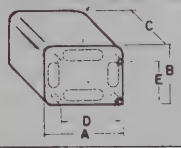
These are miniaturized light weight units for transistor type photoflash supply.

PF-5 Primary for 115 volts. 50/60 cycles or for 4½ V. battery switched by PF-6 inverter transformer. Output delivers 400 V. DC when used in voltage doubler circuit to charge photoflash capacitor (typically 40 watt-Sec.). G-1 case (Pg. 11) **Net each: $8.40**

PF-6 Inverter transformer transforms 4½ V. DC from battery to input for PF-5 stepup transformer. Ouncer case (Pg. 11) **Net each: $5.10**

PF-7 Trigger transformer. Shorting .25 mfd. capacitor (charged to approx. 225 V. DC) across terminals 1-2 produces 6 KV pulse at terminal 3 for triggering flash tube. ⅞" Dia. x 15/16"; Wt. ½ oz. **Net each: $3.60**

MIL-T-27B CASE SIZES



MIL Case	Size, Inches: A	B	C	Dimension D	E	Mtg. Studs
AF	¾	¾	1⅛	Diag.	5/16	4-40 x 3/8
AG	1	1	1⅜	Diag.	¾	4-40 x 3/8
AH	1 5/16	1 5/16	1¾	Diag.	1¼	6-32 x 3/8
AJ	1⅜	1⅜	2⅜	1 3/16	1 3/16	6-32 x 3/8
EA	1 13/16	1 13/16	2¾	1⅜	1¼	6-32 x 3/8
EB	1 13/16	1 13/16	2 7/16	1⅜	1¼	6-32 x 3/8
FA	2 5/16	2 1/16	3⅛	1 11/16	1 3/16	6-32 x 3/8
FB	2 5/16	2 1/16	2½	1 11/16	1 3/16	6-32 x 3/8
GA	2¾	2⅜	3 13/16	2⅛	1¾	6-32 x 3/8
GB	2¾	2⅜	2 13/16	2⅛	1¾	6-32 x 3/8
HA	3 1/16	2⅝	4¼	2 13/64	1 55/64	8-32 x 3/8
HB	3 1/16	2⅝	3 3/16	2 13/64	1 55/64	8-32 x 3/8
JA	3 1/16	3 1/16	4⅞	2⅝	2⅛	8-32 x 3/8
JB	3 1/16	3 1/16	3⅞	2⅝	2⅛	8-32 x 3/8
KA	3 15/16	3⅜	5¼	3	2 7/16	10-32 x ½
KB	3 15/16	3⅜	4 5/16	3	2 7/16	10-32 x ½
LA	4 5/16	3 11/16	5 5/16	3 5/16	2 11/16	10-32 x ½
LB	4 5/16	3 11/16	4½	3 5/16	2 11/16	10-32 x ½
MA	4 11/16	4	6	3 11/16	3	¼-20 x 5/8
MB	4 11/16	4	4 15/16	3 11/16	3	¼-20 x 5/8
NA	5 1/16	4 5/16	6 13/16	4 1/16	3 5/16	¼-20 x 5/8
NB	5 1/16	4 5/16	5½	4 1/16	3 5/16	¼-20 x 5/8
OA	5½	4½	6¾	3¾	3	¼-20 x 5/8

STEP-DOWN AUTO-TRANSFORMERS (FIG. A SEE PG. 11)

With 6-ft. cord and female receptacle, except R-64; 220/240 to 110/120 v., 50/60 cps.

UTC Type	Rating	Size, Inches L.	W.	H.	Wt., Lbs.	Net Each
R-41	85 watt capacity	3 3/16	2 5/8	3 1/8	4	$6.75
R-42	125 watt capacity	3½	3	3½	5	7.65
R-43	175 watt capacity	3¾	3¼	3⅞	5½	8.40
R-44	250 watt capacity	4⅜	3¼	3⅞	6½	11.10
R-45	500 watt capacity	4 5/8	3⅞	4 5/8	12	12.00
R-46	1200 watt capacity	6⅞	3⅞	4 5/8	18	24.00
R-64	2500 watts, no cord	10½	4¾	6¾	30	57.00

ISOLATION TRANSFORMERS (FIG. F SEE PG. 11)

Ideal for isolating line noise. AC-DC sets, etc. Excellent electrostatic shielding 1500 volt breakdown test. Six foot cord and female receptacle, except R-77.

Primary 110-120 volts 50/60 cycles—Secondary 110-120 volts Except R-97 220 volt Primary—120 volt Sec.

Type No.	Rating Watts	L	W	H	Mtg. Dim.	Wgt. Lbs.	Net Each
R-72	40	3⅛	2 5/8	3⅛	2x1 7/8	4	$ 7.20
R-73	100	3¾	3¼	3⅞	2½x2 3/8	6	10.50
R-74	250	4⅞	3⅞	4 5/8	3x3½	12	18.00
R-75	600	7⅜	3⅞	4 5/8	3x5⅞	20	24.00
R-76	1200	8½	4½	6⅛	3 5/8x6 5/8	30	57.00
R-77	2500	12	7	9	6x11	70	99.00
R-97	250	4⅞	3⅞	4 5/8	3x3½	12	15.00

LINE VOLTAGE ADJUSTERS WITH METER (FIG. G SEE PG. 11)

The perfect answer to abnormal or fluctuating line voltage. Adjust switch so that meter reads at red line and you know that your equipment is working at correct voltage. These units combine a tapped auto-transformer with a switch and meter in a compact, rugged assembly. The nine tap switch provides for line voltage of 60 to 140 volts on 115 volt output models and 160 to 240 volts on 230 volt output model. All units are designed for 50/60 cycles service and come complete with 6 foot input cord and plug and outlet receptacle.

Type No.	Primary Voltages	Sec. Volts	Watts Ratings	L	W	H	Wgt. Lbs.	Net Each
R-78	†	115	150	7	4	4¾	6	$17.70
R-79	†	115	300	7	4	4¾	9	18.90
R-80	†	115	600	10¼	4	4¾	13	22.80
R-81	†	115	1200	10¼	4	4¾	21	33.00
R-86	‡	230	1200	10¼	4	4¾	21	33.00

† 60, 70, 80, 90, 100, 110, 120, 130, 140

‡ 160, 170, 180, 190, 200, 210, 220, 230, 240

EXPORT VOLTAGE ADAPTER (FIG. D SEE PG. 11)

Complete with cord and plug and special locking switch providing for line voltages of 105, 115, 125, 135, 150, 210, 230, 250 volts; 42 to 60 cycles. Output voltage 115.

Type No.	Rating Watts	L	W	H	Mtg. Dim.	Wgt. Lbs.	Net Each
R-47	85	4 5/8	3	3½	2¼x2¼	4½	$10.20
R-48	150	4¾	3¼	4	2½x2½	5½	11.70

TV VOLTAGE REGULATOR (FIG. D SEE PG. 11)

Complete with cord, plug, and special locking switch. Permits operation of 115 volt 50/60 cycle TV sets on line voltages of 85, 90, 95, 100, 105, 110, 120, 125 V.

Type No.	Rating Watts	L	W	H	Mtg. Dim.	Wgt. Lbs.	Net Each
R-49	350	5	3¼	4	2½x2¾	5	$12.00

SIGNALLING AND CONTROL TRANSFORMERS (FIG. H SEE PG. 11)

Primary 110-120 volts, 50/60 cycles—Secondary 4/8/12/16/20/24 volts

High power transformers suitable for operating relays, sirens horns, gongs, etc. from 115 V. 50/60 cycle line. These units have four secondary terminals providing 4, 8, 12, 16, 20 and 24 volt output. The volt ampere rating is based on the 24 volt secondary tap with corresponding reduction at the lower voltages. Underwriters' approved primary leads are employed, and screw-type binding posts.

Type No.	Rating Watts	L	W	H	Mtg. Dim.	Wgt. Lbs.	Net Each
SC-3	50	3	3 1/16	3 3/16	1¾x2¼	3	$8.40
SC-4	100	3¼	3 1/16	4	2⅛x2½	5	9.90
SC-5	250	4	4 5/8	4¾	3 5/16x3	10	14.40

INDUSTRIAL DISCOUNTS

Applicable to any UTC products listed in this catalog.

Assorted Quantities, Lots of				
1-24	25-99	100 up	100-499/One	Type
Net Price	Net —15%	Net —20%	Net —33⅓%	

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amglo HD-Series

ULTRA-HIGH EFFICIENCY REFLECTIVE BASE FLASHTUBES

(Patented)

Incorporating many advanced design features, these flashtubes, because of higher operating efficiency and an increase in reflector working area, provide more light for the same power.

A highly reflective Alzak disc replaces the light absorbing area of the usual tube base and socket. This saving of space and weight permits construction of shallow, lightweight lampheads and allows inclusion of storage capacitors if desired. Wiring the flashtube directly into the circuit improves operating efficiency and reliability, simplifies construction and reduces costs.

The resilient neoprene mounting protects the tube from mechanical shocks and provides electrical insulation.

Focal position is adjustable without removal of cover glass.

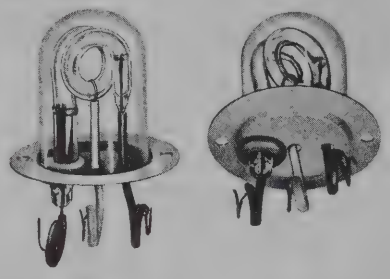
New electrode and processing developments have increased power ratings and extended tube life so that up to 100,000 flashes may be obtained.

AMGLO HD-Series Flashtubes are provided separately—or mounted, with Pyrex cover glass on reflective discs which fit AMGLO AR-365 Ultra-Reflectors, illustrated and described below.



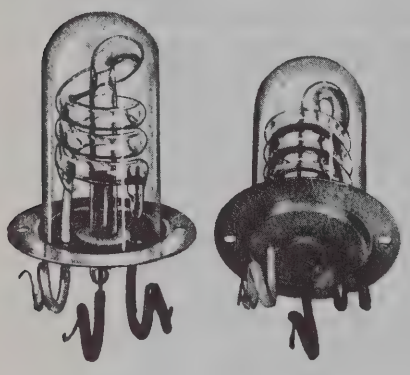
TYPE HD-1

Operating voltage 160-300 V. Energy input for photographic use 30-200 Watt-seconds. For stroboscopic use 0.1 to 10 Watt-seconds according to operating voltage and flashing rate.



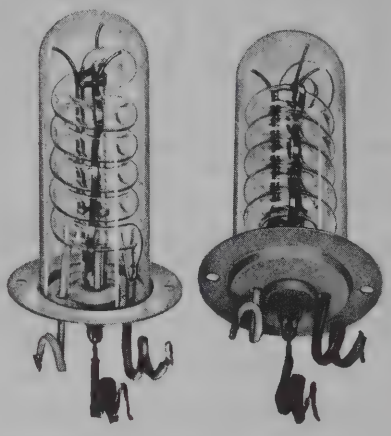
TYPE HD-2

Operating voltage 350-500 V. Energy input 30 to 200 Watt-seconds. For use with electrolytic condensers of 450 volt rating.



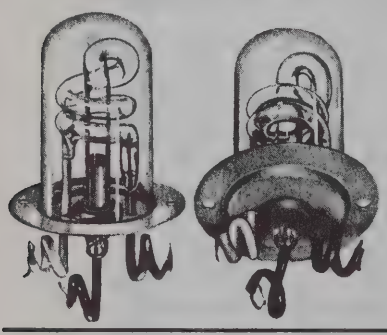
TYPE HD-3

Operating voltage 600-1000 V. Energy input 30 to 200 Watt-seconds. Electrolytic capacitors of 450 volt rating may be connected in series or series-parallel to provide 900 volt operation.



TYPE HD-4

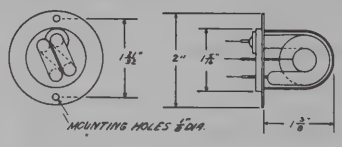
Operating voltage 2000-2500 V. Energy input 30 to 300 Watt-seconds. Oil type capacitors, of appropriate rating, are employed to provide flashes of shorter duration than those obtained with low voltage flashtubes.



TYPE HD-2A

Operating voltage and energy input similar to HD-2. Employs two turn spiral with central cathode housing.

REFLECTIVE MOUNTING DISC



Mounting disc of highly reflective Alzak aluminum replaces conventional base to eliminate the dead spot directly behind the flashtube. When mounted in a reflector a continuous reflecting surface is obtained. Drawing shows HD-2 reflective disc, with the standardized mounting dimensions for all models.

amglo

ULTRA REFLECTORS

Designed expressly for flashtube use, the AMGLO AR-365 Reflector, with its ultra-efficient reflective surface, provides an economical method for obtaining a substantial increase in useable light.

Used with AMGLO HD-Series Flashtubes, AR-365 Reflectors provide ultra-high reflectivity and remarkably even illumination over an arc of 60°.

Made of tarnish-proof Alzak aluminum, the special step design permits the use of a semi-specular Alzak surface to provide an efficiency of 86% as compared to 50%, or less, for ordinary reflectors.

Illustration shows mounted HD-type flashtube with Pyrex cover glass and R-65C Back Cover Cap. Reflector measures 6½" in diameter, 3½" in depth, including cap.



AR-365 Reflector
Front View



R-65C
Back
Cover



HD Series
Flashtube

AR-365
Reflector



FF-132



LF-132

R-520
Camera Bracket, for Rollei and other Twin Lens Cameras.



P-850	Camera Bracket, 8½" base x 10" high for 4x5 cameras.
S-300	Camera Bracket, 6⅜" base x 5⅛" high.
FF-132	Flashgun Mount. Mounts reflector to most 1½" flashguns.
LF-132	Lampstand Fitting. Mounts reflector to ⅜" lamp stand.
R-65C	Back Cover, 1⅞" deep x 4⅛" diameter. Provides space for triggering components. Bracket permits mounting to any of above Amglo fittings.

amglo U-35 SERIES STROBOSCOPIC TUBES

The most extensively used of all Stroboscopic Tubes, Amglo U-35 is standard equipment in a wide variety of Stroboscopic Instruments, Medical Electronic Units, Automotive Ignition Timers, Wheel Balancing Stroboscopes, Highspeed Photographic Units and similar applications.

It is capable of flashing at rates up to several thousand per minute when operated within the recommended voltage range. Either electrolytic or oil type capacitors may be employed; usually 1 to 2 Mfd. at the higher flashing rates and 2 to 4 Mfd. at rates to 30 per second. The Xenon gas filling produces a brilliant white light of 6500° Kelvin color temperature.

Because it is non-polarized, connections may be accidentally reversed without damage or purposely reversed periodically to double the already long service to be expected.

Many other advanced AMGLO features are included in the construction of this remarkable tube. It will provide continuous, unfaltering performance in heavy duty applications where other tubes rapidly change their characteristics or fail completely.

Proper tube type should be matched to the power supply to avoid skipping and double flashing.

When not enclosed with bulb, trigger band may be adjusted to provide the required degree of triggering sensitivity for the particular operating voltage in use.

Tubes illustrated below are available in U-35 series for operation in the 400-600 V. Range and U-35A Series for the 150-400 V. Range.



Mounted in 3 pin base with white reflective disc. Plugs into standard 6 prong radio tube socket No. 78S6. Dia. 1⅛" x 1¾" high, exclusive of pins. Adjustable trigger band.



Without base or disc. Glass portion of 6 mm tube 1½" long x ¾" wide. Mounts on ½" centers. Flexible tinned braid electrode connections. Rigid connection to adjustable trigger band.



Identical dimensions to above. Supplied without trigger lead or band. For non-critical applications a fine wire may be wrapped around upper portion of tube to apply trigger pulse.



Similar to top illustration but enclosed in clear glass envelope. Height 2⅛" exclusive of pins. Mounted in 3 pin base 1⅛" dia. with inside reflective disc.



Similar to above but has outside frosted glass envelope. The 1⅛" dia. 3 pin base, with inside reflective disc, plugs into No. 78S6 standard radio tube socket.

amglo GRID CONTROLLED FLASHTUBES

The use of many exclusive features developed by AMGLO engineers in the construction of these closed spiral, grid controlled, flashtubes has increased operating efficiency to new and higher standards for this type of tube. These AMGLO improvements increase light emission, extend service life and help maintain unchanging characteristics throughout the life of the tube.

Rare metal electrodes, for higher light intensity —auxiliary gas reservoirs, for longer service life and additional light—symmetrical light producing areas, for superior distribution—additional helix supports, for increased ruggedness—these are only a few of the many advanced engineering features responsible for superior performance.

Scientifically balanced for operation in the recommended voltage range, AMGLO Flashtubes provide a continuum of the Xenon spectrum during discharge. This full range of rich colors, produce superb color balance, without filters, with daylight color film and matchless negative quality with panchromatic types.



AMGLO 56J2Z

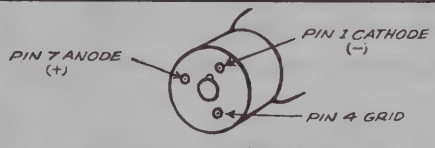
With 3 turn spiral, exactly balanced for 900 volt operation, AMGLO 56J2Z provides the ultimate in brilliant light output and longer life.

The power supply may comprise two series connected electrolytic capacitors of 450V rating, or, for higher power, two series connected pairs may be connected in parallel. In higher power units, 900 volt operation is preferable in order to shorten flash duration to prevent light cut off when the camera shutter is set at the higher speeds.

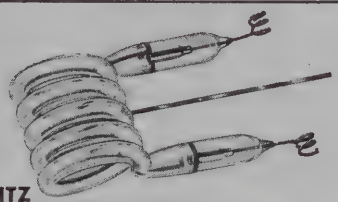


AMGLO 56J2Z-A

Similar to 56J2Z, except that the two turn spiral is balanced for use with 450V electrolytic capacitors connected in parallel. Produces a brilliant white light of 6500° Kelvin color temperature and maintains phenomenal efficiency, from lowest energy input to full rating of 200 watt-seconds. AMGLO 56J2Z-A is the ideal interchangeable flashtube for 450V operation.



Base Diagram No. 3 (Octal) used on Flashtubes 56J2Z and 56J2Z-A



AMGLO TYPE ITZ

This heavy duty tube with extra rugged electrodes can be used for intermittent service with an energy input up to 1500 watt-seconds. At 50 to 100 watt-seconds it may be flashed at the rate of several times per second for brief intervals.

Non-polarized; the electrode connections may be reversed occasionally to greatly extend service life.

Made of 10 millimeter hard glass tubing, the spiral measures 2" diameter. Tube is mounted in reflector by means of two porcelain bushings, as used with neon signs, or rubber or neoprene grommets spaced 2½" centers.

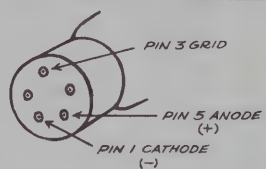


AMGLO 78R9D

Unexcelled in light output, life expectancy and ruggedness, AMGLO 78R9D is superior for operation in the 2000 to 2500 volt range.

Having all the latest AMGLO improvements, including ruggedized construction, it provides short duration flashes for ultra-crisp definition and the ability to "freeze" higher speed action.

The highly accurate Xenon gas filling produces a brilliant white light of 6500° K. color temperature.



Base Diagram No. 2 used on Flashtube 78R9D



AMGLO TYPE 6LZ

Widely used by universities and cosmic ray research workers for cloud chamber photography, for chart recorders, for exposing photosensitive materials and for many stroboscopic applications. Tube may be provided clear or accurately half coated externally in vacuum with vaporized aluminum to act as a cylindrical reflector.

Vaporized coating can also be provided to cover entire working length of tube except for a narrow window of specified diameter.

Made to specifications in regard to active length, tubing diameter, type of glass (Nonex, Pyrex, Vycor or Quartz) and operating voltage.

Tube diameters ordinarily used range from 6 mm to 10 mm. Overall length of tube is 2½" to 3" longer than working area to permit space for electrodes.

Maximum rating, of larger tubes 1500 watt-seconds, assuming a cooling interval of 60 seconds between flashes. For more rapid flashing rate, watt-second energy input should be proportionately reduced.

These tubes may also be obtained with Xenon or other gas filling, or with Argon and Mercury for producing Ultra Violet light.

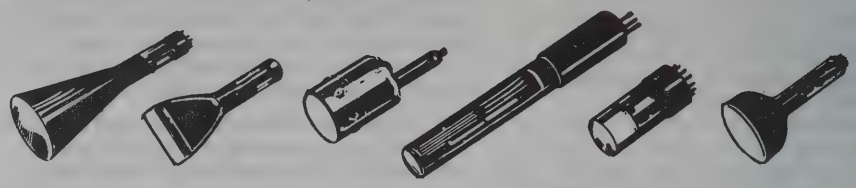
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AVG 2

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FOR REPLACEMENT IN ANY EQUIPMENT

Cathode ray tubes and multiplier phototubes that meet every replacement requirement. Replaces units found in every type instrument. For full technical information on any tube listed, ask for our short form catalog or individual specification bulletins.



ELECTROSTATIC DEFLECTION AND FOCUS CRT'S

DuMont JEDEC No.	Face O.D. In.	Lgth. In.	No. of Guns	Post Accel. v. DC	Accelerator v. DC	Focus Volts DC	Neg. Grid Cutoff v. DC	Deflection Factor v. DC/In. D1, D2	Deflection Factor v. DC/In. D3, D4	Line Width "A" Inches
3JP-12*	3	10	1	3,000	1,500	300-515	22.5-67.5	127-173	94-128	0.030 at 25 ft. l.
3WP-7	3	11 1/2	1	.....	1,500	247-465	45-75	62-76	43-52	0.026 at 7 ft. l.
3ABP-11	3	10 3/4	2	4,000	2,000	380-580	45-75	164-198	148-181	0.018 at 25μa DC
3ACP-12A	3	10	1	4,000	2,000	390-550	45-75	175-205	138-158	0.016 at 50μa DC
3ADP-11*	3	10	1	4,000	2,000	320-470	52-87	140-160	61-70	0.014 at 25μa DC
3AYP-11	1 33/64 x 3 1/16	8 7/8	1	.....	2,000	4-700	28-67	68-92	28-38	.....
4DP-7*	3 1/2 x 3 1/2	12 1/4	2	4,000	2,000	350-550	52-87	115-140	90-115	0.020 at 25μa DC
5AGP-1	5 1/4	16 3/4	1	4,000	2,000	400-685	52-88	68-92	59-81	0.022 at 25μa DC
5CP-11A*	5 1/4	16 3/4	1	3,000	1,500	280-515	22.5-67.5	58-80	50-60	0.030 at 15 ft. l.
5RP-4A*	5 1/4	16 3/4	1	10,000	2,000	362-695	30-90	102-154	97-145	0.030 at 50μa DC
5SP-7A*	5 1/4	18 1/4	2	3,000	1,500	272-521	34-56	62-76	53-65	0.027 at 10 ft. l.
5XP-7A	5 1/4	17 5/8	1	12,000	2,000	362-695	45-75	130-159	42-52	0.020 at 20 ft. l.
5XP-11B	5 1/4	17 5/8	1	12,000	2,000	362-695	45-75	130-159	42-52	0.020 at 40 ft. l.
5YP-7	5 1/4	17 5/8	1	4,000	2,000	362-695	30-90	72-108	24-36	0.032 at 25μa DC
5ABP-7	5 1/4	16 3/4	1	3,000	1,500	300-515	39-65	40-54	27-36	.....
5ADP-16	5 1/4	16 3/4	1	3,000	1,500	300-515	34-56	40-50	30.5-37.5	0.030 at 25μa DC
5AFP-11	5 1/4	18 1/4	2	4,000	2,000	400-684	45-75	54-66	43-53	0.030 at 25μa DC
5AMP-7	5 1/4	17 5/8	1	.....	2,500	0-300	34-56	40-50	20-25	0.032 at 15 ft. l.
5AQP-15	5 1/4	16 3/4	1	.....	2,500	0-300	34-56	40-50	31.5-38.5	0.030 at 15 ft. l.
5ARP-11	5 1/4	18 1/2	2	.....	2,500	0-300	34-56	45-55	31.5-38.5	0.030 at 15 ft. l.
5ATP-1	5 1/4	17 5/8	1	.....	6,000	0-700	34-56	94-116	34-42	0.035 at 65 ft. l.
5AWP-2*	5 1/4	16 3/4	1	10,300	2,300	500-730	33-55	113-128	113-128	0.016 at 25μa DC
5BDP-7*	5 1/4	18 1/4	2	14,000	2,000	400-630	45-75	130-160	111-133	0.020 at 50μa DC
5BFP-1	5 1/4	18 5/16	2	13,250	2,750	600-900	35-65	130-161	110-138	0.020 at 50μa DC
5BGP-11	5 1/4	17 1/2	1	10,000	1,670	180-590	50-80	70-86	28.4-34.8	.....
5BHP-7	5 1/4	18 1/4	1	10,000	1,670	180-590	50-80	70-85	15-18.3	.....
5CAP-11	5 1/4	17 1/2	1	6,000	1,850	225-670	60-85	48.3-61	22.6-28	.....
5CBP-7	5 1/4	18 1/4	1	4,000	1,900	190-565	62-85	48.3-58.5	15.5-19	.....
6DP-7†	5 57/64	20 1/16	3	12,000	4,000	950-1225	75-124	112-138	105-130	0.015 at 25μa DC
7YP-11	5 1/2 x 5 1/2	18 1/4	5	4,000	2,000	450-650	50-90	68-84	27-37	0.026 at 25μa DC
7ACP-2†	4 1/16 x 6 1/16	17 3/4	3	9,000	3,000	595-1020	67-112	86-130	84-126	0.036 at 50μa DC
7AEP-7	7	15 1/2	1	4,000	2,000	380-620	45-75	81-101	67-83	0.022 at 25μa DC
7AGP-19	7 1/2	18 7/8	1	.....	8,000	2000-2950	105-175	175-195	170-186	0.016 at 25μa DC
12ACP-19	12 7/16	24 7/8	2	.....	7,500	1750-2500	150-225	140-190	130-180	0.015 at 2μa DC

MAGNETIC DEFLECTION, ELECTROSTATIC FOCUS CRT'S

DuMont JEDEC No.	Face O.D., In.	Lgth., In.	Deflection Angle	Accelerator v. DC	Grid No. 2 v. DC	Focus Volts DC	Neg. Grid Cutoff v. DC	Line Width "A" Inches
3AKP-25	3	6 3/8	.....	7,000	300	−105 to +250	45 to 95	0.011 at 50μa DC
5AHP-25	4 15/16	11 1/8	53°	5,000	300	0 to 200	28 to 72	0.010 at 100μa DC
5AHP-25A	4 15/16	11 1/8	53°	5,000	300	0 to 200	28 to 72	0.010 at 100μa DC
5ZP-16	5	14 3/8	40°	27,000	200	6300 ±12%	70	.....
7ABP-7	7 3/16	13 1/4	50°	7,000	300	0 to 250	28 to 72	0.012 at 100μa DC
7ABP-19A	7 3/16	13 1/4	50°	7,000	300	0 to 250	28 to 72	0.012 at 100μa DC
10UP-14A	10 1/2	17 5/8	50°	10,000	300	−150 to +150	28 to 72	0.015 at 100μa DC
10WP-7*	10 1/2	16 15/16	50°	10,000	300	0 to 300	28 to 72	0.017 at 100μa DC
10WP-7A	10 1/2	16 15/16	50°	10,000	300	0 to 300	28 to 72	0.017 at 100μa DC
12ABP-19	12 7/16	18	55°	10,000	300	0 to 300	28 to 72	0.019 at 100μa DC
12ABP-19A	12 7/16	18	55°	10,000	300	0 to 300	28 to 72	0.019 at 100μa DC

MAGNETIC DEFLECTION AND FOCUS CRT'S

5FP-14	4 15/16	11 1/8	53°	4,000	250	75 to 102‡	25 to 70	0.020 at 200μa DC
5FP-14A*	4 15/16	11 1/8	53°	4,000	250	75 to 102‡	25 to 70	0.010 at 200μa DC
5BCP-7*	4.95	7	70°	8,000	.....	56 to 84‡	25 to 75	0.011 at 200μa DC
7BP-7A*	7	13 1/4	53°	7,000	250	99 to 135‡	25 to 70	0.020 at 200μa DC
7MP-7*	7 3/16	12 3/4	50°	7,000	250	105 to 140‡	27 to 63	0.012 at 200μa DC
7UP-7*	7	13 1/4	53°	7,000	250	99 to 135‡	25 to 70	0.020 at 200μa DC
7AJP-2, 7, 11	5 1/2 x 5 1/2	19	40°	14,000	550	77 Avg.‡	75 to 150	0.008 at 200μa DC
10KP-7*	10 1/2	17 5/8	50°	9,000	250	105 Avg.‡	27 to 63	0.020 at 200μa DC
10KP-25A	10 1/2	17 5/8	50°	9,000	250	105 Avg.‡	27 to 63	0.015 at 200μa DC
12DP-7A*	12	19 5/8	50°	7,000	250	99 to 135‡	25 to 70	0.040 at 200μa DC
12DP-19C	12	19 5/8	50°	4,000	250	75 to 102‡	25 to 70	0.020 at 200μa DC
12SP-7D*	12 7/16	18 3/4	54°	9,000	250	105 Avg.‡	27 to 63	0.015 at 200μa DC

*JAN type approval per MIL-E-1. †Single service approval. ‡Focus current, DC ma.

Other CRT's Available: 1EP, 2AP, 2BP, 3AP-A, 3BP-A, 3DP-A, 3KP, 3RP, 3RP-A, 3SP, 3XP-A, 4CP, 5AUP, 5BP-A, 5HP-A, 5JP-A, 5LP-A, 5MP-A, 5NP, 5UP, 5WP, 7CP, 7MP-A, 7QP, 7SP, 7TP, 7UP, 8CP, 8DP, 10QP, 10SP, 10UP, 10VP, 12DP-B, 12SP, 12SP-B, 16ADP, 17LP, 21FP. Write for complete information and prices.

MULTIPLIER PHOTOTUBES

DuMont Tube Type	Avg. Dia., In.	No. of Stages	Min. Window In.	Spectral Response	Avg. Cath. Lum. Sens. μa/L.	Avg. Sensitivity 0 cps A/L 105 v/s	Avg. Sensitivity 0 cps A/L 145 v/s	Avg. Cath. Rad. Sensi. μa/μW	Max. Anode Dk. Cur. μa*	Avg. Cur. Amplif. 105 v/s	Avg. Cur. Amplif. 145 v/s	Max. Volts Supply
6365	3/4	6	1/2	S11	50	.....	.15 at 150 v/s	0.056	10 at 150 v/s	.....	3 x 10³ at 150 v/s	1300
6362	3/4	10	1/2	S11	50	7.5	.....	0.045	0.05	1.5 x 10⁵	.....	1300
6935	3/4	10	1/2	S11	50	15	.....	0.045	0.1	3 x 10⁵	.....	1300
6467	1 1/4	10	1	S11	60	13	120	0.056	0.05	2.15 x 10⁵	2 x 10⁶	1800
6291	1 1/2	10	1 1/4	S11	60	13	120	0.056	0.05	2.15 x 10⁵	2 x 10⁶	1800
7065	1 1/2	10	1 1/4	S11	60	45	.....	0.056	0.05	7.5 x 10⁵	.....	1300
6292	2	10	1 1/2	S11	60	13	120	0.056	0.05	2.15 x 10⁵	2 x 10⁶	1800
7664	2	10	1 1/2	S13	60	13	120	0.056	0.05	2.15 x 10⁵	2 x 10⁶	1800
6911	2	10	1 1/2	1R	18	9	.....	0.0016	15	5 x 10⁵	.....	1600
7064	2	10	1 1/2	S11	60	45	.....	0.056	0.05	7.5 x 10⁵	.....	1300
6363	3	10	2 1/2	S11	60	13	120	0.056	0.05	2.15 x 10⁵	2 x 10⁶	1800
6364	5 1/4	10	4 3/16	S11	60	13	120	0.056	0.05	2.15 x 10⁵	2 x 10⁶	1800

*At 105 v/s, 25° C.

Electrons Industrial Control Tubes

Ready Reference Data for Reliable, Temperature Free Thyratron and Rectifier Tubes.

TYPE	OTHER DESIG NATIONS	DESCRIPTION	MAX. CONTINUOUS AVERAGE DC ANODE CURRENT (AMPS)	OSCILLOGRAPH PEAK ANODE CURRENT CONTINUOUSLY RECURRING (AMPS)	MAX. INSTANTANEOUS PEAK FORWARD VOLTAGE	MAX. INSTANTANEOUS PEAK INVERSE VOLTAGE
RECTIFIERS Xenon-Filled						
EL 1C	3B22	Full Wave. A4-10 Base. Single End.	1.0	4.0		725
EL 3B	6013	Half Wave. A4-10 Base. Anode Cap.	2.5	20		920
EL 3C	4B24	Full Wave. A4-81 Base. Single End.	2.5	10		725
EL 3C/L	6982	Full Wave. Lug Type Base. Single End.	2.5	10		725
EL 6B	5892	Half Wave. A4-81 Base. Anode Cap.	6.4	77		920
EL 6B/L	6983	Half Wave. Lug Type Base. Anode Cap.	6.4	77		920
EL 6C		Full Wave. A4-81 Base. Single End	6.4	25.6		725
EL 6F	6015	Half Wave. Panel Mounted. Flexible Leads	6.4	77		920
EL 16F		Half Wave. Panel Mounted. Flexible Leads	16	96		620
THYRATRONS Xenon-Filled						
EL C1B	3C31	A4-10 Base. Anode Cap.	1.0	8.0	525	700
EL C1B/A	5664	A4-10 Base. Anode Cap.	1.0	8.0	750	1250
EL C1K	6014	A4-10 Base. Single End	1.0	8.0	1000	1250
EL C1K/B	7319	A4-10 Base. Single End.	1.0	8.0	2000	2000
EL C3J	5632	A4-10 Base. Anode Cap.	2.5	30	900	1250
EL C3J/A	5684	A4-10 Base. Anode Cap.	2.5	30	1000	1250
EL C3J/L	7216	Lug Type Base. Anode Cap.	2.5	30	900	1250
EL C3J/AL	7556	Lug Type Base. Anode Cap.	2.5	30	1000	1250
EL C4H-1		A4-81 Base. Anode Cap.	4.0	50	1700	1700
EL C4H-2		Panel Mounted. Anode Cap.	4.0	50	1700	1700
EL C4H-3		Lug Type Base. Anode Cap.	4.0	50	1700	1700
EL C4H-4		Panel Mounted. Flexible Leads	4.0	50	1700	1700
EL C4H-5		Lug Type Base. Flexible Lead.	4.0	50	1700	1700
EL C6C	6987	#4310 Base. Anode Cap.	6.4	77	2000	4000
EL C6H-1		A4-81 Base. Anode Cap.	6.4	80	1700	1700
EL C6H-2		Panel Mounted. Anode Cap .	6.4	80	1700	1700
EL C6H-3		Lug Type Base. Anode Cap.	6.4	80	1700	1700
EL C6H-4		Panel Mounted. Flexible Leads.	6.4	80	1700	1700
EL C6H-5		Lug Type Base. Flexible Lead.	6.4	80	1700	1700
EL C6J	5C21	A4-81 Base. Anode Cap.	6.4	77	750	1250
EL C6J/A	5685	A4-81 Base. Anode Cap.	6.4	77	1000	1250
EL C6J/F	6860	Panel Mounted. Anode Cap.	6.4	77	1000	1250
EL C6J/L	6988	Lug Type Base. Anode Cap.	6.4	77	750	1250
EL C6J/K	6864	A4-81 Base. Anode Cap.	6.4	77	1000	1250
EL C6J/KF	6871	Panel Mounted. Flexible Leads.	6.4	77	1000	1250
EL C6J/KL	6989	Lug Type Base. Anode Cap.	6.4	77	1000	1250
EL C16J	5665	Panel Mounted. Flexible Leads.	16.0	160	1000	1250
EL C16H		Panel Mounted. Flexible Leads.	16.0	160	1700	1700

ELECTRONS COMPANY
A Unit of General Signal Corporation

Amperex Industrial, Communication,

TUBE TYPE
0A2
0B2
0E3
0G3
1A3/DA90
1AB6
1AC6
1AH5
1AJ4
1AN5
1B3GT
1CP31/DH3-91
1G3GT/1BG3GT
1L4/DF92
1M3/DM70
1N3/DM71
1R5/DK91
1S2A/DY87
1S5/DAF91
1T4/DF91
1U4
1U5/DAF92
1X2B
2D21
2ER5/XC95
2FY5/XC97
2GK5
3AMP1/DG7-32
3A4/DL93
3A5/DC90
3AU6
3BU8
3B28
3BKP2/DN7-78
3BKP7/DP7-78
3BKP11/DB7-78
3BKP31/DH7-78
3BYP2/DN7-11
3BYP7/DP7-11
3BYP11/DB7-11
3BYP31/DH7-11
3BZ6
3C4/DL96
3CB6
3EH7/XF183
3EJ7/XF184
3ER5
3GK5
3HA5/LC900
3NP4/MW6-2
3Q4/DL95
3S4/DL92
3V4/DL94
3-400Z
4-65A
4-125A
4-250A
4-400A
4B32
4BL8/XCF80
4C35
4CX250B
4CX250F
4CX250R
4EH7
4EJ7
4ES8
4ES8/XCC189
4GK5
4HA5/PC900
4X150A
4X150D
4X250B
4X250F
4X500A
5AQ4
5AR4/GZ34
5BHP2
5BHP7
5BHP31
5C22
5EJP31/D13-22GH
5GJ7/LCF801
5HG8/LCF86
5R4GY
5R4GYB
5U8
5U9/LCF201
5V9/LCH200
5X9/LCF200
5Z4G
6AB8
6AJ8/ECH81
6AK5/EF95
6AK5W
6AK8
6AL3/EY88
6AL5/EAA91
6AL5W
6AM5

TUBE TYPE
6AM6
6AQ5/EL90
6AQ5/EL90MP
6AQ5A
6AQ8/ECC85
6AT6/EBC90
6AU4GTA
6AU6/EF94
6AU6A
6AV6/EBC91
6AX4GT
6AX4GTB
6BA6/EF93
6BD7A
6BE6/EK90
6BE7
6BH6
6BJ6
6BL8/ECF80
6BM8/ECL82
6BQ5/EL84
6BQ5/EL84MP
6BR5/EM80
6BT4
6BX6/EF80
6BY7
6BZ6
6CA4/EZ81
6CA7/EL34
6CA7/EL34MP
6CB6A
6CD7/EM34
6CG7
6CJ5
6CJ6
6CK5
6CK6
6CM4/EC86
6CM5
6CN6
6CQ6
6CS6/EH90
6CT7
6CU7
6CV7
6CW5/EL86
6CW7
6DA5/EM81
6DA6/EF89
6DC8/EBF89
6DE6
6DJ8/ECC88
6DL4/EC88
6DL5
6DL5MP
6DR8
6DS8
6DT6
6DX8/ECL84
6DY5
6EH7/EF183
6EJ7/EF184
6ER5/EC95
6ES6
6ES8/ECC189
6ET6
6EU7
6FG6/EM84
6FY5/EC97
6GB5/EL500
6GJ7/ECF801
6GK5
6GK6
6GM8/ECC86
6GV8/ECL85
6GW8/ECL86
6HA5/EC900
6HG8/ECF86
6HU6/EM87
6J6/ECC91
6JX8/ECH84
6LN8/LCF80
6N3
6N8
6Q4/EC80
6R3/EY81
6R4/EC81
6S2
6S2A
6S4A
6SN7GTB
6U3
6U8
6U8A
6U9/ECF201
6V4/EZ80
6V9/ECH200
6W4GT
6X2
6X4/EZ90

TUBE TYPE
6X9/ECF200
6Y9/EFL200
7AN7
7AU7
7C24
7DJ8
7HG8/PCF86
8BQ5/XL84
8CW5/XL86
8GJ7/PCF801
8MB6
8MG6
8MY6
8U9/PCF201
8X9/PCF200
9A8/PCF80
9AB4
9AK8
9AQ8/PCC85
9GV8/XCL85
9U8/PCF82
9U8A
9V9/PCH200
10CW5/LL86
10DX8/LCL84
11Y9/LFL200
12AC5
12AJ7
12AT6/HBC90
12AT7/ECC81
12AU6/HF94
12AU7/ECC82
12AU7A
12AV6/HBC91
12AX4GTA
12AX4GTB
12AX7/ECC83
12AX7A
12BL6
12DS7
12DS7A
12S7
12SN7GTA
12X4/HZ90
13GB5/XL500
14K7
14L7
14GW8
15A6
15CW5/PL84
15DQ8/PCL84
16A5
16A8/PCL82
16AQ3/XY88
16GK6
16Y9/PFL200
17EW8/HCC85
17Z3
18GV8
19AU4
19AU4GTA
19BR5
19D8
19X3
19Y3
21A6
25E5
25L6GT
27GB5/PL500
30A5
31A3
35L6GT
38A3
45A5
45B5/UL84
45B5/UL84MP
50BM8/UCL82
50BM8/UCL82MP
51UVP
52AVP
53AVP
53CG
53UVP
54AVP
54UVP
55N3
56AVP
56CVP
56UVP
57AVP
58AVP
58CG
58CV
59UVP
60AVP
75C1
75N
75NB3
76NB3
80N

TUBE TYPE
85A1/OE3
85A2/OG3
85NB3
90AG
90AV
90C1
90CG
90CV
90NB3
90NB4
90NS
100C
100CB
100E1
100HB
100LB
100NB
120C
120N
120NB
150A1
150AVP
150B2/6354
150C1
150CVP
150N
150NB
150UVP
152AVP
152UVP
153AVP
153C
155N
160G
161G
171G
200C
200CB
200HB
200LB
200N
200NB
230NB
356
367
300PC
310PC
400PC
404A
417A
500N
501N
501R
502N
504R
505N
506N
507N
575A
632B
651
652
653B
655
673
805
807
810
811A
812A
813
828
829B
832A
833A
834
838
845
849
849A
857B
866AX
869B
869BL
872AX
880
891R
892
892R
912NB3
912NB4
967
1119
1164
1561
1749A
1805
1838
1849
1875

TUBE TYPE
1908
1910
1913
1941A
2050
3200
3533
3538
3545
3546PW
3554
4065
4152
4654
4699
5544
5545
5552A
5553B
5555
5557/FG17
5559
5560/FG95
5586
5604
5632/C3J
5651
5654/6AK5W
5658
5666
5667
5678
5684/C3JA
5685/C6JA
5718
5726/6AL5W
5727
5759
5762
5771
5822A
5823
5842
5847
5861/EC55
5866
5866A
5867
5867A
5868
5869
5870
5894
5894A
5895
5911
5913
5920
5923
5924
5924A
6007
6008
6075
6076
6077
6078
6079
6083
6084
6085
6146
6155
6156
6159
6201
6211
6218
6227
6252
6252 USN
6267/EF86
6268
6279
6339
6354
6360 COMM
6360 MIL
6360A
6370
6375
6463
6508
6617
6618
6686
6687
6688
6688A
6688 (JAN)

TUBE TYPE
6689
6693
6700/ET51
6756
6759
6779
6786
6800A
6801
6816
6883
6884
6907
6922
6922M
6923
6939
6960
6961
6977
6979
7025
7034
7034W
7035
7035W
7062
7090
7091
7092
7119
7136
7189
7189A
7189MP
7203
7203W
7204
7204W
7237
7292
7308
7316
7320/E84L
7377
7378
7459
7527
7534
7580
7580W/4CX250R
7609
7643
7645
7650
7693
7694
7699
7709
7710
7714
7722/E280F
7737
7737M
7753
7788
7800
7804
7805
7806
7807
7854
7899
7900
7983
7986/5866A
8008AX
8020AX
8032
8042
8078
8108/EC157
8116
8117
8118
8163
8177
8179
8228
8233
8254
8255
8268
8269
8270
8300
8348
8408
8416
8436/EC158

AMPEREX ELECTRONIC CORPORATION / **Amperex®**

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and Receiving Tubes. . . .



TUBE TYPE

8453/Z550M
8457
8458
8463
8482
8483
8505
8509
8560
8577
8579
8580
18045
18503
18504
18505
18506
18508
18509
18510
18515
18516
18517
18518
18522
18526
18529
18536
18550
18552
55850AM
55850S

Alpha-Numeral Listing

AB2
ABC1
ABL1
AF3
AF7
AK2
AL1
AL4
AX50
AX105/FG105
AX260
AZ1
AZ4
AZ11
AZ12
AZ31
AZ41
AZ50
C3J
C3JA
C3M
C6JA
C8
C10
C12
CBL1
CF3
CF7
CF50
CK1
CL4
CY1
CY2
D10-11BE
D10-11GH
D10-11GM
D10-11GP
D10-12BE
D10-12GH
D10-12GM
D10-12GP
D13-15BE
D13-15GH
D13-15GM
D13-15GP
D13-16BE
D13-16GH
D13-16GP
D13-17BE
D13-17GH
D13-17GP
D13-19BE
D13-19GH
D13-19GM

TUBE TYPE

D13-19GP
D13-20BE
D13-21BE
D13-21GH
D13-21GM
D13-21GP
D13-22GH/5EJP31
D13-23GH
D13-24BE
D13-26GH
DA90
DAC21
DAF40
DAF41
DAF91
DAF92
DAF96
DB7-11/3BYP11
DB7-78/3BKP11
DC70/6375
DC90
DCC90/3A5
DCG1/250
DCG4/1000G
DCG5/5000EG
DF21
DF22
DF91
DF92/1L4
DF96
DF97
DF904
DG7-5
DG7-6
DG7-31
DG7-32/3AMP1
DH3-91/1CP31
DH7-11/3BYP31
DH7-78/3BKP31
DH13-10
DK21
DK40
DK91
DK92
DK96
DL21
DL41
DL92
DL93/3A4
DL94
DL95
DL96
DLL21
DM70
DM70/1M3
DM71
DM71/1N3
DN7-11/3BYP2
DN7-78/3BKP2
DP7-11/3BYP7
DP7-78/3BKP7
DY86
DY87
DY87/1S2A
E1T/6370
E10-10BE
E10-10GH
E10-10GM
E10-10GP
E10-12BE
E10-12GH
E10-12GM
E10-12GP
E55L/8233
E80CC/6085
E80CF/7643
E80F/6084
E80L/6227
E80T/6218
E81CC/6201
E81L/6686
E83F/6689
E84L/7320
E88C/8255
E88CC/6922
E90CC/5920
E90F/7693
E91H/6687
E91AA/5726
E91N/5727
E92CC
E95F/5654
E99F/7694
E130L/7534
E180CC/7062
E180F/6688
E182CC/7119
E182F/5847
E186F/7737
E280F/7722

TUBE TYPE

EA50
EA52/6923
EA53
EA76
EAA91
EAA91/6AL5
EABC80
EAC91
EAF42
EB34
EB41
EB91
EBC3
EBC33
EBC41
EBC81
EBC90/6AT6
EBC91/6AV6
EBF2
EBF32
EBF35
EBF80
EBF83
EBF89
EBF89/6DC8
EBL1
EBL21
EC50
EC55/5861
EC80
EC80/6Q4
EC81
EC81/6R4
EC86
EC86/6CM4
EC88
EC88/6DL4
EC90
EC91
EC92
EC95
EC95/6ER5
EC97
EC97/6FY5
EC157/8108
EC158/8436
EC900
EC900/6HA5
EC1000/8254
EC2000
ECC32
ECC33
ECC34
ECC35
ECC40
ECC81
ECC81/12AT7
ECC82
ECC82/12AU7
ECC83
ECC83/12AX7
ECC84
ECC85
ECC85/6AQ8
ECC86
ECC86/6GM8
ECC88
ECC88/6DJ8
ECC91
ECC91/6J6
ECC189
ECC189/6ES8
ECC2000
ECF1
ECF80
ECF80/6BL8
ECF82
ECF86
ECF86/6HGH
ECF200
ECF201
ECF801
ECF801/6GJ7
ECH3
ECH4
ECH21
ECH35
ECH41
ECH42
ECH81
ECH81/6AJ8
ECH83
ECH84
ECH84/6JX8
ECH200
ECL11
ECL80
ECL82
ECL82/6BM8
ECL83

TUBE TYPE

ECL84
ECL84/6DX8
ECL85
ECL85/6GV8
ECL86
ECL86/6GW8
EEP1
EF6(N)
EF9
EF22
EF36
EF37A
EF39
EF40
EF41
EF42
EF43
EF50
EF55
EF80
EF80/6BX6
EF83
EF85
EF86
EF86/6267
EF89
EF89/6DA6
EF91
EF92
EF93
EF93/6BA6
EF94
EF94/6AU6
EF95
EF97
EF98
EF183
EF183/6EH7
EF184
EF184/6EJ7
EFF51
EFL200
EFM1
EFM11
EFP60
EH90
EK2
EK90
EK90/6BE6
EL2
EL3(N)
EL5
EL6
EL11
EL12
EL33
EL34
EL34MP
EL34/6CA7
EL34/6CA7MP
EL36
EL37
EL37MP
EL38
EL41
EL42
EL50
EL51
EL60
EL81
EL82
EL83
EL84
EL84MP
EL84/6BQ5
EL84/6BQ5MP
EL85
EL86
EL86/6CW5
EL90
EL90MP
EL91
EL95
EL95MP
EL500
EL500/6GB5
EL821
EL822
EM1
EM4
EM34
EM34/6CD7
EM80
EM80/6BR5
EM81
EM81/6DA5
EM84
EM84/6FG6
EM87
EM87/6HU6

TUBE TYPE

EQ80
ET51/6700
EY51
EY80
EY81
EY81/6R3
EY82
EY86
EY87
EY88
EY88/6AL3
EZ22
EZ40
EZ41
EZ80
EZ80/6V4
EZ81
EZ81/6CA4
EZ90
EZ90/6X4
FG17
FG95
FG105
GZ30
GZ32
GZ33
GZ34
GZ34/5AR4
HBC90
HBC91
HCC85
HCC85/17EW8
HCH81
HF93
HF94
HF200
HF300
HK90
HL92
HL94
HY90
HZ90
K81A
LC900
LCF80
LCF86
LCF200
LCF201
LCF801
LCH200
LCL84
LFL200
LL86
PABC80
PB2/500
PC88
PC900
PCC84
PCC85
PCC85/9AQ8
PCC88
PCC189
PCF80
PCF80/9A8
PCF82
PCF86
PCF86/7HG8
PCF200
PCF201
PCF801
PCH200
PCL82
PCL84
PCL85
PCL86
PE06/40E
PE06/40N
PE06/40P
PF86
PFL200
PL21
PL36
PL81
PL82
PL83
PL84
PL84/15CW5
PL150
PL500
PL500/27GB5
PL1607
PL6574
PL6755
QE04/10
SD504
PY80
PY81
PY82
PY88
TBL2/400

TUBE TYPE

TBL2/500
U30
UABC80
UAF42
UB41
UBC41
UBC81
UBF80
UBF89
UBL1
UBL21
UC92
UCC85
UCH4
UCH21
UCH41
UCH42
UCH81
UCL11
UCL82
UCL82MP
UCL82/50BM8
UCL83
UF21
UF41
UF42
UF43
UF80
UF85
UF86
UF89
UL41
UL44
UL84
UL84MP
UL84/45B5
UM4
UM80
UY1(N)
UY11
UY41
UY42
UY82
UY85
UY89
VC25/20
VC25/32
VC50/20
VC50/32
VC100/20
VC100/32
VC250/32
XC95
XC95/2ER5
XC97
XC97/2FY5
XCC189
XCC189/4ES8
XCF80
XCL85
XF183
XF183/3EH7
XF184
XF184/3EJ7
XL84
XL84/8BQ5
XL86
XL500
XP1000
XP1002
XP1004
XP1010
XP1011
XP1020
XP1030
XP1031
XP1032
XP1040
XP1110
XP1111
XP1112
XP1113
XY88
XY88/16AQ3
Z70U/7710
Z70W/7709
Z711U/7711
Z303C
Z502S
Z504S
Z505S
Z550M/8453
Z803U/6779
Z805U/7714
Z900T/5823
ZB3200
ZM1030
ZM1032
ZZ1000/8228

AMPEREX ELECTRONIC CORPORATION / **Amperex®**

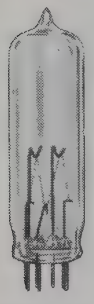
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AUTOMATIC AMPERITE REGULATOR

BALLAST TUBE FOR AUTOMATIC REGULATION OF CURRENT AND VOLTAGE



STANDARD



MINIATURE

AUTOMATIC REGULATION

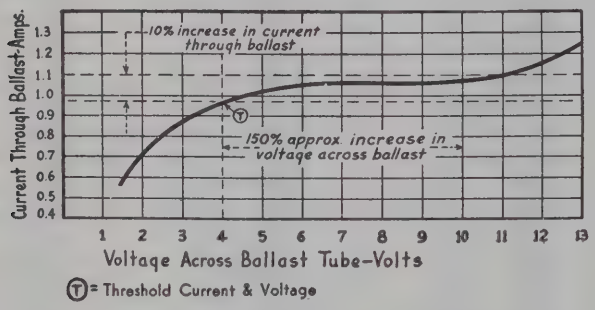
WHAT IT IS

The *AMPERITE Ballast-Regulating Tube* is an automatic "*rheostat*" designed to keep the current in a circuit at a definite value, for example, 0.5 amp.

Should the supply voltage increase, the *Amperite* will automatically increase in resistance enough to take up the increase in supply voltage — keeping the voltage on the load constant. It consists of an iron wire *hermetically sealed* in a bulb containing *hydrogen* or *helium* — the two gases with the *highest heat conductivity*. Its regulating action is based on the high temperature co-efficient of resistance of the iron wire and the rapid cooling of *hydrogen* or *helium* gas.

Being a constant current device, the *AMPERITE Ballast-Regulating Tube* can be used only to regulate a constant load—fixed wattage. Thermostatic relays can sometimes be included in these regulators to reduce initial surge.

We strongly recommend that you send us your specifications on special problems, and let us recommend the BALLAST TUBE you need.



T = Threshold Current & Voltage

Characteristic curve of a typical Amperite. Approximate curve of any other Amperite can be obtained by multiplying or dividing the current or voltage scale by any number.

Standard Types of Amperite Ballast Tubes ..... Net $1.80
Amperite NE70V Neon Lamp ..... Net $1.80

D6-1E	1H20	*3T4	4A10	6-3	7-4	9-4A	12-4
*D6T4	1H22	*3T4A	4-12	6-4	**7TF4	9-7	12-7
**D6TK7	**2TK7	**3TF4A	4H3	6-4A	7A10	9-8	12A10
**D6TF10	2A10	**3TF4	4H4	6-4B	7-11	9A10	12-11
**D6TF30	2A12	**3TFV4	4H4C	*6T4	**7HTF2	10T1	13-4
D7-20	2A20	3V4	**4HTF4	*6T4F	**7HTF3	**10TF2	15-2
D7H4	*2HT2	3-7	**4HTF7	**6TF4	**7HTF4	10-3	15-4
*D7HT4	2H4	**3TF7	4H10	6-7	7H4	10-4A	16-4
*D7HT11	*2HT4	3A10	4H11	**6TF7	7H4B	10-4B	17-3
1A10	**2HTF4	3-11	5E1	6-8B	7H7	10-4C	20-3
**1TF10	2H10	3H11	**5TF2	6A10	7H11	10-4D	20-4
1-15	3-2	*3T11	5-4	6-11	**8TF2	10-4E	22-4
*1HT2	**3TF2	3TF11	**5TF4	6-12	8-3B	10A10	24-3
*1HT4	**3TK2	**3TF12	5A10	6-13	8-4	10A12	34-2
1H10	3-4	3-14	5-11	6A15	8A10	10-25	35-4
**1HTF10	3H-1-7	3-16	5-16	6-36	**9TF2	11-3	40-6E
*1HT11	3H4	3A20	5H3	6H4	9-3	11-4	41-7E
**1HTF11	**3HTF4	3H-25	5H4	**6HTF4	9-4	11A10	55-1
		3-38A	5H10	6H6		11-11	55-4
		3-50A	5H11				

*T denotes T5½ bulb-7 pin miniature, e.g., 3T4.
**TF denotes T6½ bulb-9 pin miniature, e.g., 3TF4.
Base Wiring: Octal, 7 and 9 pin miniature—prongs 2-7.

AMPERITE NEON LAMP
TYPE NE70V Net $1.80

GENERAL ADVANTAGES:

• Light, compact • No moving parts • Rugged; will withstand vibration of 10G. minimum • Hermetically sealed; not affected by altitude or humidity changes • Can be changed as easily as a radio tube • Operates equally well on A.C. or D.C. • Inexpensive

CAPACITIES AVAILABLE

Current values of 60 ma. to 5 amps; threshold voltage 0.4 to 40 V. Maximum dissipation 50w per tube (ST19 bulb). Any number of AMPERITES with the same voltage range can be operated in parallel. AMPERITES should not be used in series.

AGEING

AMPERITE Ballast Tubes may change approximately up to 3% in current if aged for 4 to 8 hours, at maximum voltage. They will change very little thereafter.

LIFE EXPECTANCY

Average life if operated as recommended	**2000 Hours**
If operated continuously at maximum voltage	**1000 Hours**
If operated continuously at 80% maximum voltage	**5000 Hours**
If filament is operated below glow point	**5000 Hours up**

In operation, the *Amperite* filament starts to glow at one point; as the voltage is increased, the glow spreads over the entire filament. Like incandescent lamps, turning *Amperite* on and off reduces its life, especially if operating near its maximum voltage.

TIME LAG CHARACTERISTICS

Time lag encountered in an *Amperite Ballast Tube* depends upon the wattage consumed by the ballast and the size of the bulb. Where the wattage is small for the size of the bulb, the action can be made practically instantaneous — less than 1 second. In such cases the bulb will remain at practically ambient temperature. When the wattage is high enough to heat the bulb to a temperature uncomfortable to the hand (160°F) the lag might be as much as several minutes for final readings—but normally reaches within 90% of final readings within a few seconds.

AMPERITE NUMBERING SYSTEM

In general, the AMPERITE number approximately denotes the current—voltage threshold value. For example:

Amperite Number	3-4	3H4	10-7	12-11	12H11
Threshold Current	0.3	0.35	1.0	1.2	1.25
Threshold Voltage	4.0	4.0	7.0	11.0	11.0

We strongly recommend that you send us your specifications on special problems, and let us recommend the BALLAST TUBE you need.

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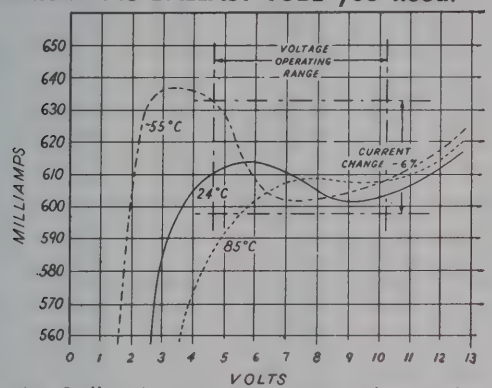
AUTOMATIC AMPERITE REGULATOR

BALLAST TUBE FOR AUTOMATIC REGULATION OF CURRENT AND VOLTAGE

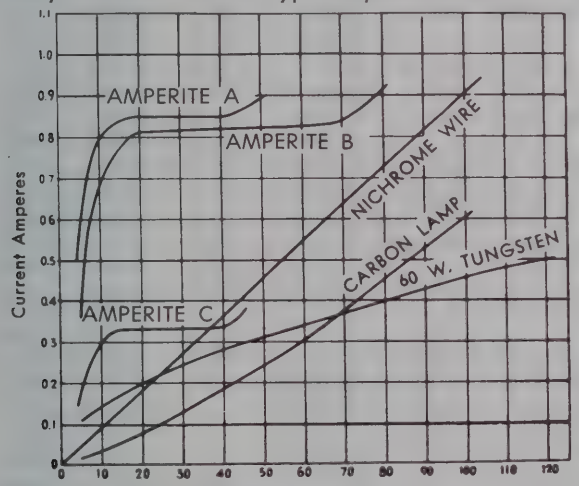
AMBIENT EFFECTS

Ambient temperature variation of —50° to +70° C will change the current value of an *Amperite* approximately 2% on regulating portion of curve as shown directly below. Being hermetically sealed the *Amperite* is not affected by altitude or humidity changes.

We strongly recommend that you send us your specifications on special problems, and let us recommend the BALLAST TUBE you need.



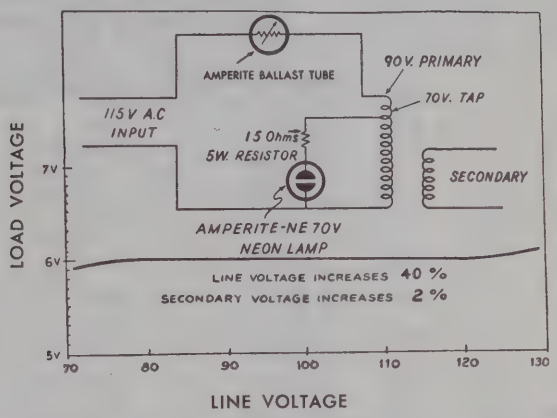
Amperite Ballast-Type 6-4 current voltage characteristic under ambient conditions of —55°, 24°, and 85° C. The percentage change with ambient is approximately the same with all type *Amperite* ballasts.



This diagram illustrates far superior regulating characteristics of the *Amperite* Ballast-Regulating Tube. ***STANDARD SIZES available for various wattage consumption . . . For good regulation, a bulb should not be required to dissipate more than 50% of maximum wattage.***

BATTERY CHARGING AND DISCHARGING

Amperite Ballast Tubes are very successfully used for keeping the current constant in charging and discharging batteries. Any number of *Amperites* of the same voltage range can be placed in parallel to obtain proper current. The current can be kept to ± 1%. Advise voltage variation and currents desired.



A light, compact, and inexpensive method of obtaining close regulation is to use an *Amperite Ballast Tube* with an *Amperite* Neon Lamp — type NE70V. Base octal-base wiring-prongs 2-5. One NE70V is used for all loads up to 100W.

POWER SUPPLIES

We strongly recommend, for any particular application, to fill in and return one of our special problem sheets (ASP 343) and permit us to recommend the most suitable AMPERITE.

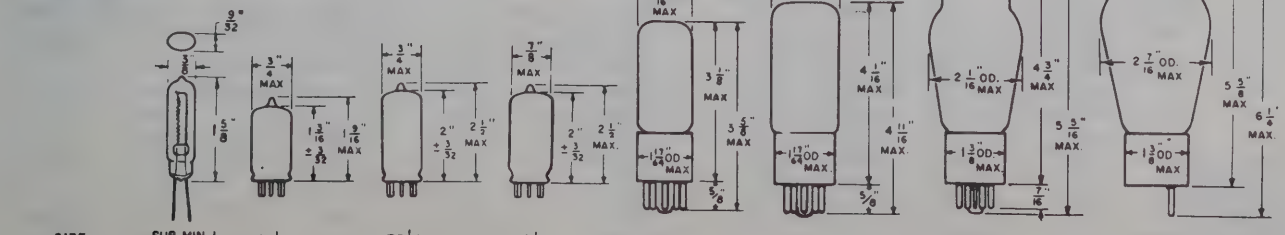
POWER SUPPLY	Dry Cells	6 Volts	12 Volts	26 Volts	115 Volts
Supply Variation	2.2-3.0V	5.5-7.5V	11.4-13.8V	22.0-30.0V	105-125V
Desired on Load	1.8-2.0V	3.9-4.1V	6.1- 6.4V	12.4-12.8V	90- 95V
Required on AMPERITE	0.4-1.0V	1.6-3.4V	5.3- 7.4V	9.6-19.2V	15- 30V
Current Variation	.29-.32a	.29-.32a	.29- .32a	.29- .32a	.29-.32a

The above chart shows the maximum load voltage for the given supply to obtain ± 2% current regulation on load. Better regulation is obtainable by increasing the voltage across the **AMPERITE.** Up to a point, the higher the percentage of the supply voltage taken up by the **AMPERITE,** the better the regulation.

Radio tube filament loads — have low cold resistance which causes a high initial surge. For such loads we recommend a bleeder of 20 to 50% prox. of load and the corresponding **AMPERITE.** e.g.

FILAMENT LOAD	USE AMPERITE	TOTAL CURRENT
0.3a	4HTF4	0.45a
0.6a	8-4	0.8a
0 7a	9H4	0.95a

On Radio tube filament loads the bleeder will also improve the regulation.



EIMAC POWER GRID TUBES and Accessories

(24 hour factory delivery on most distributor orders)

At Eimac you'll find the most complete line of power grid tubes available today: triodes, tetrodes, pulse modulators, diodes, zero-bias tubes, ceramic tubes, glass tubes, air cooled, water cooled and vapor cooled tubes. And there are more to come! Continuing Eimac projects are ever increasing the scope of power grid tube capabilities.

Tube Type	User Price	Socket Type	Socket Price	Chimney Type	Chimney Price
2-01C	$ 18.00	None	$	None	$ ....
2-25A	24.00	E F Johnson No. 122-224	....	None	....
2-50A	27.00	E F Johnson No. 122-224	....	None	....
2-150D	44.50	E F Johnson No. 123-211	....	None	....
2-240A	50.00	E F Johnson No. 123-211	....	None	....
2-450A	138.00	E F Johnson No. 124-214	....	None	....
2-2000A	250.00	E F Johnson No. 124-214	....	None	....
2C39A	20.75	Jettron No. 76-020	....	None	....
2C39WA	29.00	Jettron No. 76-020	....	None	....
2X1000A	144.00	E F Johnson No. 122-224	....	None	....
2X3000F	168.00	None	....	None	....
322	26.00	Jettron No. 76-020	....	None	....
3C24	16.00	E F Johnson No. 122-224	....	None	....
3CPN10A5/7815	30.75	Jettron No. 76-020	....	None	....
3CPX100A5/7815R	30.75	Jettron No. 76-020	....	None	....
3CV30,000A3	710.00	SK-1300	78.50	None	....
3CW20,000A1	560.00	SK-1300	78.50	None	....
3CW20,000A3	455.00	SK-1300	78.50	None	....
3CW20,000A7	710.00	SK-1300	78.50	None	....
3CW25,000A3	480.00	SK-1300	78.50	None	....
3CX100A5/7289	26.50	Jettron No. 76-020	....	None	....
3CX100F5/8250	34.00	Jettron No. 76-020	....	None	....
3CX1000A7/8283	250.00	SK-860	38.00	SK-816	7.00
		SK-870	40.00	SK-816	7.00
3CX10,000A1/8158	490.00	SK-1300	78.50	SK-1306	6.50
3CX10,000A3/8159	490.00	SK-1300	78.50	SK-1306	6.50
3CX10,000A7/8160	650.00	SK-1300	78.50	SK-1306	6.50
3CX15,000A3	510.00	SK-1300	78.50	SK-1306	6.50
3W5000A1/8240	280.00	None	....	None	....
3W5000A3/8242	245.00	None	....	None	....
3W5000F1/8241	260.00	None	....	None	....
3W5000F3/8243	250.00	None	....	None	....
3CX2500A3	200.00	None	....	None	....
3CX2500F3	205.00	None	....	None	....
3X3000A1/8238	210.00	None	....	None	....
3X3000A7	255.00	None	....	None	....
3X3000F1/8239	220.00	None	....	None	....
3X3000F7/8162	260.00	None	....	None	....
3-400Z/8163	34.00	SK-410	6.50	SK-416	6.50
3-1000Z/8164	78.00	SK-510	6.50	SK-516	12.00
4-65A/8165	27.00	E F Johnson No. 122-101	....	None	....
4-125A	36.00	SK-400	17.50	SK-406	6.50
		SK-410	6.50	SK-406	6.50
4-250A	46.50	SK-400	17.50	SK-406	6.50
		SK-410	6.50	SK-406	6.50
4-400A/8438	48.00	SK-400	17.50	SK-406	6.50
		SK-410	6.50	SK-406	6.50
4-1000A/8166	131.50	SK-500	24.30	SK-506	12.00
		SK-510	6.50	SK-506	12.00
4CN15A	58.50	SK-700	36.40	SK-606	0.75
		SK-740	10.70	None	....
4CPX250K	68.50	None	....	None	....
4CV8000A	$470.00	SK-1490	$88.50	None	$....
4CV20,000A	590.00	SK-310	114.00	None	....
4CV35,000A	825.00	SK-310	114.00	None	....
4CV100,000C/8351	2,350.00	SK-1510	250.00	None	....
4CW2000A/8244	220.00	SK-800B	54.00	None	....
		SK-810B	56.00	None	....
		SK-890B	65.00	None	....
4CW10,000A	610.00	SK-300A	103.00	SK-306	6.50
				SK-316	9.65
4CW50,000C/8350	2,100.00	SK-1500	220.00	None	....
4CX125C	61.50	SK-700	36.40	SK-606	0.75
		SK-740	10.70	None	....
4CX125F	123.50	SK-710	36.40	None	....
		SK-740	10.70	None	....
4CX250B/7203	35.60	*See SK-600 Series Socket listing			
4CX250F/7204	38.00	*See SK-600 Series Socket listing			
4CX250K/8245	64.00	None	....	None	....
4CX250M/8246	119.00	None	....	None	....
4CX250R/7580W	44.50	*See SK-600 Series Socket listing			
4CX300A/8167	54.00	SK-710	36.40	SK-606	0.75
		SK-760	10.70	None	....
		SK-770	10.70	None	....
4CX300Y	105.00	SK-711A	25.70	SK-606	0.75
		SK-760	10.70	None	....
		SK-770	10.70	None	....
4CX350A/8321	48.50	*See SK-600 Series Socket listing			
4CX350F/8322	51.50	*See SK-600 Series Socket listing			
4CX600A	319.00	None	....	None	....
4CX1000A/8168	181.00	SK-800B	54.00	SK-806	8.50
		SK-801B	56.00	SK-806	8.50
		SK-890B	65.00	SK-806	8.50
4CX1000K/8352	205.00	SK-820	178.00	SK-806	8.50
		SK-830	178.00	SK-806	8.50
4CX3000A/8169	420.00	SK-1400A	107.00	SK-1406	6.50
		SK-1470A	107.00	SK-1406	6.50
4CX5000A/8170	495.00	SK-300	103.00	SK-306	6.50
				SK-316	9.65
4CX5000R/8170W	705.00	SK-300A	103.00	SK-306	6.50
				SK-316	9.65
4CX10,000D/8171	550.00	SK-300A	103.00	SK-306	6.50
				SK-316	9.65
4CX15,000A/8281	695.00	SK-300A	103.00	SK-306	6.50
				SK-316	9.65
				SK-1306	6.50
4CX35,000C/8349	1,765.00	SK-1500	220.00	None	....
4E27A/5-125B	45.00	E F Johnson No. 122-237	....	None	....
4PR60B/8252	107.00	E F Johnson No. 122-234	....	None	....
4PR65A/8187	43.00	E F Johnson No. 122-101	....	None	....
4PR125A/8247	57.00	SK-400	17.50	SK-406	6.50
		SK-410	6.50	SK-406	6.50
4PR250C/8248	188.00	SK-400	17.50	SK-406	6.50
		SK-410	6.50	SK-406	6.50
4PR400A/8188	64.00	SK-400	17.50	SK-406	6.50
		SK-410	6.50	SK-406	6.50
4PR1000A/8189	156.00	SK-500	24.30	SK-506	12.00
		SK-510	6.50	SK-506	12.00
4PR1000B	162.50	SK-500	24.30	SK-506	12.00
		SK-510	6.50	SK-506	12.00
4W300B/8249	57.00	*See SK-600 Series Socket listing			
4W20,000A/8173	2,030.00	None	....	None	....
4X150A/7034	23.15	*See SK-600 Series Socket listing			
4X150D/7035	35.70	*See SK-600 Series Socket listing			
4X150G/8172	58.00	None	....	None	....
4X150R/8296	45.50	*See SK-600 Series Socket listing			
4X150S/8297	48.50	*See SK-600 Series Socket listing			
4X250B	35.60	*See SK-600 Series Socket listing			
4X250F	35.60	*See SK-600 Series Socket listing			
4X500A	127.50	SK-900	68.50	SK-906	15.00
5-500A	58.50	SK-400	17.50	None	....
		SK-410	6.50	None	....
5CX1500A	218.00	SK-840	61.25	SK-806	8.50

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Tube Type	User Price	Socket Type	Socket Price	Chimney Type	Chimney Price
5CX3000A	$437.00	Y-386	$114.00	None	$....
6C21	93.00	E F Johnson No. 123-211	....	None	....
25T	28.50	E F Johnson No. 122-224	....	None	....
35T	33.00	E F Johnson No. 122-224	....	None	....
35TG	36.00	E F Johnson No. 122-224	....	None	....
75TH	43.00	E F Johnson No. 122-224	....	None	....
75TL	43.00	E F Johnson No. 122-224	....	None	....
100IG	107.00	None	....	None	....
100TH	23.50	E F Johnson No. 122-224	....	None	....
100TL	23.50	E F Johnson No. 122-224	....	None	....
152TH	93.00	E F Johnson No. 124-213	....	None	....
152TL	125.00	E F Johnson No. 124-213	....	None	....
250R	36.00	E F Johnson No. 123-211	....	None	....
250TH	38.50	E F Johnson No. 123-211	....	None	....
250TL	38.50	E F Johnson No. 123-211	....	None	....
253	37.00	E F Johnson No. 123-211	....	None	....
304TH	80.00	E F Johnson No. 124-213	....	None	....
304TL	80.00	E F Johnson No. 124-213	....	None	....
450TH	85.00	E F Johnson No. 123-211	....	None	....
450TL	85.00	E F Johnson No. 123-211	....	None	....
575A	20.15	E F Johnson No. 123-211	....	None	....
592/3-200A3	46.00	None	....	None	....
673	20.15	E F Johnson No. 123-206	....	None	....
750TL	169.00	E F Johnson No. 124-214	....	None	....
869B	138.00	None	....	None	....
869B/L	138.00	None	....	None	....
1000T	169.00	E F Johnson No. 123-211	....	None	....
1500T	320.00	E F Johnson No. 124-214	....	None	....
2000T	425.00	E F Johnson No. 124-214	....	None	....
5867A	30.60	SK-410	6.50	SK-416	6.50
6696A	1,105.00	None	....	None	....
6697A	1,330.00	None	....	None	....
7034/4X150A	23.15	*See SK-600 Series Socket listing			
7035/4X150D	35.70	*See SK-600 Series Socket listing			
7203/4CX250B	35.60	*See SK-600 Series Socket listing			
7204/4CX250F	38.00	*See SK-600 Series Socket listing			
7211	88.50	Jettron No. 76-020	....	None	....
7289/3CX100A5	26.50	Jettron No. 76-020	....	None	....
7480	1,590.00	None	....	None	....
7580W/4CX250R	44.50	*See SK-600 Series Socket listing			
7698	88.50	Jettron No. 76-020	....	None	....
7815/3CPN10A5	30.75	Jettron No. 76-020	....	None	....
7815R/3CPX100A5	30.75	Jettron No. 76-020	....	None	....
7843	60.00	None	....	None	....
8020(100R)	16.00	E F Johnson No. 122-224	....	None	....
8158/3CX10,000A1	490.00	SK-1300	78.50	SK-1306	6.50
8159/3CX10,000A3	490.00	SK-1300	78.50	SK-1306	6.50
8160/3CX10,000A7	650.00	SK-1300	78.50	SK-1306	6.50
8162/3X3000F7	260.00	None	....	None	....
8163/3-400Z	34.00	SK-410	6.50	SK-416	6.50
8164/3-1000Z	78.00	SK-510	6.50	SK-516	12.00
8165/4-65A	27.00	E F Johnson No. 122-101	....	None	....
8166/4-1000A	131.50	SK-500	24.30	SK-506	12.00
		SK-510	6.50	SK-506	12.00
8167/4CX300A	54.00	SK-710	36.40	SK-606	0.75
		SK-760	10.70	None	....
		SK-770	10.70	None	....
8168/4CX1000A	181.00	SK-800B	54.00	SK-806	8.50
		SK-810B	56.00	SK-806	8.50
		SK-890B	65.00	SK-806	8.50
8169/4CX3000A	$420.00	SK-1400A	$107.00	SK-1406	$6.50
		SK-1470A	107.00	SK-1406	6.50
8170/4CX5000A	495.00	SK-300	103.00	SK-306	6.50
				SK-316	9.65
8170W/4CX5000R	705.00	SK-300	103.00	SK-306	6.50
				SK-316	9.65
8171/4CX10,000D	550.00	SK-300	103.00	SK-306	6.50
				SK-316	9.65
8172/4X150G	58.00	None	....	None	....
8173/4W20,000A	2,030.00	None	....	None	....
8187/4PR65A	43.00	E F Johnson No. 122-101	....	None	....
8188/4PR400A	64.00	SK-400	17.50	SK-406	6.50
		SK-410	6.50	SK-406	6.50
8189/4PR1000A	156.00	SK-500	24.30	SK-506	12.00
		SK-510	6.50	SK-506	12.00
8238/3X3000A1	210.00	None	....	None	....
8239/3X3000F1	220.00	None	....	None	....
8240/3W5000A1	280.00	None	....	None	....
8241/3W5000F1	260.00	None	....	None	....
8242/3W5000A3	245.00	None	....	None	....
8243/3W5000F3	250.00	None	....	None	....
8244/4CW2000A	220.00	SK-800B	54.00	None	....
		SK-810B	56.00	None	....
		SK-890B	65.00	None	....
8245/4CX250K	64.00	None	....	None	....
8246/4CX250M	119.00	None	....	None	....
8247/4PR125A	57.00	SK-400	17.50	SK-406	6.50
		SK-410	6.50	SK-406	6.50
8248/4PR250C	188.00	SK-400	17.50	SK-406	6.50
		SK-410	6.50	SK-406	6.50
8249/4W300B	57.00	*See SK-600 Series Socket listing			
8250/3CX100F5	34.00	Jettron No. 76-020	....	None	....
8252/4PR60B	107.00	E F Johnson No. 122-234	....	None	....
8281/4CX15,000A	695.00	SK-300A	103.00	SK-306	6.50
				SK-316	9.65
				SK-1306	6.50
8283/3CX1000A7	250.00	SK-860	38.00	SK-816	7.00
		SK-870	40.00	SK-816	7.00
8296/4X150R	45.50	*See SK-600 Series Socket listing			
8297/4X150S	48.50	*See SK-600 Series Socket listing			
8321/4CX350A	48.50	*See SK-600 Series Socket listing			
8322/4CX350F	51.50	*See SK-600 Series Socket listing			
8349/4CX35,000C	1,765.00	SK-1500	220.00	None	....
8350/4CW50,000C	2,100.00	SK-1500	220.00	None	....
8351/4CV100,000C	2,350.00	SK-1510	250.00	None	....
8352/4CX1000K	205.00	SK-820	140.00	SK-806	8.50
		SK-830	178.00	SK-806	8.50
8438/4-400A	48.00	SK-400	17.50	SK-406	6.50
		SK-410	6.50	SK-406	6.50
8561/4CX300Y	105.00	SK-711A	25.70	SK-606	0.75
		SK-760	10.70	None	....
		SK-770	10.70	None	....
KY21A	26.75	E F Johnson No. 122-225	....	None	....
RX21A	25.75	E F Johnson No. 122-225	....	None	....

***SK-600 Series Socket Listing**
For the following tubes, use the socket and chimney schedule shown below:

Tubes	Socket Type	Socket Price	Chimney Type	Chimney Price
4X150A/7034				
4X150D/7035				
4X150R/8296				
4X150S/8297				
4X250B	SK-600	$11.25	SK-606	$0.75
4X250F	SK-600A	11.25	SK-606	0.75
4CX250B/7203	SK-610	11.25	SK-606	0.75
4CX250F/7204	SK-620	12.00	SK-626	0.75
4CX250R/7580W			SK-636B	11.00
4CX350A/8321	SK-620A	15.00	SK-626	0.75
4CX350F/8322			SK-636B	11.00
4W300B/8249	SK-630	11.85	SK-626	0.75
7203/4CX250B			SK-636B	11.00
7204/4CX250F	SK-630A	15.10	SK-626	0.75
7580W/4CX250R			SK-636B	11.00
8321/4CX350A	SK-640	6.90	SK-606	0.75
8322/4CX350F	SK-650	8.50	None	....
8249/4W300B	SK-655	7.00	SK-626	0.75
7034/4X150A				
7035/4X150D				
8296/4X150R				
8297/4X150S				

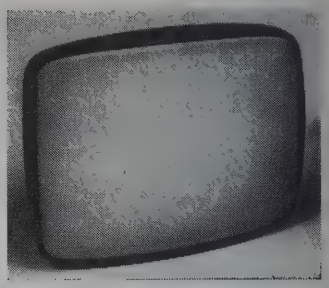
Prices subject to change without notice.

TV PICTURE TUBES

GE ELECTRONICS

Tube Type	
★ 5TP4	‡
8AP4A	‡
9QP4	‡
10BP4A	Use SG-10FP4A
10FP4A	Use SG-10FP4A
★SG-10FP4A	‡
★ 11AP4	‡
12BMPH	‡
★ 12KP4A	Use SG-12KP4A
★SG-12KP4A	‡
12LP4A	Use SG-12KP4A
12TP4	Use SG-12KP4A
★ 14AJP4	Use SG-14AJP4
★SG-14AJP4	‡
★ 14ASP4	Use SG-14AJP4
★ 14ATP4	‡
★ 14AUP4	‡
★ 14AVP4	Use SG-14AJP4
14BAP4	Use SG-14QP4A
14BP4	Use SG-14CP4A
★ 14BP4A	Use SG-14CP4A
14CP4	Use SG-14CP4A
★ 14CP4A	Use SG-14CP4A
★SG-14CP4A	‡
14DP4	Use SG-14CP4A
14EP4	Use SG-14CP4A
14HP4	Use SG-14QP4A
14NP4	Use SG-14WP4
★ 14NP4A	Use SG-14WP4
14AP4	Use SG-14QP4A
★ 14QP4A	Use SG-14QP4A
★SG-14QP4A	‡
14RP4	Use SG-14WP4
★ 14RP4A	Use SG-14WP4
★ 14SP4	Use SG-14WP4
★ 14WP4	Use SG-14WP4
★SG-14WP4	‡
★ 14XP4	‡
★ 14ZP4	Use SG-14WP4
16AP4A	‡
★ 16ASP4	‡
16AZP4	‡
★ 16ATP4	‡
★ 16BUP4	‡
★ 16BVP4	‡
16DP4A	‡
16GP4	‡
16GP4B	‡
16KP4	Use SG-16KP4A
★ 16KP4A	Use SG-16KP4A
★SG-16KP4A	‡
16LP4A/ZP4	‡
16QP4	Use SG-16KP4A
16RP4	Use SG-16KP4A
★ 16RP4A	Use SG-16KP4A
16TP4	Use SG-16KP4A
16UP4	Use SG-16KP4A
16WP4A	‡
16ZP4	Use SG-16KP4A
16ZP4	Use 16LP4A/ZP4
17AP4	Use SG-17BP4B
17ATP4	Use SG-17BJP4
★ 17ATP4A	Use SG-17BJP4
17AVP4	Use SG-17BJP4
★ 17AVP4A	Use SG-17BJP4
★ 17BJP4	Use SG-17BJP4
★SG-17BJP4	‡
17BP4	Use SG-17BP4B
17BP4A	Use SG-17BP4B
★ 17BP4B	Use SG-17BP4B
★SG-17BP4B	‡
17BP4C	Use SG-17BP4B
★ 17BRP4	Use 17DSP4
★ 17BUP4	Use SG-17BJP4
★ 17BVP4	Use SG-17BWP4
★ 17BWP4	Use SG-17BWP4
★SG-17BWP4	‡
★ 17BZP4	Use 17DSP4
★ 17CAP4	Use 17DSP4
★ 17CBP4	Use SG-17BJP4
★ 17CDP4	‡
★ 17CFP4	‡
★ 17CKP4	Use 17DSP4
★SG-17CKP4	‡
★ 17CLP4	Use SG-17BJP4
★ 17CP4	‡
★ 17CRP4	‡
★ 17CSP4	Use SG-17BWP4
★ 17CTP4	‡
★ 17CWP4	Use 17DSP4
★ 17DAP4	‡
★ 17DKP4/DTP4	‡
★ 17DLP4	‡
★ 17DQP4	‡
★ 17DRP4	‡
★ 17DSP4	‡
★ 17DTP4	Use 17DKP4/DTP4
★ 17DZP4/DZP4	‡
17FP4/FP4A	‡

Tube Type	
17GP4	‡
17HP4	Use SG-17HP4B
17HP4A	Use SG-17HP4B
★ 17HP4B	Use SG-17HP4B
★SG-17HP4B	‡
17JP4	Use SG-17BP4B
17LP4	Use SG-17LP4A
★ 17LP4A	Use SG-17LP4A
★SG-17LP4A	‡
17QP4	Use SG-17QP4A
★ 17QP4A	Use SG-17QP4A
★SG-17QP4A	‡
17RP4	Use SG-17HP4B
★ 17RP4C	Use SG-17HP4B
17TP4	‡
17UP4	Use SG-17QP4A
17VP4	Use SG-17LP4A
★ 17VP4B	Use SG-17LP4A
17YP4	Use SG-17QP4A
★ 19ABP4	‡
★ 19ACP4	Use 19CFP4
★ 19AFP4	‡
★ 19AHP4	‡
★ 19AJP4	‡
19AP4A	‡
19AP4B	‡
★ 19ARP4	Use 19AFP4
★ 19AUP4	Use 19AFP4
★ 19AVP4	‡
★ 19AXP4/AYP4	‡
★ 19BDP4	‡
★ 19BHP4	‡
★ 19BLP4	‡
★ 19BMP4	Use 19AFP4
★ 19BNP4	Use 19BQP4
★ 19BQP4	‡
★ 19BTP4/YP4	‡
★ 19BVP4	Use 19AVP4
★ 19CFP4	‡
★ 19CHP4	Use 19CFP4
★ 19CKP4	Use 19CFP4
★ 19CUP4	‡
★ 19DEP4	‡
★ 19DFP4	‡
★ 19DUP4	‡
★ 19DVP4	‡
★ 19DZP4	‡
★ 19ECP4	‡
★ 19XP4	Use 19AVP4
★ 19YP4	Use 19BTP4/YP4
★ 19ZP4	Use 19BHP4
20CP4	Use SG-20CP4D
20CP4A	Use SG-20CP4D
★ 20CP4B	Use SG-20CP4D
20CP4C	Use SG-20CP4D
★ 20CP4D	Use SG-20CP4D
★SG-20CP4D	‡
20DP4	Use SG-20CP4D
20DP4A	Use SG-20CP4D
★ 20DP4B	Use SG-20CP4D
★ 20DP4C	Use SG-20CP4D
20HP4	Use SG-20HP4D
20HP4A	Use SG-20HP4D
20HP4B	Use SG-20HP4D
★ 20HP4C	Use SG-20HP4D
★ 20HP4D	Use SG-20HP4D
★SG-20HP4D	‡
20LP4	Use SG-20HP4D
20MP4	Use SG-20HP4D
21ACP4	Use SG-21ACP4A
★ 21ACP4A	Use SG-21ACP4A
★SG-21ACP4A	‡
21AFP4	Use SG-21YP4A
21ALP4	Use SG-21FLP4
★ 21ALP4A	Use SG-21FLP4
★ 21ALP4B	Use SG-21FLP4
21AMP4	Use SG-21ACP4A
★ 21AMP4A	Use SG-21ACP4A
★ 21AMP23A	Use SG-21ACP4A
21ANP4	Use SG-21FLP4
★ 21ANP4A	Use SG-21FLP4
21AP4	‡
21AQP4	Use SG-21ACP4A
★ 21AQP4A	Use SG-21ACP4A
21ASP4	Use SG-21XP4A
★ 21ATP4	Use SG-21FLP4
★ 21ATP4A	Use SG-21FLP4
21ATP4B	Use SG-21FLP4
21AUP4	Use SG-21AUP4B
★ 21AUP4A	Use SG-21AUP4B
★ 21AUP4B	Use SG-21AUP4B
★SG-21AUP4B	‡
21AVP4	Use SG-21AUP4B
★ 21AVP4A	Use SG-21AUP4B
★ 21AVP4B	Use SG-21AUP4B
★ 21AWP4	Use SG-AWP4
★SG-21AWP4	‡
21AXP22A(Color)	‡
21AYP4	Use SG-21XP4A
★ 21BAP4	Use SG-21FLP4



General Electric TV picture tubes feature many multipurpose designs that replace several of the most commonly used types. Each SG type replaces a number of other types, as shown in the tables.

All material and parts used in the manufacture of General Electric picture tubes are new except for the envelope (and screen and aperture mask assembly in the case of color tubes) which, prior to re-use, have been inspected and tested to meet our high quality standards.

Tube Type	
★ 21BCP4	Use SG-21YP4A
★ 21BDP4	Use SG-21AUP4B
★ 21BNP4	Use SG-21FLP4
★ 21BSP4	Use SG-21ACP4
★ 21BTP4	Use SG-21FLP4
★ 21CBP4	Use SG-21FLP4
★ 21CBP4A	Use SG-21FLP4
★ 21CEP4/CEP4A/DFP4	Use SG-21FLP4
★ 21CMP4	Use SG-21FLP4
★ 21CQP4	‡
★ 21CVP4	Use SG-21FLP4
★ 21CWP4	Use SG-21FLP4
★ 21CYP22A(Color)	‡
★ 21CZP4	Use SG-21DEP4A
★ 21DAP4	Use SG-21DEP4A
★ 21DEP4/DEP4A	Use SG-21DEP4A
★SG-21DEP4A	‡
★ 21DFP4	Use 21CEP4/CEP4A/DFP4
★ 21DHP4	‡
★ 21DLP4/DQP4	‡
★ 21DNP4	Use SG-21FLP4
★ 21DQP4	Use 21DLP4/DQP4
★ 21DSP4	Use 21CXP4/DSP4
★ 21EAP4	Use 21FDP4
★ 21EMP4	Use 21EQP4
21EP4	Use SG-21EP4B
21EP4A	Use SG-21EP4B
★ 21EP4B	Use SG-21EP4B
★SG-21EP4B	‡
★ 21EQP4	‡
★ 21ESP4	‡
★ 21EVP4	‡
21FB22(Color)	‡
★ 21FD4	‡
21FJP22(Color)	‡
★ 21FLP4	Use SG-21FLP4
★SG-21FLP4	‡
★ 21FMP4	‡
21MP4	‡
21FP4	Use SG-21FP4C
21FP4A	Use SG-21FP4C
★ 21FP4C	Use SG-21FP4C
☆SG-21FP4C	‡
21WP4	‡
★ 21WP4A	Use SG-21WP4A
★SG-21WP4A	Use SG-21WP4A
★ 21WPH4A	‡
21XP4A	Use SG-21XP4A
★ 21XP4A	Use SG-21XP4A
★SG-21XP4A	‡
21YP4	Use SG-21YP4A
★ 21YP4A	Use SG-21YP4A
★SG-21YP4A	‡
21ZP4	Use SG-21ZP4B
21ZP4A	Use SG-21ZP4B
★ 21ZP4B	Use SG-21ZP4B
★SG-21ZP4B	‡
★ 23AFP4	Use 23BTP4
★ 23AHP4	‡
★ 23ANP4	Use 23BKP4
★ 23ASP4	‡
★ 23ATP4	Use 23BKP4
★ 23AVP4	Use 23CP4
★ 23AUP4	Use 23AHP4
★ 23AWP4/BJP4	‡
★ 23BDP4	Use 23BTP4
★ 23BGP4	Use 23BHP4
★ 23BHP4	‡

Tube Type	
★ 23BJP4	Use 23AWP4/BJP4
★ 23BKP4	‡
★ 23BLP4	Use 23BKP4
★ 23BMP4	Use 23BTP4
★ 23BNP4	‡
★ 23BQP4	‡
★ 23BTP4	‡
★ 23BVP4	‡
23CBP4	Use 23BQP4
★ 23CP4	‡
★ 23CP4A	Use 23CP4
★ 23CZP4	Use 23AHP4
★ 23DBP4	‡
★ 23DKP4	‡
★ 23DLP4	‡
★ 23DQP4	‡
★ 23DSP4A	‡
★ 23DWP4	‡
★ 23DYP4	‡
★ 23EP4	‡
★ 23ESP4	‡
★ 23FP4	Use 23FP4A
★ 23FP4A	‡
★ 23GP4	Use 23CP4
★ 23HP4	Use 23CP4
★ 23JP4	‡
★ 23KP4/KP4A	‡
★ 23MP4	Use 23FP4A
★ 23MP4A	Use 23FP4A
★ 23NP4	‡
★ 23TP4	‡
★ 23UP4	‡
★ 23WP4	Use 23FP4A
★ 23XP4	Use 23BTP4
★ 23YP4	Use 23BTP4
★ 23ZP4	‡
★ 24ADP4	Use SG-24CP4A
★ 24AEP4	Use SG-24AEP4
★SG-24AEP4	‡
★ 24AHP4/ALP4	‡
★ 24AJP4	‡
★ 24ALP4	Use 24AHP4/ALP4
★ 24ANP4	Use SG-24AEP4
★ 24AUP4	‡
★ 24AVP4	Use 24BEP4
★ 24BEP4	‡
24CP4	Use SG-24CP4A
★ 24CP4A	Use SG-24CP4A
★SG-24CP4A	‡
24DP4	Use SG-24AEP4
★ 24DP4A	Use SG-24AEP4
24QP4	Use SG-24CP4A
★ 24TP4	Use SG-24CP4A
24VP4	Use SG-24CP4A
★ 24VP4A	Use SG-24CP4A
24XP4	Use SG-24CP4A
★ 24YP4	Use SG-24AEP4
★ 24ZP4	Use SG-24AEP4
★ 27EP4	Use SG-27RP4
27GP4	Use SG-27RP4
★ 27LP4	‡
27NP4	Use SG-27RP4
★ 27RP4	Use SG-27RP4
★SG-27RP4	‡
★ 27XP4	‡

★ Black-Daylight aluminized tube.
‡ Call your G-E Distributor for current price.

GENERAL ELECTRIC

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RECEIVING TUBES

GE ELECTRONICS

Type	Suggested List Price‡	Type	Suggested List Price‡	Type	Suggested List Price‡	Type	Suggested List Price‡	Type	Suggested List Price‡	Type	Suggested List Price‡	Type	Suggested List Price‡	Type	Suggested List Price‡
0Z4	$2.40	4GK5	$3.85	6AV3	$2.90	6DN6	$7.00	6HK5	$3.90	8CM7	$2.70	12EA6	$2.45	21GY5*	$4.60
0Z4A	2.45	4GS8/4BU8	3.70	6AL11*	4.10	6DN7	3.30	6HM5/6HA5	3.85	8CN7	3.05	12EQ5	2.70	21HB5	4.35
0Z4G	2.45	4GZ5	2.30	6AZ8	5.55	6D04	2.50	6HQ5	4.20	8CS7	3.05	12EG6	3.45	21HB5A	4.35
1A7GT	5.40	4HA5	3.40	6B10*	3.30	6D05	7.85	6HS6	2.75	8CX8	4.40	12EK6	3.10	21HJ5*	5.85
1AD2*	2.80	4HA7/4HC7*	3.05	6BA6	1.90	6DQ6B	3.90	6HS8	3.55	8EB8	4.10	12EQ7	2.75	21KA6	4.45
1AY2	2.60	4HS8	3.05	6BA7	5.90	6DR7	4.10	6HZ6	2.75	8EM5	3.25	12F8	2.90	22BW3*	3.05
1B3GT	2.75	4JC6	3.30	6BA8A	4.00	6DS4	4.45	6HZB	5.50	8ET7	4.15	12FK6	2.60	22DE4	3.40
1BC2	2.90	4JD6	3.60	6BA11*	3.65	6DS5	3.30	6J5	3.70	8FQ7	2.35	12FM6	2.60	23Z9	4.75
1DN5	4.40	5AM8	4.05	6BC7	3.60	6DT5	3.55	6J6A	2.65	8GJ7	3.25	12FQ8	4.10	25AV5GA	4.80
1G3GT/1B3GT	2.75	5AN8	4.45	6BC8	3.75	6DT6A	2.05	6J7	5.00	8GN8	3.70	12FR8	6.90	25AX4GT	3.05
1H2	3.95	5AQ5	2.40	6BD6	2.30	6DT8	3.55	6J10*	5.00	8JV8	3.65	12FX8A	3.85	25BK5	3.40
1J3	2.75	5AR4	4.25	6BD11*	5.05	6DV4	6.20	6J11*	4.80	8LT8	2.70	12GA6	2.70	25BQ6GA/25CU6	4.35
1K3	2.75	5AS4A	3.45	6BE3*	2.80	6DW4B	3.50	6JB6A	5.85	9AB/8A8/PCF80	3.40	12GC6	3.95	25BQ6GTB	4.35
1L4	3.25	5AS8	4.40	6BE6	2.10	6DX8	2.95	6JC6	3.75	9AU7	2.65	12GE5*	4.10	25C5	2.20
1L6	6.40	5AT8	3.80	6BF5	3.35	6DZ4	3.75	6JC8	3.05	9BJ11	4.80	12GN7A	3.90	25CA5	3.60
1LA6	5.85	5AU4	3.65	6BF6	1.95	6DZ7	8.70	6JE6A	8.50	9BR7	3.15	12H6	3.95	25CD6GB	5.75
1LH4	7.60	5AV8	3.85	6BF11*	4.90	6E5	5.65	6JE8	3.70	9CL8	2.95	12HE7	6.80	25DK4	2.20
1LN5	7.70	5B8	5.50	6BG6GA	6.15	6EA4	7.30	6JH6	2.45	9GV8	3.75	12J5	4.10	25DN6	5.95
1N2A	4.40	5BC3	3.15	6BH6	2.75	6EA5	3.55	6JH8	4.10	9KZ8	2.40	12J8	4.35	25EC6	6.15
1R5	3.20	5BE8	3.10	6BH8	4.00	6EA7	5.20	6JK8	4.05	9UBA	3.10	12JN6	3.90	25EH5	2.90
1R2A	2.90	5BK7A	3.75	6BH11*	3.90	6EA8	3.00	6JM6A	4.10	10AL11*	4.55	12JN8	3.70	25F5A	3.85
1S4	4.10	5BQ7A	4.00	6BJ3	2.80	6EB5	4.60	6JN6A	3.85	10BQ5	2.30	12K5	3.45	25L6GT	2.70
1S5	3.05	5BR8	4.20	6BJ6A	2.75	6EB8	4.40	6JN8	3.65	10C8	5.15	12L6GT	3.15	25W4GT	2.55
1T4	3.05	5BT8	3.10	6BJ7	2.95	6EH5	2.90	6JS6A	7.30	10CW5	3.40	12R5	3.30	25W6GT	3.40
1U4	3.05	5BW8	3.20	6BJ8	3.60	6EH7/EF183	3.85	6JT8	4.05	10DE7	3.20	12SA7	4.40	25Z5	4.35
1U5	2.65	5CG8	3.15	6BK4A	7.55	6EH8	3.00	6JU8	3.30	10DX8	2.90	12SC7	5.15	25Z6GT	3.25
1V2	2.15	5CL8A	3.85	6BK5	3.45	6EJ7/EF184	3.85	6JV8	4.00	10EG7	4.40	12SF5	3.95	27	5.10
1X2A/1X28	2.90	5CQ8	4.10	6BK7B	3.55	6EM5	3.20	6JW8	3.10	10EW7	4.40	12SG7	4.70	27GB5/PL500	3.70
2AF4	3.85	5CZ5	4.45	6BL7GTA	4.40	6EM7	4.80	6JZ8*	3.55	10GN8	3.55	12SJ7	4.30	29GK6	3.60
2AF4B	3.85	5DH8	5.50	6BL8/ECF80	3.75	6EQ7	2.75	6K6GT	2.45	10HF8	4.65	12SK7	4.00	30AG11*	4.40
2AH2*	3.40	5DJ4	3.35	6BM8/ECL82	2.90	6ER5	3.55	6K7	5.00	10JY8	3.65	12SL7GT	3.55	32ET5A	2.40
2AS2*	3.00	5EA8	3.80	6BN4A	3.40	6ES5	2.85	6K11/6Q11*	3.65	10KR8	4.25	12SN7GTA	2.55	33GT7*	6.95
2BN4A	2.75	5ES8	5.50	6BN6	3.00	6ES8	5.45	6KA8	4.25	11AR11*	4.10	12SQ7	3.75	33GY7*	6.05
2CW4	4.40	5EU8	3.45	6BN8	3.15	6ET7	4.00	6KR8	4.25	11BQ11	4.10	12V6GT	3.75	33JV6	4.20
2CY5	3.05	5EW6	3.05	6BN11	4.10	6EU7	2.70	6KT8	4.10	11CY7	3.60	12W6GT	3.75	34GD5	2.20
2DS4	4.40	5FG7	2.75	6BQ5/EL84	2.25	6EU8	3.10	6KZ8	3.15	11JE8	3.85	12X4	1.95	35B5	3.20
2DV4	6.15	5FV8	3.00	6BQ6GA/6CU6	4.10	6EV5	2.80	6L6	8.80	11KV8	5.90	13DE7	3.20	35C5	2.00
2DZ4	3.85	5GH8	4.10	6BQ6GTB	4.10	6EV7	2.75	6L6GC	4.45	11Y9	3.75	13DR7	3.55	35DZ8	4.00
2EN5	3.20	5GX6	2.45	6BQ7A	3.75	6EW6	2.30	6LB8	4.70	12AB5	3.30	13EM7/15EA7	4.80	35EH5	2.75
2ER5	3.30	5GX7	3.60	6BR8	3.85	6EW7	5.50	6LE8	5.55	12AC6	2.10	13FD7	4.55	35GL6	2.90
2FH5	3.15	5HA7	3.05	6BS8	3.75	6EX6	7.50	6LF8	3.55	12AD6	2.60	13GB5	3.70	35L6GT	2.45
2FQ5A	3.85	5HG8	3.70	6BU8	3.40	6EY6	3.60	6LM8	4.20	12AE6A	2.75	13GF7	4.70	35W4	1.05
2FS5	4.85	5J6	3.25	6BV8	3.00	6EZ5	4.05	6LN8	2.40	12AF3	3.85	13J10*	5.05	35Y4	4.50
2GK5	3.85	5JK6	3.05	6BW4	2.75	6EZ8	3.55	6LU8	4.10	12AF6	2.85	13V10	4.10	35Z3	4.70
2GU5	4.50	5LJ8	2.85	6BW8	3.30	6F5	5.50	6LY8	3.55	12AL5	2.05	14B6	5.25	35Z5GT	1.95
2HA5	3.85	5T8	4.20	6BX7GT	5.60	6F6	5.80	6M11*	4.55	12AL8	6.20	14BL11	5.10	36AM3A	1.55
2HK5	3.85	5U4GB	1.95	6BY5GA	4.80	6F6GT	5.80	6N7	5.05	12AL11*	4.20	14GT8	3.35	36AM3B	1.55
3A2	5.50	5U8	3.10	6BY6	2.75	6FD7	5.05	6S4A	2.30	12AQ5	2.45	14JG8	3.10	38HE7	6.65
3A3	3.20	5V3	3.50	6BY8	2.70	6FG5	5.35	6S8GT	4.15	12AT6	1.75	15AF11*	4.75	38HK7	6.55
3AF4A/3AF4B	3.80	5V4GA	3.55	6BZ6	2.10	6FG6/EM84	3.30	6SA7	4.35	12AT7	2.85	15BD11	4.85	45B5/UL84	2.80
3AL5	1.95	5V6GT	2.70	6BZ7	3.75	6FG7	3.55	6SC7	4.40	12AU6	2.00	15CW5/PL84	2.65	50B5	2.60
3AT2*	3.05	5X8	3.75	6BZ8	4.20	6FH5	3.15	6SF5	3.75	12AU7A	2.30	15DQ8	3.55	50BM8	3.10
3AU6	2.20	5Y3GT	1.60	6C4	1.75	6FJ7*	3.7.	6SG7	4.65	12AV5GA	4.50	15EA7	4.80	50C5	2.00
3AV6	2.20	5Y4GA	2.45	6C5	5.35	6FM7*	3.25	6SH7	5.35	12AV6	1.60	15FM7/13FM7*	3.40	50DC4	1.95
3BF6	2.70	5Z3	3.90	6C9	5.50	6FM8	2.80	6SJ7	4.10	12AV7	3.40	15FY7*	3.55	50EH5	2.15
3BN4	3.05	6AB4	2.45	6C10*	3.70	6FQ5A	3.85	6SK7	4.25	12AW6	3.10	15HB6	3.85	50HC6	2.40
3BN6	3.60	6AC7	5.50	6CA4	2.30	6FQ7	2.35	6SL7GT	3.30	12AX3*	3.00	15KY8A	4.75	50HK6	2.15
3BU8	3.55	6AF3	3.10	6CA5	3.00	6FS5	4.10	6SN7GTB	2.45	12AX4GTB	2.55	15LE8	7.65	50HN5	2.75
3BY6	2.75	6AF4	3.75	6CA7/EL34	5.75	6FV6	4.05	6SQ7	3.85	12AX7	2.40	16A8	3.45	50L6GT	2.55
3BZ6	2.15	6AF4A	3.75	6CB5A	9.40	6FV8A	2.95	6SR7	3.70	12AZ7	2.60	16AQ3/XY88	2.70	60FX5	2.60
3CB6	2.15	6AF11*	4.75	6CB6A	2.10	6FW5	3.85	6SV7	3.55	12AZ7A	2.85	16GK6	3.05	75	6.40
3CE5/3BC5	2.45	6AG5	2.85	6CD3	3.20	6FY5	2.75	6T4	5.10	12B4A	3.05	16GY5	4.85	80	4.80
3CF6	2.55	6AG7	6.20	6CD6GA	5.50	6FY7*	3.20	6T8A	3.20	12BA6	1.60	16KA6	4.45	117Z3	4.50
3CS6	2.75	6AG11*	4.10	6CE5/6BC5	2.20	6G11*	4.40	6T9*	3.70	12BA7	5.60	17AX3*	2.60	6931	3.40
3CY5	3.75	6AH4GT	3.25	6CF6	2.75	6GC5	4.00	6T10*	4.25	12BD6	2.30	17AX4GTA	3.05	6973	4.25
3DG4	4.10	6AH6	4.40	6CG3	3.40	6GE5*	3.85	6U5/6G5	7.40	12BE3*	3.05	17AY3	2.70	7025	2.80
3DK6	2.30	6AK5	4.50	6CG7	2.30	6GF5*	3.45	6U8A/6KD8	3.10	12BE6	1.65	17BE3*	2.90	7189A	2.70
3DT6	2.30	6AL3	2.75	6CG8A	3.10	6GF7	4.85	6U10*	3.65	12BF6	2.10	17BF11*	4.55	7199	4.45
3DZ4	3.85	6AL5	1.75	6CH8	5.65	6GH8A	3.00	6V3A	4.55	12BH7A	2.90	17C9	7.15	7247	3.20
3EA5	3.55	6AL7GT	6.90	6CK4	3.55	6GJ7	3.40	6V4/EZ80	1.50	12BK5	3.75	17CU5	2.30	7355	3.10
3EH7	3.55	6AL11*	4.10	6CL6	3.80	6GK5	3.85	6V6	6.35	12BL6	2.85	17D4	3.05	7408	3.05
3EJ7	3.55	6AM4	5.55	6CL8A	3.75	6GK6	2.95	6V6GTA	2.05	12BN6	4.10	17DE4	3.20	7581A	4.55
3ER5	3.30	6AM8A	3.25	6CM6	3.35	6GL7	5.45	6W4GTA	2.30	12BQ6GA/12CU6	4.20	17DM4	3.05	7591A	2.80
3FS5	4.30	6AN4	6.15	6CM7	2.75	6GM5	3.05	6W6GT	2.70	12BQ6GT8	4.20	17DQ6B	3.95	7695	4.40
3GK5	3.85	6AN8A	3.75	6CM8	4.05	6GM6	2.75	6X4	1.60	12BR7	3.05	17EW8/HCC85	2.60	8136	2.55
3GS8/3BU8	3.55	6AQ5A	2.00	6CN7	4.00	6GM8/ECC86	4.35	6X5GT	2.10	12BT3*	2.85	17GE5*	4.35	8425A/6AU6A	2.55
3HA5	3.85	6AQ6	2.70	6CQ4	3.55	6GN8	4.10	6X8A	3.30	12BV7	3.30	17GV5*	4.20	8426A/12AU6	2.80
3HM5	3.85	6AQ7GT	4.10	6CQ8	3.30	6GT5	5.25	6X9	2.95	12BW4	2.75	17GW6	4.00		
3HQ5	3.85	6AQ8/ECC85	3.00	6CR6	2.30	6GU5	4.10	6Y6GT	3.55	12BY7A	3.05	17H3	2.75		
3S4	3.40	6AR5	2.45	6CS6	2.45	6GU7	3.20	6Y9	3.75	12BZ7	4.15	17JB6	5.50		
3V4	2.60	6AR8	4.85	6CS7	2.80	6GV5*	4.10	6Y10	3.85	12CA5	2.80	17JM6A	4.20		
4AU6	2.70	6AR11*	4.10	6CU5	2.70	6GW6	3.90	7A4	7.05	12CN5	3.25	17JN6A	3.90		
4BC8	3.85	6AS5	2.75	6CU8	4.50	6GW8/ECL86	3.05	7A7	7.15	12CR6	2.60	17JZ8*	3.55		
4BL8/XCF80	2.40	6AS8	3.95	6CW4	4.45	6GX6	2.30	7AG7	7.90	12CT8	4.95	18A5	4.40		
4BN6	3.85	6AS11*	5.10	6CW5	3.25	6GX7	3.70	7AU7	2.45	12CU5/12C5	2.75	18FW6	2.45		
4BQ7A	4.10	6AT6	2.05	6CX8	4.25	6GY5*	4.60	7B5	8.35	12CX6	2.75	18FX6	2.20		
4BS8	4.25	6AT8	3.95	6CY5	3.45	6GY6/6GX6	2.60	7B6	5.25	12D4	2.75	18FY6	2.15		
4BU8	3.30	6AT8A	3.95	6CY7	3.05	6GY8	3.55	7C5	3.30	12DB5	2.60	19AU4GTA	3.55		
4BZ6	2.10	6AU4GTA	3.40	6CZ5	4.15	6GZ5	2.70	7C7	3.40	12DE8	3.10	19BG6GA	6.65		
4BZ7	3.85	6AU5GT	4.65	6D10*	3.85	6H6	4.30	7EY6	3.35	12DL8	5.85	19CL8A	3.70		
4CB6	2.15	6AU6A	1.95	6DA4	3.05	6HA6	4.45	7F7	7.50	12DQ6B	3.95	19EA8	3.85		
4CE5/4BC5	3.05	6AU8A	4.40	6DA4A	3.05	6HB5*	4.20	7F8	8.25	12DQ7	3.70	19EZ8	4.50		
4CS6	2.90	6AV5GA	4.70	6DA5/EM81	2.80	6HB6	4.45	7GV7	3.90	12DS7	4.05	19GQ7	3.80		
4CY5	2.70	6AV6	1.60	6DB5	5.00	6HB7	3.35	7HG8/PCF86	3.15	12DT5	3.10	19HV8	3.55		
4DE6	2.95	6AV11*	4.40	6DE4	3.05	6HD5*	5.35	7N7	7.10	12DT8	3.55	19JN8	3.85		
4DK6	2.55	6AW8A	3.50	6DE6	3.35	6HE5*	3.70	8AU8	3.85	12DU7	4.40	19KG8	2.80		
4DT6	2.10	6AX3*	2.55	6DE7	3.35	6HF5*	7.30	8AW8A	3.50	12DV8	3.95	19T8	3.65		
4EH7	3.55	6AX4GTB	2.50	6DG6GT	3.55	6HF8	3.95	8B10*	3.35	12DZ6/12EA6	3.60	20EZ7	3.45		
4EJ7	3.55	6AX5GT	3.25	6DK6	2.25	6HG8/ECF86	4.10	8BQ5	2.75						
4EW6	2.90	6AX8	3.45	6DM4	3.05	6HJ8	3.10	8CG7	2.30						

* Compactron type.

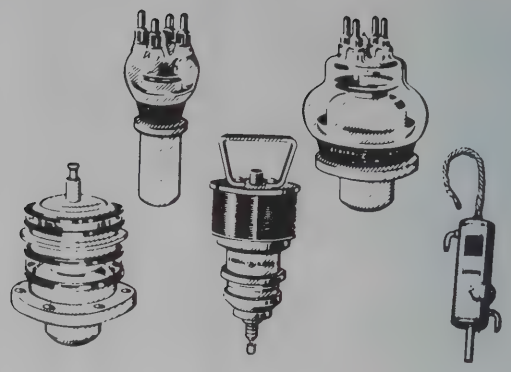
‡ Manufacturer's suggested list price; subject to change without notice.

GENERAL ELECTRIC

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INDUSTRIAL TUBES

- CATHODE-RAY
- FIVE-STAR
- MILITARY
- POWER
- COMMUNICATION
- TRANSMITTING



G-E Type	Price Each¶
OA2†	$ 1.35
OA3†	1.55
OA4G†	1.90
OB2†	1.45
OB3†	2.35
OC3†	1.50
OD3†	1.45
1AD4†	2.80
1D21/SN4	12.90
C1K	Use GL-6014/C1K
GL-1L21	25.00
GL-1L36	18.50
1L38	33.25
1P39	2.80
1P40	3.75
2B22■	31.00
GL-2B23	77.00
2C‡	6.90
C6M	56.00
2C39A	20.75
2C39B	32.15
2C39WA	32.15
2C40	28.00
2C40A■	34.00
2C42■	27.10
2C43■	27.20
2C46■	29.50
2D21†	1.30
2D21W	Use 5727/2D21W
2E26†	3.75
GL-2H21	340.00
2X2A†	3.65
3B24W	11.25
3B28	6.30
3C23■	11.98
3CX100A5	32.00
KC-4	Use GL-5575/100
4-65A	28.50
4-250A/5D22	46.50
4-400A	48.00
4-1000A	132.00
4D21/4-125A	36.00
4X150A	26.25
4X500A	125.60
5AHP7A	47.00
5AUP24‡	160.00
5R4GYA†■	2.05
5RGYB†	2.05
5Y3WGTB (6087/-5Y3WGTB)■	5.75
FA-6	Use GL-5627
6AC7WA†■	5.70
6AL5W	Use 5726/6AL5W
6AK5W	Use 5654/6AK5W
6AK5WB†■	5.45
6AK6†	1.40
6AN5†	4.20
6AS6†	3.45
6AS6W	Use 5725/6AS6W
6A57GA†	4.95
6AU6WB†	Use 6136/6AU6WB
6BA6W	Use 5749/6BA6W
6BE6W	Use 5750/6BE6W
6C4WA†■	3.15
6D4†	2.85
6DJ8†	2.40
6J4†	4.20
6SK7WA†■	2.85
6X4W†	1.60
6X4WA†	Use 6202/6X4WA

G-E Type	Price Each¶
GL-7C29	$ 189.50
GL-7D21	790.00
7RP4	64.00
PJ-8	Use GL-5556
8D21‡	1985.00
12A6†	3.10
12AT7WB	Use 6201/12AT7WB
12AY7†■	2.45
FA-13	Use GL-5628
C16J	Use GL-5665/C16J
FG-17	Use GL-5557
PJ-23	Use GL-868
FG-27A	52.00
28D7	4.95
FG-32	Use GL-5558
FG-33	Use GL-5720
FG-41	Use GL-5830
B-47	Use GL-5623
FG-57	Use GL-5559
FG-67	Use GL-5728
FG-81A	32.50
83†	1.75
FG-95	Use GL-5560/FG-95
FG-97	62.00
FG-98A	77.00
100TH‡	23.60
FG-104	Use GL5561
FG-105	59.00
FG-154	108.00
FG-172■	122.00
FG-280	105.00
393A■	13.25
407A†	5.90
408A†	4.95
GL-411	478.75
GL-414	280.00
GL-415	Use GL-5550
502A	2.30
GL-506	Use GL-6228
575A■	20.15
627‡	31.50
672A	42.50
673	20.15
678	49.50
740	Use GL-6856/740
760	Use GL-6858/760
760P	Use GL-6859/760P
805	22.10
807†■	3.15
809†	8.20
810	26.95
811A†	7.15
812A†	7.15
813	23.15
815	29.35
816	3.25
828	32.95
829B	20.00
830B‡	17.35
832A	16.70
833A	56.00
836	11.10
GL-838	20.00
845	25.00
GL-857B	218.50
862A	1775.00
866A	2.80
868/PJ-23	4.50
GL-869B	138.00

G-E Type	Price Each¶
GL-870A■	$ 1990.00
872A/872	9.90
GL-880	610.00
884†	2.30
889A	250.00
892	345.00
892R	440.00
GL-893AR‡	1260.00
920‡	7.30
923	3.40
927	4.70
929	2.35
930	3.80
931A	12.25
1612†	5.80
1614†	4.90
1619†‡	5.70
1620†	7.55
2050†	2.40
2050A	2.05
GL-5513	620.00
GL-5518	1400.00
5528†	56.00
GL-5544	32.50
GL-5549	653.50
GL-5550	49.00
GL-5551A	65.00
GL-5551A/P	65.00
GL-5552A	99.00
GL-5552A/P	99.00
GL-5553B	245.00
GL-5553B/P	245.00
GL-5554	215.00
GL-55555	316.00
GL-5556	47.50
5557■	9.50
5558	17.50
5559■	23.00
5560■	33.00
5561	59.00
5563A	51.25
GL-5564	850.00
GL-5575/100/616	250.00
GL-5593	340.00
5610‡	1.05
GL-5623	30.00
GL-5627	80.00
GL-5628	60.00
GL-5630	1900.00
5632/C3J	13.80
5636†*■	6.10
5642†§	3.85
5651†	1.78
5654/6AK5W†*■	2.45
5662†‡	1.45
5663†■	2.10
5665/C16J	56.90
5670†*■	2.45
GL-5674	225.00
5675‡	16.75
5681	2060.00
5686†*■	3.40
5687†*■	4.00
5687WA†■	5.70
5691†	8.75
5692†	8.25
5693†	6.60
5696A†	2.05
5702WA*	6.50
5702WB*	9.55

G-E Type	Price Each¶
5703WA*	$ 7.10
5703WB*	8.80
5718†*■	3.65
5719†*■	3.15
GL-5720/FG-33	34.75
5725/6AS6W†*■	3.15
5726/6AL5W†*■	1.55
5727/2A21W†*■	2.90
GL-5728	74.00
5736	205.00
5744WA*	7.10
5744WB*	9.00
5749/6BA6W†*■	2.20
5750/6BE6W†*■	3.45
5751†*■	2.55
5751WA†*■	2.95
5762/7C24	240.00
5763†	2.55
GL-5779	200.00
GL-5788	500.00
5814A†*■	2.35
5814WB†*■	6.25
GL-5820A	1100.00
GL-5822A	116.00
5823†	1.75
5824†	3.60
GL-5830	540.00
5840†*■	5.35
5844†*	2.30
5855	85.00
5879†	1.85
5881†	3.50
5886†	5.00
5894	25.00
5896†*■	3.75
5899†*■	5.50
5902†*■	4.80
5963†■	1.35
5964†	1.55
5965A†*	1.90
GL-5973	495.00
5998A†	12.20
6005/6AQ5W†*■	3.95
6011/710	12.70
6012†	7.65
GL-6014/C1K	12.90
6019	751.75
6021†*■	3.50
GL-6039	1890.00
6046†	1.55
6072A†*■	3.90
6080†■	5.35
6087/5Y3WGTB†*	5.75
6100†*	2.50
6111†*■	3.70
6112†*■	4.10
6134†	5.70
6135†*■	2.40
6136/6AUGW/B†*■	2.70
6137/6SK7WA†	2.85
6146A†	4.35
6161	125.00
6166A	Use 9007/6166A
GL-6183	Use GL-6942
6189/12AU7WA†■	3.65
6197†	2.65
6198A	185.00
6201/12AT7WB†*■	2.55
6202/6X4WA*■	2.85
6203†*■	4.10

¶ Manufacturer's suggested price.
* Five-Star Types
† Industrial Receiving Type.
■ Available to MIL specifications.
‡ Discontinued Type; available while stock lasts.
§ Subject to F.E.T.
#Coated plates.

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INDUSTRIAL TUBES (Cont'd)

ELECTRONICS

G-E Type	Price Each¶
6205†*■	$ 5.35
6206†*■	7.25
6211A†*	2.35
6216†*■	3.47
6222†*	7.35
GL-6228/GL-506	3695.25
GL-6251	2790.00
6265†*	4.10
GL-6283	500.00
6299■	56.00
6336A†	19.40
GL-6346	70.00
6350†	2.35
6360†	4.95
6286†*■	7.40
6397†	8.30
6414†*■	3.65
6427	840.00
6442■	39.25
6463†	1.90
6485†	2.05
GL-6512	285.00
GL-6513	382.00
GL-6514	525.00
GL-6515	960.00
6550†	4.30
GL-6621	10.35
6660†	1.10
6661†	1.40
6662†	1.35
6663†	1.00
6664†	1.15
6669†	1.15
6676†	1.20
6677†	1.90
6678†	1.70
6679†	1.55
6680†	1.30
6681†	1.30
6688A†*	8.75

G-E Type	Price Each¶
6771	$ 71.90
6807	29.30
6808	30.50
6809	31.00
6814†*■	5.90
6829†*■	6.10
GL-6848	1840.00
6856/740	20.80
6858/760	28.10
6859/760P	29.80
GL-6878	3060.00
6883†	5.05
6894	25.50
6897■	32.15
6907	27.00
6919†*	1.35
6942	960.00
7007/6166A■	1020.00
7034/4X150A	25.00
7036†*	1.50
GL-7038	185.00
7044	2.70
7054†	1.55
7056†	1.05
7057†	1.95
7058†	1.30
7059†	1.75
7061†	1.30
7077	33.75
GL-7151	750.00
7167†	2.00•
GL-7171	81.50
7226	315.00
7233†	2.40
7239†*	6.25
7262A	250.00
7263A	430.00
7266■	29.70
7289■	30.75
7293	1300.00

G-E Type	Price Each¶
7296	$ 41.85
7325	185.00
7370	10.80
7391	67.00
GL-7399	520.00
7427†	2.65
7462	33.75
7468	33.75
7518/710L	14.00
7588	74.25
7625	33.75
GL-7629A	1800.00
7644	65.00
GL-7669	65.00
GL-7669/P	65.00
GL-7670	77.20
GL-7671	99.00
GL-7671/P	99.00
GL-7672	116.00
GL-7673	245.00
GL-7673/P	245.00
GL-7681	155.00
7697	185.00
7701†	3.00•
GL-7703	190.00
7716†	1.75
7717/6CY5†	1.40
7720	33.75
7724/14GT8†	1.50
7725	13.50
7726	16.30
7735A	185.00
7736	850.00
7768	77.50
7784	65.00
7815	30.75
7815R	30.75
7841	29.70
7861†*	3.50
7913	91.80

G-E Type	Price Each¶
GL-7964	$ 85.00
7984	5.35
GL-7985	1920.00
GL-7998	155.00
8005†	17.85
8008	7.60
GL-8020	16.00
8068	3.60
8081	35.10
8082	35.10
8083	35.10
GL-8092A	1975.00
GL-8093	1350.00
8102†	1.45
8106†	1.55
8113*	6.45
8156	4.10
GL-8205	825.00
GL-8360	77.20
GL-8465	500.00
GL-8466	535.00
8507	250.00
8511	315.00
8541	310.00
9001†	5.40
9002†	4.85
9003†	5.40

MC LEOD GAGE PARTS

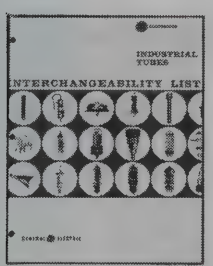
N-24900 AAG1	$320.00
N-24900 AAG2	325.00
N-24900 AEG1	98.00
N-24900 AEG2	103.00

¶ Manufacturer's suggested price.
* Five-Star Types.
† Industrial Receiving Type.
■ Available to MIL specifications.
• List Price.
Coated plates.

THERMOSTAT KITS FOR IGNITRON

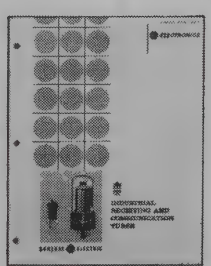
Kit No.	Price, Each¶
N-15272AA	$ 7.30
N-15273AA	5.15
N-15286AA	9.30
N-15287AA	8.00

NEW G-E INDUSTRIAL TUBE CATALOGS



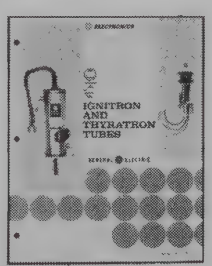
ETI-719D 25¢

Alpha-numerical listing of G-E replacements for nearly 3,000 types of industrial tubes.



ETI-2387A 25¢

Complete specifications of G-E industrial receiving, communications, 5-Star and ceramic receiving tubes.



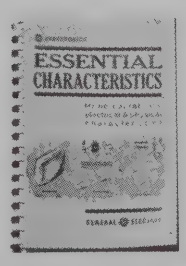
ETI-2388A 25¢

Specifications and data on 80 types of G-E Ignitrons and Thyratrons, plus operating guide.



ETI-2389A 25¢

Lists 125 special-purpose and broadcast power tubes and rectifiers, including installation information.



ETR-15L $1.50

Lists all receiving, TV picture, 5-Star, and small special-purpose tubes, and G-E capacitors.

These Catalogs Are Available From Your General Electric Tube Distributor

GENERAL ELECTRIC

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NATIONAL®

ELECTRONIC CONTROL DEVICES FOR INDUSTRY

Ignitrons, Rectifier Tubes, Thyratrons, Silicon Devices and Readout Tubes

IGNITRONS

Type Number	Maximum Demand	Net Selling Price	Type Number	Maximum Demand	Net Selling Price	Type Number	Maximum Demand	Net Selling Price
NL-1005A	600 Kva	$ 71.50	NL-1051A*	600 Kva	$ 65.00	NL-1081*	1000 Kva	$ 75.00
NL-1009A	1700 Kva	155.00	NL-1052A*	1200 Kva	99.00	NL-1082*	2000 Kva	107.00
NL-1011A	600 Kva	65.00	NL-1053A	3000 Kva	284.00	NL-1091*	1000 Kva	75.00
NL-1012A	1200 Kva	99.00	NL-1054A	4800 Kva	750.00	NL-1092*	2000 Kva	107.00
NL-1013A	2400 Kva	260.00	NL-1059	100K Amps	333.00	NL-5550	300 Kva	49.00
NL-1014A	4800 Kva	750.00	NL-1061*	600 Kva	65.00	NL-5553B*	2400 Kva	245.00
NL-1016A	1700 Kva	155.00	NL-1062*	1200 Kva	99.00	NL-5553BL	2400 Kva	245.00
NL-1022A	1200 Amps	116.00	NL-1063	3000 Kva	284.00	NL-5555	1200 Amps	316.00
NL-1036	35K Amps	98.00	NL-1064	4800 Kva	825.00	NL-5555A	1200 Amps	316.00
NL-1037	100K Amps	134.00	NL-1066*	2000 Amps	77.20	NL-7673*	2400 Kva	245.00
NL-1038	100K Amps	333.00	NL-1069	1700 Kva	155.00	NL-7703	100K Amps	190.00
NL-1039	100K Amps	132.00				NL-7703H	100K Amps	190.00

THYRATRONS

Type Number	DC Output Amperes	Net Selling Price	Type Number	DC Output Amperes	Net Selling Price	Type Number	DC Output Amperes	Net Selling Price
NL-C3J/AL	2.5	$14.20	NL-710A/7725	2.5	$13.50	NL-5559/FG57	2.5	$23.00
NL-C3J/AL-Ne	2.5	14.60	NL-710AL	2.5	16.30	NL-5560/FG-95	2.5	33.00
NL-C3J/L	2.5	18.40	NL-710L/7518	2.5	14.20	NL-5563A	2.5	12.70
NL-3C23	1.5	11.98	NL-714	1	10.00	NL-5632/C3J	1.6	50.00
NL-C6J†§	6.4	28.10	NL-716	1	12.50	NL-5665/C16J	18	52.50
NL-C6J/K†	6.4	28.30	NL-718	18	64.00	NL-5684/C3J/A	2.5	13.10
NL-C6J/K-Ne	6.4	32.50	NL-732	30	120.00	NL-5684-Ne	2.5	16.70
NL-KY21A	.75	26.75	NL-734/5544§	3.2	22.50	NL-5684A-Ne	2.5	17.90
FG-105	0.25	59.00	NL-740/6856†§	4	20.80	NL-6014/C1K	1	11.80
NL-632B	2.5	33.00	NL-760†§	6.4	28.10	NL-6989/C6J/KL	6.4	29.45
NL-678	1.6	49.00	NL-770L†	10.0	45.25	NL-6989-Ne	6.4	33.90
NL-710/6011	2.5	12.70	NL-5557/FG17/715	1	9.50	NL-7556A-Ne	2.5	19.60

FULL AND HALF WAVE RECTIFIERS

Type Number	DC Output Amperes	Net Selling Price	Type Number	DC Output Amperes	Net Selling Price	Type Number	DC Output Amperes	Net Selling Price
NL-RX21A	.75	$25.75	NL-623	15	$13.35	NL-869B/L	5	$138.00
NL-575A	2.5	20.15	NL-635/7019†§	6.4	13.00	NL-5558/FG32	2.5	17.50
NL-604§	2.5	11.80	NL-643	15	13.50	NL-6894	2.5	25.00
NL-606§	6.4	21.40	NL-649/5834	2	10.20	NL-6895	2.5	25.00
NL-610/7723	2.5	11.40	NL-660†§	6.4	13.00	NL-7723-Ne	2.5	13.10
NL-615	2.5	10.05	NL-664L†	10	26.00	NL-7786-Ne	6.4	15.50
NL-617	5	15.00	NL-673	2.5	20.15			
NL-619	6	10.00	NL-869B	5	138.00			

STUD MOUNTED SILICON CONTROLLED RECTIFIERS

11 Amp r. m. s.			16 Amp r. m. s.			35 Amp r. m. s.		
Type Number	PRV	Net Selling Price	Type Number	PRV	Net Selling Price	Type Number	PRV	Net Selling Price
NL-511-3	800	31.00	NL-2N1842	25	$ 6.75	NL-2N681	25	$ 8.55
NL-511-4	1000	40.00	NL-2N1843	50	7.50	NL-2N682	50	9.40
NL-511-6	1200	70.00	NL-2N1844	100	8.25	NL-2N683	100	10.20
			NL-2N1845	150	10.15	NL-2N684	150	12.70
			NL-2N1846	200	12.00	NL-2N685	200	14.25
			NL-2N1847	250	14.25	NL-2N686	250	17.15
			NL-2N1848	300	16.00	NL-2N687	300	19.40
			NL-2N1849	400	19.00	NL-2N688	400	21.00
			NL-2N1850	500	21.25	NL-2N689	500	22.50
			NL-516M	600	25.50	NL-2N690	600	27.50
			NL-516S	700	27.30	NL-2N691	700	31.20
			NL-516N	800	32.00	NL-2N692	800	35.00

READOUT TUBES

Type Number	Character Size	Net Selling Price	Type Number	Character Size	Net Selling Price	Type Number	Character Size	Net Selling Price
NL-803	0.6″	$10.00	NL-6012	0.8″	$14.50	NL-8037/5031	0.6″	$15.75
NL-4022	0.3″	19.00	NL-6034	0.8″	20.00	NL-8091	1.375″	30.00
NL-4026	0.3″	33.00	NL-6844A	0.6″	11.00	NL-8421/5092	0.6″	15.75
NL-4031	0.3″	33.00	NL-7009	0.3″	19.00	NL-8422/5991	0.6″	15.75
NL-5016	0.6″	11.00	NL-7037	2.0″	26.50	NL-8423/6091	0.8″	20.00
NL-5030	0.6″	10.50	NL-7094	2.0″	45.00	NL-8502/4021	0.3″	33.00
NL-5032	0.6″	15.75	NL-7153	0.8″	14.50	NL-50911	0.6″	15.75
NL-5992	0.6″	15.75	NL-7977/4032	0.3″	33.00			

WRITE FOR INDIVIDUAL DATA SHEETS FOR DETAILED RATINGS

NOTES: * Plastic coated version available, indicated by the addition of the suffix letter P.
† Available with bracket base for panel mounting, designated by the addition of suffix letter P.
§ Available with lug base, designated by the addition of suffix letter L.

NATIONAL ELECTRONICS INC.

A Subsidiary of Eitel-McCullough, Inc.

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RCA ELECTRON TUBES

ENTERTAINMENT RECEIVING TYPES

* Optional List

PRICE SCHEDULE — SEPT. 1965

RCA Type	List Price*
0Z4	$2.40
0Z4G	2.45
1A3	6.15
1A5GT	4.00
1A7GT	5.40
1AD2	2.85
1AX2	2.90
1B3GT use 1G3GT/1B3GT	
1DN5	3.45
1G3GT/1B3GT	2.75
1H5GT	3.90
1K3/1J3	2.75
1L6	6.45
1LA6	5.85
1LB4	8.15
1LH4	7.60
1LN5	7.70
1N5GT	4.90
1R5	3.20
1S4	4.10
1S5	3.05
1T4	3.05
1U4	3.05
1U5	2.65
1V	5.50
1V2	2.20
1X2A	2.90
1X2B	2.90
2A3	9.90
2AF43	3.80
2AH2	3.40
2AS2	3.00
2AV2	2.20
2BJ2	4.20
2BN4A	2.75
2CW4	4.40
2CY5	3.05
2DS4	4.40
2DV4	6.15
2DZ4	3.85
2EN5	3.20
2ER5	3.30
2FH5	3.15
2FS5	4.85
2GK5	3.85
2GU5	4.50
2HA5	3.85
2HQ5	3.85
3A2	5.50
3A3/3B2	3.20
3AF4A	3.80
3AL5	1.95
3AT2	3.05
3AU6	2.20
3AV6	2.20
3AW3	3.20
3BA6	2.35
3BC5	2.45
3BE6	2.10
BN4A	3.05
3BN6	3.60
3BU8	3.55
3BY6	2.75
3BZ6	2.15
3CA3	3.20
3CB6	2.15
3CE5	2.45
3CF6	2.55
3CS6	2.75
3CY5	3.55
3DG4	4.10
3DK6	2.30
3DT6A	2.35
3DZ4	3.85
3EA5	3.55
3EH7	3.55
3EJ7	3.55
3ER5	3.30
3FH5	3.25
3FS5	4.30
3GK5	3.85
3GS8	3.55
3HM5/3HA5	3.85
3HQ5	3.85
3LF4	6.00
3Q4	3.35
3Q5GT	$5.85
3S4	3.40
3V4	2.60
4AU6	2.70
4AV6	2.25
4BC5	2.20
4BC8	3.85
4BL8	2.40
4BN6	3.85
4BQ7A	4.15
4BS8	4.25
4BU8	3.70
4BZ6	2.10
4BZ7	3.85
4CB6	2.20
4CS6	2.90
4CY5	2.70
4DE6	2.50
4DK6	2.55
4DT6A	2.10
4EH7	3.55
4EJ7	3.55
4ES8	4.35
4EW6	2.90
4GK5	3.90
4GM6	2.20
4GS8	3.70
4GX7	3.60
4GZ5	2.35
4HA5	3.40
4HA7	3.05
4HC7	3.05
4HM6	2.85
4HS8	3.05
4HT6	2.25
4JC6	3.60
4JD6	3.60
5AM8	4.05
5AN8	4.45
5AQ5	2.40
5AR4/GZ34	4.25
5AS4A	3.45
5AS8	4.40
5AT8	3.80
5AU4	3.65
5AV8	3.85
5AZ4	5.30
5B8	5.50
5BC3	3.15
5BE8	3.10
5BK7A	3.75
5BQ7A	4.00
5BR8	4.20
5BT8	3.10
5BW8	3.20
5CG8	3.15
5CL8A	3.85
5CM8	3.55
5CQ8	4.10
5CZ5	4.45
5DJ4	3.35
5EA8	3.80
5EU8	3.45
5EW6	3.05
5FG7	2.60
5FV8	3.00
5GH8	4.10
5GM6	2.80
5XG6	2.45
5GX7	3.60
5HA7	3.05
5HB7	2.75
5HG8	3.70
5J6	3.25
5KD8	2.50
5KE8	5.20
5LJ8	2.85
5T8	4.20
5U4G	1.95
5U4GB	1.95
5U8	3.10
5V3A	3.50
5V4GA	3.55
5V6GT	2.75
5X4G	3.15
5X8	3.75
5Y3GT	1.60
5Y4GA	2.45
5Y4GT	$3.40
5Z3	3.95
5Z4	7.85
6A7	8.00
6A8	6.45
6AB4	2.45
6AB7	7.75
6AC5GT	5.85
6AC7	5.50
6AF3	3.10
6AF4	3.75
6AF4A	3.75
6AF6G	6.30
6AF11	4.75
6AG5	2.85
6AG7	6.20
6AG11	4.15
6AH4GT	3.25
6AH6	4.40
6AK5	4.50
GAL3	2.75
GAL5	1.75
6AL7GT	6.95
6AL11	4.15
6AM4	5.55
6AM8A	3.25
6AN4	6.15
6AN8A	3.75
6AQ5A	2.00
6AQ6	2.70
6AQ7GT	4.10
6AQ8	3.00
6AR5	2.45
6AR11	4.10
6AS5	2.75
6AS8	4.00
6AS11	5.10
6AT6	2.05
6AT8A	4.00
6AU4GTA	3.40
6AU5GT	4.65
6AU6	1.95
6AU8A	4.40
6AV5GA	4.70
6AV6	1.60
6AW8A	3.50
6AX3	2.55
6AX4GTB	2.50
6AX5GT	3.25
6AX8	3.50
6AY3	2.90
6AY11	4.10
6AZ8	5.50
6B8	6.85
6B10	3.35
6BA3	3.05
6BA6	1.90
6BA7	5.85
6BA8A	4.00
6BA11	4.10
6BC4	5.50
6BC5	2.25
6BC7	3.60
6BC8	3.75
6BD6	2.35
6BD11	5.05
6BE3	2.85
6BE6	2.10
6BF5	3.35
6BF6	1.95
6BF11	4.90
6BG6G	6.10
6BH3	2.80
6BH6	2.75
6BH8	4.00
6BH11	3.90
6BJ3	2.80
6BJ6	2.75
6BJ7	2.95
6BJ8	3.60
6BK4B	7.55
6BK5	3.50
6BK7B	3.55
6BL7GTA	4.40
6BL8	3.75
6BM8/ECL82	2.90
6BN4A	3.40
BN6	3.00
6BN8	3.15
6BQ5	$2.30
6BQ6GTB/ 6CU6	4.10
6BQ7A	3.75
6BR8A	3.85
6BS3A	3.30
6BS8	3.75
6BU8	3.40
6BV8	3.00
6BW4	2.75
6BW8	3.35
6BX7GT	5.60
6BY5GA	4.80
6BY6	2.75
6BY8	2.70
6BZ6	2.10
6BZ7	3.75
6BZ8	4.20
6C4	1.75
6C5	5.35
6C6	7.85
6C9	5.50
6C10	3.70
6CA4	2.30
6CA5	3.00
6CA7	5.75
6CB5A	9.35
6CB6A	2.10
6CD6GA	5.50
6CE5	2.20
6CF6	2.75
6CG7 use 6FQ7/6CG7	
6CG8A	3.10
6CH8	5.60
6CK4	3.55
6CL6	3.80
6CL8A	3.75
6CM6	3.35
6CM7	2.75
6CM8	4.05
6CN7	4.00
6CQ4	3.55
6CQ8	3.30
6CR6	2.30
6CS6	2.45
6CS7	2.80
6CU5	2.70
6CU6 use 6BQ6GTB/6CU6	
6CU8	4.40
6CW4	4.40
6CW5	3.10
6CX8	4.25
6CY5	3.45
6CY7	3.05
6CZ5	4.10
6D6	7.35
6D10	3.85
6DA4	3.05
6DB5	5.00
6DC6	3.55
6DC8	3.05
6DE4	3.05
6DE6	2.40
6DE7	3.35
6DG6GT	3.55
6DK6	2.25
6DM4	3.05
6DN6	7.00
6DN7	3.35
6DQ4	2.45
6DQ5	7.85
6DQ6B	3.90
6DR7	4.10
6DS4	4.40
6DS5	3.30
6DT5	3.55
6DT6A	2.05
6DT8	3.55
6DV4	6.15
6DW4	3.50
6DW4B	3.50
6DW5	3.85
6DX8	2.90
6DZ4	3.75
6E5	5.65
6EA5	3.55
6EA7	5.20
6EA8	$3.00
6EB8	4.40
6EH5	2.90
6EH7	3.85
6EH8	3.00
6EJ7	3.55
6EM5	3.20
6EM7	4.80
6EQ7	2.75
6ER5	3.55
6ES5	2.85
6ES8	5.45
6ET7	4.00
6EU7	2.70
6EU8	3.10
6EV5	2.85
6EV7	2.75
6EW6	2.35
6EW7	5.50
6EX6	7.50
6EY6	3.60
6EZ5	4.05
6EZ8	3.55
6F5	5.50
6F6	5.80
6F6G	5.80
6F6GT	5.80
6F7	11.05
6F8G	8.45
6FA7	2.95
6FD7	5.05
6FE5	3.40
6FG6 use EM84/6FG6	
6FG7	3.55
6FH5	3.15
6FH8	4.05
6FJ7	3.75
6FM7	3.25
6FM8	2.85
6FQ5A	3.85
6FQ7/6CG7	2.35
6FS5	4.10
6FV6	4.00
6FV8A	2.95
6FW5	3.85
6FY5/EC97	2.75
6FY7	3.20
6G6G	6.80
6G11	4.40
6GB5	3.70
6GC5	4.00
6GE5	3.85
6GF5	3.50
6GF7	4.85
6GH8A	3.00
6GJ5A	5.60
6GJ7	3.40
6GK5	3.85
6GK6	2.90
6GL7	5.50
6GM5	3.05
6GM6	2.75
6GN8	4.10
6GT5	5.25
6GU5	4.10
6GU7	3.20
6GV5	4.15
6GV8	3.10
6GW6/6DQ6B	3.90
6GW8/ECL86	3.05
6GX6	2.60
6GX7	3.60
6GY5	4.60
6GY5	4.60
6GY6	2.60
6GY8	3.55
6GZ5	2.70
6H6	4.30
6HA5	3.85
6HB5	4.20
6HB6	4.45
6HB7	3.35
6HE5	3.70
6HF5	7.30
6HF8	4.00
6HG5	2.70
6HG8	4.10
6HJ5	5.80
6HJ8	3.10
6HK5	$3.90
6HL8	3.05
6HM5/6HA5	3.85
6HM6	2.70
6HQ5	4.20
6HR6	2.75
6HS6	2.75
6HS8	3.55
6HZ6	2.75
6HZ8	5.50
6J5	3.70
6J5GT	3.70
6J6A	2.65
6J7	5.00
6J10	5.00
6J11	4.80
6JB6	5.60
6JC6	3.75
6JC8	3.05
6JD6	3.30
6JE6A	8.50
6JE8	3.70
6JG6A	6.00
6JH6	2.45
6JH8	4.10
6JK8	4.05
6JM6	4.15
6JN6	3.85
6JN8	3.65
6JS6	7.30
6JT6A	4.80
6JT8	4.00
6JU8A	3.35
6JV8	4.00
6JZ8	3.55
6K6GT	2.45
6K7	5.00
6K8	7.05
6K11/6Q11	3.65
6KA8	4.25
6KD8	2.80
6KE8	5.35
6KL8	2.60
6KM6	8.20
6KM8	3.45
6KR8	4.25
6KT8	4.10
6KU8	4.80
6KV8	5.85
6KY8	7.25
6KZ8	3.15
6L6	8.80
6L6GC	4.45
6L7	6.95
6LB8	4.70
6LC8	3.85
6LE8	5.55
6LF	3.50
6LM8	4.15
6LN8	2.40
6M11	4.55
6N7	5.05
6N7GT	5.20
6Q7	5.50
6R7	6.15
6S4A	2.35
6S8GT	4.15
6SA7	4.40
6SA7GT	4.40
6SB7Y	5.95
6SC7	4.40
6SF5	3.70
6SF5GT	3.05
6SF7	6.30
6SG7	4.70
6SH7	5.35
6SJ7	4.15
6SJ7GT	3.90
6SK7	4.25
6SK7GT	4.40
6SL7GT	3.35
6SN7GTB	2.45
6SQ7	3.85
6SQ7/GT	3.55
6SR7	4.25
6SS7	5.20
6T4	5.15
6T8A	3.20
6T9	3.70

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481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351

RCA ELECTRON TUBES

ENTERTAINMENT RECEIVING TYPES

* Optional List

PRICE SCHEDULE — SEPT. 1965

RCA Type	List Price*
6T10	$4.25
6U5	7.40
6U8A	3.10
6U10	3.65
6V3A	4.55
6V6	6.35
6V6GTA	2.05
6W4GT	2.30
6W6GT	2.70
6X4	1.60
6X5GT	2.10
6X8	3.00
6Y6GA/6Y6G	4.05
6Z4 use 84/6Z4	
7A4	7.10
7A5	5.65
7A7	7.15
7A8	7.80
7AF7	6.20
7AU7	2.45
7B4	6.80
7B7	7.65
7B8	5.60
7C5	3.35
7C6	7.30
7C7	3.40
7EY6	3.35
7F7	7.50
7F8	8.25
7H7	6.00
7HG8	3.15
7K7	8.10
7N7	7.10
7V7	4.65
7W7	6.55
7X7	7.65
7Z4	6.50
8AU8	3.85
8AWA	3.50
8B10	3.35
8BA8A	3.45
8BH8	3.35
8BN8	3.05
8BQ5	2.75
8CG7 use 8FQ7/8CG7	
8CM7	2.70
8CN7	3.05
8CS7	3.05
8CW5A	2.55
8CX8	4.40
8EB8	4.10
8EM5	3.25
8ET7	4.15
8FQ7/8CG7	2.35
8GJ7	3.25
8GN8	3.70
8JV8	3.65
8KA8	3.85
8LC	3.85
9A8	3.40
9AU7	2.65
9BR7	$3.15
9CL8	2.95
9EA8	3.05
9GV8	3.75
9KZ8	2.40
9U8A	3.10
10AL11	4.55
10C8	5.15
10CW5	3.40
10DE7	3.20
10DR7	4.10
10DX8	2.75
10EG7	4.35
10EM7	4.45
10GN8	3.55
10HF8	4.65
10JA8	3.55
10JY8	3.65
10KR8	4.25
10KU8	485
11AR11	4.10
11CY7	3.60
11JE8	3.85
11KV8	5.90
11LQ8	5.90
12AB5	3.30
12AC6	2.10
12AD6	2.60
12AE6A	2.75
12AF3	3.85
12AF6	2.85
12AH7GT	5.25
12AJ6	2.40
12AL5	2.10
12AL8	6.15
12AL11	4.20
12AQ5	2.45
12AT6	1.75
12AT7	2.85
12AU6	2.00
12AU7A	2.35
12AV5GA	4.50
12AV6	1.60
12AV7	3.40
12AW6	3.10
12AX3	3.00
12AX4GTB	2.55
12AX7A	2.40
12AY3	2.65
12AY7	4.85
12AZ7A	2.85
12B4A	3.05
12BA6	1.60
12BA7	5.60
12BD6	2.35
12BE3	3.05
12BE6	1.65
12BF6	2.10
12BH7A	2.90
12BK5	3.75
12BL6	2.85
12BQ6GTB/ 12CU6	4.20
12BR7	$3.05
12BS3A	3.35
12BT3	2.85
12BV7	3.30
12BW4	2.75
12BY7A	3.05
12BZ6	2.10
12BZ7	4.15
12C5 use 12CU5/12C5	
12CA5	2.85
12CN5	3.25
12CR6	2.60
12CT8	4.95
12CU5/12C5	2.75
12CU6 use 12BQ6GTB/ 12CU6	
12CX6	2.75
12D4	2.75
12DB5	2.60
12DE8	3.10
12DK6	2.30
12DK7	2.75
12DL8	5.85
12DQ6B use 12GW6/12DQ6B	
12DQ7	3.25
12DS7	4.05
12DT5	3.10
12DT8	3.55
12DU7	4.40
12DV8	4.00
12DW7	3.05
12DY8	7.95
12DZ6	3.60
12EA6	2.45
12EC8	3.40
12ED5	2.70
12EG6	3.45
12EK6	3.10
12EL6	1.90
12EN6	2.90
12EQ7	2.75
12F8	2.90
12FK6	2.20
12FM6	2.60
12FQ8	4.15
12FR8	6.90
12FV7	3.40
12FX5	2.45
12FX8A	3.85
12GA6	2.70
12GC6	3.95
12GE5	4.10
12GJ5	4.35
12GN7A	3.90
12GT5	4.50
12GW6/ 126Q6B	3.95
12H6	4.00
12HG7	3.90
12J5GT	4.80
12J8	$4.35
12JB6A	5.65
12JN6	3.90
12JN8	3.70
12JT6A	4.80
12K5	3.75
12K7GT	6.60
12KL8	2.45
12L6GT	3.55
12R5	3.35
12SA7	4.40
12SA7GT	4.40
12SC7	5.20
12SF5	3.85
12SF7	6.20
12SG7	4.70
12SH7	5.40
12SJ7	4.30
12SK7	4.00
12SK7GT	4.00
12SL7GT	3.55
12SN7GTA	2.55
12SQ7	3.75
12SQ7GT	3.75
12U7	2.50
12V6GT	3.75
12W6GT	3.75
12X4	1.95
13CW4	4.75
13DE7	3.20
13DR7	3.55
13EM7	4.85
13FD7	4.55
13FM7	3.00
13GB5	3.70
13GF7	4.65
13J10	5.05
14A7	5.55
14B6	5.30
14C7	6.20
14F7	8.45
14GT8	3.35
14JG8	3.10
14Q7	5.85
14R7	6.80
15AF11	4.75
15BD11	4.85
15CW5	2.65
15FM7	3.40
15FY7	3.55
15HB6	3.85
15KY8	4.75
16AQ3	2.70
16GK6	3.05
17AX3	2.60
17AX4GTA	3.05
17AY3	2.65
17BE3	2.90
17BF11	4.55
17BH3	2.85
17BQ6GTB	$5.20
17BS3	3.35
17C5	2.20
17C9	7.15
17CU5	2.35
17D4	3.05
17DE4	3.20
17DM4A	3.05
17DQ6B	3.95
17EW8	2.60
17GE5	4.35
17GJ5	5.50
17GT5	4.00
17GV5	4.20
17GW6	4.00
17H3	2.75
17JB6A	5.50
17JG6A	5.75
17JM6	4.20
17JN6	3.90
17JT6A	4.80
17JZ8	3.55
17LD8 use 15KY8	
18A5	3.90
18FW6A	2.45
18FX6A	2.20
18FY6A	2.20
18GD6A	2.00
19AU4GTA	6.65
19BG6GA	6.15
19CL8A	3.70
19EA8	3.85
19HR6	2.45
19HS6	2.40
19HV8	3.55
19J6	3.70
19JN8	3.05
19T8	3.70
19X8	4.10
20EZ7	3.40
21GY5	4.65
21HB5	4.35
21HJ5	5.85
22BH3A	3.10
22BW3	3.05
22DE4	3.40
22JF6	6.85
22JG6A	5.75
22JU6	5.75
23Z9	4.70
25AV5GA	4.80
25AX4GT	3.05
25BK5	3.40
25BQ6GTB/ 25CU6	4.40
25C5	2.20
25CA5	3.60
25CD6GB	5.75
25CU6 use 25BQ6GTB/ 25CU6	
25DN6	5.95
25EC6	6.15
25EH5	2.90
25F5A	$3.85
25L6GT	2.75
25W4GT	2.55
25Z5	4.35
2Z6GT	3.25
27GB5/PL500	3.70
32ET5A	2.40
33GT7	6.95
33GY7	6.05
33JV6	4.20
34GD5A	2.20
35A5	5.65
35B5	3.20
3C5	2.00
35DZ8	4.00
35EH5	2.75
35GL6	2.90
35L6GT	2.45
35W4	1.05
35Y4	4.50
35Z3	4.70
35Z4GT	2.55
35Z5GT	1.95
36AM3B	1.55
38HE7	6.65
42	4.85
43	7.20
50A5	5.85
50B5	2.60
50C5	2.00
50DC4	1.95
50EH5	2.20
50FE5	4.10
50FK5	2.20
50HC6	2.40
50HK6	2.15
50L6GT	2.55
50X6	5.85
50Y6GT	4.35
50Y7GT	4.25
60FX5	2.60
75	6.40
80	4.80
84/6Z4	3.40
117L7/M7GT	9.55
117N7GT	12.85
117P7GT	12.85
117Z3	4.50
117Z6GT	6.70
5879	3.85
6973	4.25
7025	2.80
7027A	6.75
7189	2.70
7199	4.45
7247	3.20
7355	3.10
7408	3.05
7543	2.90
7591A	2.80
7695	4.40
7868	3.85
EM84/6FG6	3.35

INDUSTRIAL TUBES FOR DEALER SERVICE

0A2	$ 1.85
0A3	2.20
0A3A	2.20
0A4G	2.65
0B2	1.95
0C3	2.10
0C3A	2.10
0D3	2.05
0D3A	2.05
0Z4A	1.60
1L4	3.10
1P40	4.40
2D21	1.85
2E24	6.85
2E26	4.40
2X2A	4.40
3A5	2.85
3AQP1	27.05
3B25	10.75
5CP1A	41.85
5R4GY	2.85
5R4GYB	2.85
5UP1	$15.50
6AK6	2.90
6AS6	4.85
6AS7G	6.95
6DJ8	3.40
6J4	5.65
12A6	4.75
12AT7WA	3.55
12AT7WB	3.55
12SW7	2.10
12SX7GT	3.55
12SY7	3.75
83	2.65
502A	3.20
807	3.70
811A	8.35
812A	8.35
816	3.80
866A	3.65
868	5.60
884	3.20
885	2.75
918	$7.15
920	8.70
922	4.05
925	5.20
927	5.50
929	3.05
930	4.45
991	1.45
1612	8.10
1614	6.95
1619	8.75
1620	10.60
1625	6.05
1629	2.90
1635	5.90
2250	3.35
2050A	2.85
5581	4.30
5642	5.85
5651	2.50
5651A	2.50
5654	3.40
5672	$3.20
5686	4.75
5763	3.45
5783	5.05
5814A	3.30
5823	2.45
5881	4.35
5915	2.30
5963	1.95
5965	2.70
6005	5.55
6080	7.50
6146	5.15
6146A	5.15
6146B/ 8298A	6.10
6159	5.65
6159B	6.55
6197	3.25
6202	3.80
6336A	26.70
6350	2.60
6386	$10.35
6417	4.70
6550	6.45
6550V1	14.80
6660/6BA6	1.45
6661/6BH6	1.90
6662/6BJ6	1.85
6663/6AL5	1.30
6664/6AB4	1.60
6669/6AQ5A	1.50
6676/6CB6A	1.50
6677/6CL6	2.60
6678/6U8A	2.30
6679/12AT7	2.10
6680/12AU7A	1.75
6681/12AX7A	1.80
6883	5.20
6883B/8032/ 8552	6.35
6893	5.25
6922	6.85
6939	15.95
7054	2.20
7056	1.30
7057	2.75
7058	1.80
7059	2.10
7061	1.85
7167	2.00
7308	6.00
7360	5.30
7551	4.75
7558	4.90
7717/ 6CY5	1.95
7724/ 14GT8	2.10
7898	1.90
7905	5.40
8077/ 7054	2.10
9001	7.55
9002	5.80
9003	7.55

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RCA PICTURE TUBES

RCA SILVERAMA
Black & White Picture Tubes

All materials and parts used in the manufacture of RCA Silverama Picture Tubes are new except for the envelope which, prior to re-use, was carefully inspected to meet the standards of the original new envelope.

RCA COLORAMA and RCA HI-LITE
Color Picture Tubes

RCA Colorama Picture Tubes contain used materials which, prior to reuse, are carefully inspected to meet RCA's high quality standards.

RCA Hi-Lite Color Television Picture Tubes contain all new parts and materials.

RCA SILVERAMA BLACK & WHITE Interchangeability Information

RCA TYPE	REPLACES
5TP4	**5TP4**
7JP4	7JP4
8DP4	8DP4
9QP4A	9QP4A
10BP4A	10BP4
	10BP4A
	10EP4
10FP4A	**10BP4C**
	10BP4D
	10CP4
	10FP4
	10FP4A
	SG10FP4A
12BNP4A	**12BNP4**
	12BNP4A
12KP4A	12JP4
	12KP4
	12KP4/ 12ZP4
	12LP4
	12LP4A
	12LP4C
	12QP4
	12QP4A
	12TP4
	12ZP4
	12ZP4A
	SG12K4A
14ATP4	**14ATP4**
14CP4B	14BP4
	14BP4A
	14CP4
	14CP4A
	14CP4B
	14DP4
	14EP4
	14EP/14CP4
	14EP4/ 14CP4/ 14BP4
	SG14CP4A
14WP4	14NP4
	14NP4A
	14RP4
	14RP4A
	14SP4
	14WP4
	14WP4/ 14ZP4
	14ZP4
	14ZP4/ 14WP4
	SG14WP4
16ANP4	**16ANP4**
16AP4A	16AP4
	16AP4A
16BGP4	**16BGP4**
	16CAP4
16AYP4	**16AYP4**
16DP4A	16DP4
	16DP4A
16GP4B	16GP4
	16GP4A
	16GP4B
	16GP4C
16LP4A	16CP4
	16LP4
	16LP4A
	16ZP4
16RP4B	16KP4
	16KP4A
	16QP4
	16RP4
	16RP4/ 16KP4
	16RP4A
	16RP4A/ 16KP4A
	16RP4B
	16UP4
	16XP4
	SG16KP4A
16TP4	16TP4
16WP4A	16SP4
	16SP4A
	16VP4
	16WP4
	16WP4/ 16YP4
	16WP4A
	16WP4B
	16YP4
17BJP4	17ATP4
	17ATP4/ 17AVP4
	17ATP4A
	17ATP4A/ 17AVP4A
	17AVP4
	17AVP4/ 17ATP4
	17AVP4A
	17AVP4A/ 17ATP4A
	17BJP4
	17BUP4
	17CBP4
	17CLP4
	SG17BJP4
17BP4D	17AP4
	17BP4
	17BP4A
	17BP4B
	17BP4C
	17BP4D
	17JP4
	SG17BP4B
17CDP4	**17CDP4**
17CFP4	**17CFP4**
17CP4	17CP4
	17CP4A
17CSP4	**17BVP4**
	17BWP4
	17CSP4
	SG17BWP4
17CYP4	**17CYP4**
17DAP4	**17DAP4**
17DKP4	**17DKP4**
	17DTP4
17DQP4	**17DQP4**
17DRP4	**17DRP4**
17DSP4	**17BRP4**
	17BZP4
	17BZP4/ 17CAP4/ 17CKP4
	17BZP4/ 17CAP4/ 17CKP4/ 17BRP4
	17CAP4
	17CKP4
	17CWP4
	17DLP4
	17DSP4
	SG17CKP4
17DXP4	**17DXP4**
	17DZP4
17EFP4	**17DHP4**
	17EBP4
	17EFP4
17GP4	17GP4
17HP4C	17HP4
17GP4	17HP4/ 17RP4
	17HP4A
	17HP4B
	17HP4B/ 17RP4C
	17HP4C
	17RP4
	17RP4C
	SG17HP4B
17LP4B	17LP4
	17LP4/ 17VP4
	17LP4A
	17LP4A/ 17VP4B
	17LP4B
	17VP4
	17VP4/ 17LP4
	17VP4B
	SG17LP4A
17QP4B	17QP4
	17QP4A
	17QP4B
	17UP4
	17YP4
	SG17QP4A
17TP4	17TP4
19ABP4	**19ABP4**
19AHP4	**19AHP4**
19AJP4	**19AJP4**
19AP4B	19AP4
	19AP4A
	19AP4B
	19AP4C
	19AP4D
19AUP4	**19AFP4**
	19AUP4
19AVP4	**19AVP4**
	19BHP4
	19BLP4
	19BVP4
	19XP4
	19ZP4
19AYP4	**19AXP4**
	19AYP4
	19BWP4
19BDP4	**19BDP4**
19BTP4	**19BTP4**
	19YP4
19CHP4	**19ACP4**
	19CFP4
	19CHP4
	19CKP4
	19DLP4
19CMP4	**19CMP4**
19CXP4	**19CDP4**
	19CQP4
	19CXP4
19DAP4	**19CZP4**
	19DAP4
19DRP4	**19DCP4**
	19DRP4
	19EDP4
	19EHP4
	19EHP4A
	19ERP4
	19EUP4
19DQP4	**19DQP4**
	19DWP4
	19EVP4
	19EWP4
	19FCP4
	19FDP4
	19FJP4
	19FJP4A
19DSP4	**19DHP4**
	19DSP4
20DP4D	20CP4
	20CP4A
	20CP4B
	20CP4C
	20CP4D
	20DP4
	20DP4A
	20DP4A/ 20CP4A
	20DP4B
	20DP4C
	20DP4C/ 20CP4D
	20DP4D
	SG20CP4D
20HP4E	20HP4
	20HP4A
	20HP4A/ 20LP4
	20HP4A/ 20MP4
	20HP4B
	20HP4C
	20HP4D
20HP4E	**20HP4E**
	20LP4
	20MP4
	SG20HP4D
21AMP4B	21ACP4
	21ACP4/ 21AMP4
	21ACP4A
	21ACP4A/ 21AMP4A
	21ACP4A/ 21BSP4
	21ACP4A/ 21BSP4/ 21AMP4A
	21AMP4
	21AMP4A
	21AMP4B
	21AQP4
	21AQP4A
	21BSP4
	21CUP4
	SG21ACP4A
21AP4	21AP4
21AVP4C	21AUP4
	21AUP4A
	21AUP4B
	21AUP4B/ 21AUP4A
	21AUP4C
	21AVP4
	21AVP4/ 21AUP4
	21AVP4A
	21AVP4B
	21AVP4B/ 21AVP4A
	21AVP4B/ 21AUP4B/ 21AVP4A/ 21AUP4A
	21AVP4C
	21BDP4
	SG21AUP4B
21AWP4A	**21AWP4**
	21AWP4A
	SG21AWP4
21CBP4A	21ALP4
	21ALP4A
	21ALP4B
	21ALP4B/ 21ALP4A
	21ANP4
	21ANP4A
	21ATP4
	21ATP4A
	21ATP4A/ 21ATP4
	21ATP4B
	21BAP4
	21BNP4
	21BTP4
	21CBP4
	21CBP4A
	21CBP4A/ 21CBP4/ 21CMP4
	21CBP4B
	21CMP4
	21CVP4
	21CWP4
	21DNP4
	21FLP4
	SG21FLP4
21CQP4	**21CQP4**
21DEP4A	**21CZP4**
	21DAP4
	21DEP4
	21DEP4A
	21DEP4A/ 21DEP4/ 21CZP4
	SG21DEP4A
21DFP4	**21CEP4**
	21CEP4A
	21DFP4
21DHP4	**21DHP4**
21DLP4	**21DLP4**
	21DQP4
21DSP4	**21CXP4**
	21DSP4
21EP4C	21EP4
	21EP4A
	21EP4B
	21EP4C
	SG21EP4B
21EQP4	**21EMP4**
	21EQP4
21EVP4	**21EVP4**
21FAP4	**21DMP4**
	21ESP4
	21FAP4
21FDP4	**21EAP4**
	21FDP4
21FP4D	21FP4
	21FP4A
	21FP4C
	21FP4D
	SG21FP4C
21FVP4	**21FVP4**
	21EWP4
21MP4	21MP4
21WP4B	21WP4
	21WP4A
	21WP4B
	SG21WP4A
21XP4B	21ASP4
	21AYP4
	21XP4
21XP4B	**21XP4A**
	21XP4B
	SG21XP4A
21YP4B	21AFP4
	21BCP4
	21YP4
	21YP4A
	21YP4B
	SG21YP4A
21ZP4C	21ZP4
	21ZP4A
	21ZP4B
	21ZP4C
	SG21ZP4B
23AHP4	**23AHP4**
	23AUP4
	23CZP4
23ARP4	**23ARP4**
23ASP4	**23ASP4**
23BGP4	**23BGP4**
	23BHP4
23BJP4	**23AWP4**
	23BJP4
23BLP4	**23ANP4**
	23ATP4
	23BKP4
	23BLP4
	23DNP4
23BQP4	**23BQP4**
	23UP4
23CBP4	**23CBP4**
12CGP4	**23CGP4**
23CP4	**23AVP4**
	23BNP4
	23CP4
	23CP4A
	23GP4
	23HP4
23CQP4	**23ALP4**
	23CQP4
23DAP4	**23DAP4**
23DBP4	**23DBP4**
23ENP4	**23DLP4**
	23DLP4A
	23ENP4
	23FEP4
23EP4	**23EP4**
23EQP4	**23DZP4**
	23EQP4
	23EWP4
	23EWP4A
23ETP4	**23DYP4**
	23ETP4
	23FJP4
	23GTP4
23FBP4	**23FBP4**
23FP4A	**23FP4**
	23FP4A
	23KP4
	23KP4A
	23MP4
	23MP4/ 23MP4A/ 23WP4
	23MP4A
	23WP4
23JP4	23JP4
23NP4	23NP4
23YP4	23AFP4
	23BDP4
	23BTP4
	23BVP4
	23XP4
	23YP4
24AEP4	**24EAP4**
	24ANP4
	24DP4
	24DP4A
	24DP4A/ 24YP4
	24YP4
	24ZP4
	SG24AEP4
24AHP4	**24AHP4**
	24ALP4
24ATP4	**24ATP4**
24AUP4	**24AUP4**
24BAP4	**24BAP4**
24BEP4	**24AVU4**
	24BEP4
24CP4B	**24ADP4**
	24ADP4/ 24AVP4A/ 24CP4A/ 24TP4
	24CP4
	24CP4A
	24CP4B
	24QP4
	24TP4
	24VP4
	24VP4A
	24XP4
	SG24CP4A
27MP4	**27MP4**
27RP4A	**27EP4**
	27GP4
	27NP4
	27RP4
	27RP4A
	SG27RP4

RCA COLOR PICTURE TUBES Interchangeability Information

COLORAMA TYPES	
15GP22	**15GP22**
21AXP22A	**21AXP22**
	21AXP22A
	21AXP22A/ 21AXP22
21CYP22A	**21CYP22**
	21CYP22A
21FBP22	**21FBP22**
21FJP22	**21FJP22**
	21FKP22
25AP22	**25AP22A**

HI-LITE TYPES	
21FBP22A	**21FBP22A**
21FJP22A	**21FJP22A**
25AP22A	**25AP22**
	25AP22A

Bold Face Indicates Aluminized Types.

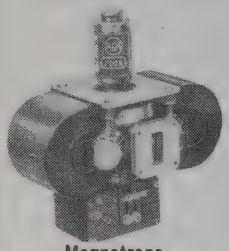
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RCA ELECTRON TUBES
FOR INDUSTRY AND COMMUNICATIONS

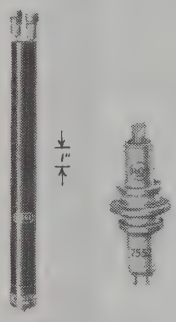
RESALE PRICE SCHEDULE • JULY, 5, 1965

POWER/MICROWAVE/PHOTOSENSITIVE/CAMERA/DISPLAY/INDUSTRIAL RECEIVING

MICROWAVE DEVICES



Magnetrons



Traveling Wave

Pencil

CAMERA & DISPLAY

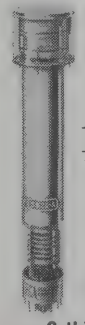
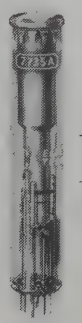


Image Orthicons



Vidicons

RCA Type	Dist. Resale Price Optional
RCA POWER TUBES	
RCA VACUUM POWER TUBES FOR CW APPLICATIONS	
2C39A	$20.75
2C39A-V1	20.75
2C39WA	25.00
2C40	29.30
2C40A	34.00
2C43	26.95
2E24	5.85
2E26	3.75
4-125A/4D21	36.00
4-250A/5D22	46.50
4E27A/5-125B	45.00
4X500A	128.50
9C21	1,775.00
9C25	1,690.00
207	370.00
801A	13.00
802	16.45
805	22.10
807	3.15
809	8.95
810	28.60
811A	7.15
812A	7.15
813	24.30
814	31.50
815	28.35
827R	370.00
828	32.95
829B	19.90
832A	16.75
833A	53.65
834	21.70
837	12.65
845	25.80
880	715.00
889A	260.00
889RA	435.00
891	342.00
891R	540.00
892	342.00
892R	535.00
1624	7.50
1625	5.15
2029	7875.00
4602	P
4604	8.40
4615	75.00
5556	42.50
5671	1,860.00
5713	340.00
5762/7C24	230.00
5770	1,250.00
5771	675.00
5786	220.00
6146	4.35
6146A	4.35
6146B/8298A	5.20
6146W	6.75
6155	36.00
6156	42.60
6159	4.80
6159B	5.60
6159W/7357	6.90
6161	125.00
6166	735.00
6166A/7007	1,020.00
6524	20.75
6806	69.75
6816	52.90
6850	19.30
6883	4.45
6883B/8032A/8552	5.40
6884	60.00
6893	4.15
6897	32.15
7034/4X150A	25.00
7035/4X150D	27.90
7094	32.25
7203/4CX250B	35.75
7204/4CX250F	39.35
7213	465.00
7271	27.70
7457	65.25
7580	45.05
7650	290.00
7801	120.00
7842	65.25
7843	$52.50
7844	52.00
7870	120.00
8000	24.40
8005	17.85
8032	4.95
8072	18.75
8121	25.90
8122	31.60
8165/4-65A	27.00
8166/4-1000A	132.00
8168/4CX1000A	181.00
8170/4CX5000A	495.00
8226	83.00
8239/3X3000F1	215.00
8437	1950.00
8438/4-400A	48.00
8560	51.50
8596	75.00
RCA VACUUM POWER TUBES FOR RF-PULSE APPLICATIONS	
2C40A	34.00
2041	7825.00
4605V2	8090.00
4612	63,890.00
4616	11,225.00
4617	57,225.00
4622	70.00
5946	125.00
7214	490.00
7649	70.00
7651	305.00
7835	47,475.00
8134	1,890.00
8227	90.10
RCA HARD-TUBE MODULATORS	
3E29	21.35
4610	21.35
6293	5.95
RCA VACUUM POWER TUBES FOR SPECIAL APPLICATIONS	
3C33	29.30
4600A	330.00
4614	310.00
RCA RECTIFIERS VACUUM TYPES — Half-Wave Types	
2X2A	3.35
579B	20.50
836	12.65
1616	13.65
5825	22.90
8013A	19.80
8020	16.00
MERCURY-VAPOR TYPES — Half-Wave Types (except as noted)	
575A	20.15
604/7014	11.80
615/7018	9.75
635/7019	13.00
635L/7020	13.50
673	20.15
816	3.25
857B	235.00
866A	3.10
869B	150.00
872A	10.85
4620	218.50
5558	17.50
5561	59.00
6894	25.00
6895	25.00
8008	10.85
GAS TYPES — Half-Wave Types	
3B25	9.15
3B28	6.60
RCA IGNITRONS	
5550	49.00
5551A	65.00
5552A	99.00
5553B	245.00
RCA THYRATRONS TRIODES (Mercury-Vapor Types)— For Control Service (except as noted)	
3C23	$11.98
627	31.50
676	63.80
677	63.80
710/6011	13.00
714/7021	9.50
716/6855	12.50
760/6858	28.10
5557	9.50
5559	23.00
5563A	50.00
TRIODES (Gas Types)— For Control Service (except as noted)	
3D22A	32.30
629	18.25
6130/3C45	14.00
C1K/6014	13.10
C3J/5632	13.80
C3JA/5684	14.50
C3JL	15.25
C6J/5C21	28.10
C6JA/5685	29.00
C16J/5665	52.50
TETRODES (Mercury-Vapor Types)— For Control Service (except as noted)	
105	59.00
172	129.00
632B	33.00
672A	39.85
5560	33.00
RCA MICROWAVE TUBES	
RCA MAGNETRONS (For Pulsed-Oscillator Service)	
6521	700.00
7008	1110.00
6865-A	1,590.00
4011-A	1,585.00
RCA TRAVELING-WAVE TUBES	
4012	1,425.00
4013	1,425.00
4015	3160.00
4017	1340.00
4019	1725.00
4020	2845.00
4021	2635.00
6861	955.00
7642	1265.00
RCA PENCIL TUBES	
4037	20.50
4046	58.00
5675	8.95
5876	8.60
5876A	8.60
5893	20.75
6173	13.35
6263A	13.05
6264A	13.85
6562/5794A	6.80
7533	6.80
7552	47.70
7553	57.10
7554	40.00
RCA PHOTOSENSITIVE TUBES & DEVICES	
RCA PHOTOCONDUCTIVE CELLS	
SQ2500	1.55
SQ2501	2.85
SQ2502	2.85
SQ2504	1.55
SQ2505	1.50
SQ2506	1.65
SQ2508	1.90
SQ2509	1.00
SQ2514	13.20
4402	1.70
4403	1.50
4404	1.40
4413	2.65
4423	1.65
4424	1.75
4425	$ 1.65
4448	1.55
4450	1.40
4451	1.40
4453	1.60
7163	1.35
RCA PHOTOJUNCTION CELLS	
4420	6.40
SQ2516	12.50
RCA PHOTOVOLTAIC CELLS	
SL2205	10.30
SL2206	14.30
RCA PHOTOTUBES SINGLE- AND TWIN-UNIT TYPES — Gas Types	
1P29	5.60
1P37	4.50
1P40	3.45
1P41	3.75
868	4.45
918	5.25
920	6.25
921	3.45
923	3.15
927	3.60
928	7.10
930	3.65
4409	5.00
5581	3.45
5582	5.40
5583	4.80
5584	7.15
6405/1640	7.85
6953	4.45
SINGLE AND TWIN-UNIT TYPES — Vacuum Tubes	
1P39	2.10
1P42	13.95
917	7.00
919	7.15
922	3.30
925	4.15
926	3.75
929	2.10
934	4.15
935	11.90
5652	6.25
5653	2.80
6570	9.00
7043	4.40
RCA MULTIPLIER PHOTOTUBES	
1P21	54.50
1P22	15.80
1P28	21.60
931-A	12.40
2020	85.00
2067	155.00
4438	105.00
4439	105.00
4440	105.00
4441	155.00
4441A	320.00
4459	490.00
4460	205.00
4461	260.00
4463	310.00
4464	340.00
4465	420.00
5819	64.25
6199	47.30
6217	72.00
6328	13.65
6342-A	57.20
6472	14.75
6655-A	54.35
6810-A	195.00
6903	370.00
7029	605.00
7046	570.00
7102	110.00
7117	12.65
7200	205.00
7264	265.00
7265	375.00
7326	410.00
7746	200.00
7764	125.00
7767	120.00
7850	240.00
8053	107.25
8054	125.00
8055	170.00
8575	360.00

P—Price and Delivery on Request

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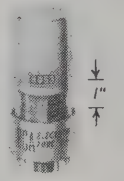
RCA ELECTRON TUBES
FOR INDUSTRY AND COMMUNICATIONS

RESALE PRICE SCHEDULE • JULY, 5, 1965

POWER/MICROWAVE/PHOTOSENSITIVE/CAMERA/DISPLAY/INDUSTRIAL RECEIVING

RCA Type	Dist. Resale Price Optional
RCA CAMERA & DISPLAY TUBES	
RCA IMAGE ORTHICONS	
8092-A	$1,870.00
8093-A	1,320.00
8093/AL	1,675.00
7293-A	1,300.00
7293A/L	1,625.00
5820-A	1,100.00
5820A/L	1,625.00
7513	1,320.00
7513L	1,675.00
7513/V1*	1,400.00
4401/V1	1,320.00
4414/7611	1620.00
4415**	1,400.00
4415V1	1,320.00
4416**	1,400.00
7295-B	1,440.00
7389-B	1,440.00
7629-A	1,700.00
RCA MONOSCOPES	
2F21	275.00
1699	P
RCA VIDICONS	
2048-A	720.00
4427	585.00
4478	107.00
4488	125.00
6326	515.00
6326A	515.00
7038	185.00
7262-A	250.00
7263-A	430.00
7697	185.00
7735-A	185.00
8051	575.00
8507	250.00
8480	820.00
8134	405.00
8134/V1	405.00
RCA IMAGE-CONVERTER TUBES	
4449A	1585.00
4476/6914	150.00
4477/6922	145.00
4481/6929	125.00
4483/6914	135.00
4484/6914A	150.00
4485/6914	140.00
6032-A	170.00
6381	P
6914	99.25
6914-A	130.00
6929	P
7404	370.00
RCA CATHODE-RAY TUBES OSCILLOGRAPH TYPES	
1EP1	25.75
1EP11	28.10
2AP1-A	17.70
2BP1	20.15
2BP11	21.60
3AP1-A	22.75
3AQP1	23.10
3BP1-A	18.50
3JP1	23.20
3KP1	21.90
3RP1	13.20
3RP1-A	23.35
3WP1	28.30
5ABP1	34.00
5ADP1	34.00
5BP1-A	35.05
5CP1-A	24.30
5UP1	13.25
5UP7	26.25
7MP7	40.45
7VP1	25.30
7VP31	24.85
902-A	21.45
TRANSCRIBER KINESCOPE	
5WP11	99.40
VIEW-FINDER KINESCOPES	
5FP4-A	27.75
MONITOR KINESCOPES	
7TP4	$75.80
8HP4	48.30
8NP4	24.70
8QP4	35.05
14BAP4	36.25
17DWP4	37.30
21EYP4	31.85
PROJECTION KINESCOPES	
5AZP4	127.00
7NP4	1,085.00
7WP4	1,110.00
FLYING-SPOT CATHODE-RAY TUBES	
5AUP24	150.00
5WP15	99.40
5ZP16	92.25
4452	90.00
STORAGE TUBES COMPUTER STORAGE TUBE	
Primary-Current-Modulation Type	
6571	77.95
DISPLAY STORAGE TUBES Direct-View Types	
2053	P
4412	3240.00
4454	1,135.00
6866	1,280.00
7183	1050.00
7268	P
7315	925.00
RADECHON Single Beam, Barrier-Grid Type	
1858	430.00
6499	360.00
GRAPHECHON Scan-Conversion Type	
7539	1,720.00
RECEIVING TYPE TUBES FOR INDUSTRY AND COMMUNICATIONS	
Beam Deflection	
7360	3.77
Beam Power	
Subminiature:	
5902	4.80
Miniature:	
5686	3.37
5763	2.45
6005	3.93
6005/6AQ5W	3.95
6005/6AQ5W/6095	3.95
6417	3.04
6669/6AQ5A	1.12
7061	1.29
7551	3.37
7558	3.49
7905	3.85
Other Air-Cooled Types:	
12A6	3.36
1614	4.93
1619	5.67
1622	4.85
1631	3.45
Diodes, Misc.	
9005	8.05
9006	2.70
Glow-Discharge	
0A2	1.32
0A3	1.54
0A3A	1.54
0A4G	1.86
0B2	1.37
0C2	1.50
0C3	1.50
0C3A	1.50
0D3	1.44
0D3A	1.44
1C21	$4.15
991	.87
5651	1.78
5651A	1.78
5651WA	3.80
5823	1.72
6072	3.90
6073	3.00
6073/0A2	3.35
6074	3.45
6074/0B2	3.70
6626/0A2WA	3.35
Pentodes	
Subminiature:	
5636	6.10
5639	5.25
5840	5.35
5899	5.55
6205	6.40
6206	7.25
Miniature:	
1L4	1.37
3A4	1.25
6AK6	1.40
6AS6	3.43
6AU6WA	2.70
6AU6WB	2.70
26A6	3.70
5618	6.75
5654	2.41
5654/6AK5W	2.45
5654/6AK5W/6096	4.35
5725	3.15
5749	2.20
5749/6BA6W	2.20
5847/404A	9.55
6136	2.70
6186	3.85
6186/6AG5WA	3.85
6189/12AU7WA	3.70
6197	2.30
6660/6BA6	1.08
6661/6BH6	1.39
6662/6BJ6	1.34
6676/6CB6A	1.16
6677/6CL6	1.86
7054	1.54
7056	.92
8077/7054	1.50
9001	5.38
9003	5.38
Acorn:	
959	13.85
Other Air-Cooled Types:	
6AC7W	4.20
6AG7Y	2.80
1613	3.00
1620	7.55
1621	3.50
5693	6.60
Rectifiers	
Vacuum:	
83	1.89
5R4GYB	2.03
6X4W	1.60
5642	3.82
Tetrodes	
Nuvistor:	
7587	5.20
Thyratrons	
Gas:	
2D21	1.29
2D21W	2.90
884	2.28
502A	2.28
2050	2.37
2050A	2.21
5696	2.05
5727	2.90
5727/2D21W	2.90
6012	7.65
Triodes	
Subminiature:	
5718	3.65
5719	3.15
6814	5.90
Miniature:	
6J4	$4.02
6J4WA	5.60
6J6WA	5.35
6664/6AB4	1.12
9002	4.14
Nuvistor:	
7586	3.35
7895	3.35
8056	5.00
8058	13.25
8203	3.80
8393	3.60
Acorn:	
6F4	13.10
6L4	8.40
955	7.05
Twin Diodes	
5726	1.55
5726/6AL5W	1.55
5726/6AL5W/6097	1.55
5896	3.80
6663/6AL5	.98
6887	1.25
7055	1.00
TWIN PENTODES	
6939	11.37
TWIN TRIODES	
3A5	2.03
6AS7G	4.93
12AT7WA	2.53
12AT7WB	2.53
12SX7GT	2.53
1635	3.82
5670	2.45
5670WA	2.45
5687	4.05
5691	8.75
5692	8.25
5751	2.55
5751WA	2.55
5814A	2.35
5814WA	2.40
5842/417A	7.35
5963	1.36
5964	1.55
5965	1.92
6021	3.50
6072	3.90
6080	5.33
6080WA	10.80
6082	5.60
6101	5.35
6101/6J6WA	5.35
6111	3.70
6112	4.15
6189/12AU7WA	3.70
6201	2.95
6211	2.15
6336A	19.04
6350	1.85
6386	7.38
6679/12AT7	1.53
6680/12AU7A	1.26
6681/12AX7A	1.29
6922	4.87
7044	2.70
7057	1.95
7058	1.26
7898	1.34
TWIN DIODE TRIODES AND TRIODE PENTODES	
12SW7	1.49
26C6	3.05
6678/6U8A	1.67
7059	1.48
7060	1.75
MISCELLANEOUS TYPES	
2K26	65.00
12SY7	2.67
26D6	3.05
1612	5.77
1629	1.86
5734	22.05
5750	3.45
5915	1.62
6550	4.59
7724/14GT8	1.48

PHOTOSENSITIVE



Multiplier

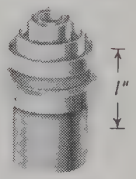


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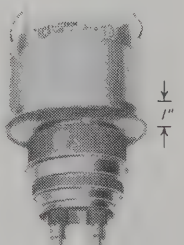


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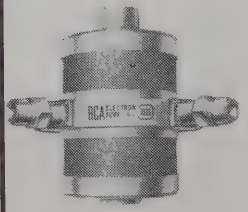
POWER TUBES



Small



Large



Super

*Available in matched sets of three **Available as matched set of three—two 4415's, one 4416

P—Price and Delivery on Request

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Westinghouse

INDUSTRIAL · POWER · SPECIAL TYPES

SUGGESTED INDUSTRIAL USER

PRICE LIST · · · FID-001

April 1, 1965

Type	Suggested Industrial User Price	Warranty Class	Description
WL-0A2	$ 1.32	J	Voltage Regulator
WL-0A2WA	3.35	J	Voltage Regulator
WL-0A3/VR75	1.54	J	Voltage Regulator
WL-0B2	1.37	J	Voltage Regulator
WL-0B2WA	2.40	J	Voltage Regulator
WL-0B3/VR90	2.35	J	Voltage Regulator
WL-0C3/VR105	1.50	J	Voltage Regulator
C1BA	Order WL-5664/C1B/A		
C1JA	Order WL-6014/5683/C1K		
C1K	Order WL-6014/5683/C1K		
C3J	Order WL-5632/C3J		
C3J/A	Order WL-7306A/5684/C3J/A		
C3J/AL	Order WL-7556A/C3J/AL		
3C	Order WL-4B24/3C		
WL-0D3/VR150	1.44	J	Voltage Regulator
1C	Order WL-3B22/1C		
WL-1P39	2.50	J	Phototube
WL-1P40	3.75	J	Phototube
WL-1Q22	48.50	B	Reference Cavity
WL-1Q23	48.50	B	Reference Cavity
WL-1Q24	48.50	B	Refe.ence Cavity
WL-2C39A	20.75	E	Triode
WL-2C39B	32.15	E	Triode
WL-2D21	1.29	J	Thyratron
2D21W	Order WL-5727/2D21W		
WL-2E24	5.85	J	Beam
WL-2E26	3.75	J	Beam
WL-2X2A	3.65	J	Vacuum Rectifier
WL-3B22/1C	10.85	F	Gas Rectifier
WL-3B28	6.00	J	Gas Rectifier
WL-3C23	11.98	B	Thyratron
WL-3X2500A3	200.00	E	Triode
WL-3X2500F3	205.00	E	Triode
WL-4B24/3C	11.80	F	Gas Rectifier
4CX250B	35.75	E	Beam
4CX5000A	495.00	E	Beam
WL-4D21/4-125A	36.00	E	Tetrode
4-125A	Order WL-4D21/4-125A		
4-250A	Order WL-5D22/4-250A		
WL-4-400A	48.00	E	Tetrode
WL-4X500A	127.50	E	Tetrode
WL-4-1000A	131.50	E	Tetrode
WL-5C21/C6J	28.10	A	Thyratron
WL-5D22/4-250A	46.50	E	Tetrode
5R4GYA	Order WL-5R4GYB		
WL-5R4GYB	2.03	J	Full-Wave Vac. Rectifier
6AK5W	Order WL-5654/6AK5W		
WL-6AS6	3.43	J	Pentode
WL-6AS7GA	4.93	J	Twin Triode
WL-6J4	4.19	J	Triode
WL-C6H-1	29.10	A	Thyratron
WL-C6H-2	30.25	A	Thyratron
WL-C6H-3	30.25	A	Thyratron
C6J	Order WL-5C21/C6J		
C6J/A	Order WL-5685/C6J/A		
C6J/F	Order WL-6860/C6J/F		
C6J/K	Order WL-C6H-1		
C6J/L	Order WL-7321/C6J/L		
C6J/KF	Order WL-C6H-2		
6C	Order WL-670/6C		
7C24	Order WL-5762/7C24		
12AU7WA	Order WL-6189/12AU7WA		
12AY7	2.45	J	Twin Triode

Type	Suggested Industrial User Price	Warranty Class	Description
FG-17	$ Order WL-5557/17		
FG-32	Order WL-5558/32		
FG-33	Order WL-5720/33		
FG-41	Order WL-5830/41		
FG-57	Order WL-5559/57		
WL-81A	32.50	A	Thyratron
FG-95	Order WL-632B		
ML-100	Order WL-5575/100/616		
WL-102A	174.00	E	Vacuum Rectifier
FG-104	Order WL-5561/104		
WL-105	59.00	B	Thyratron
WL-106 ··	190.00	E	Klystron
WL-107 ··	255.00	E	Klystron
WL-108 ··	290.00	E	Klystron
WL-119 ··	325.00	E	Klystron
WL-121 ··	260.00	E	Klystron
WL-122 ··	195.00	E	Klystron
WL-123 ··	255.00	E	Klystron
WL-124 ··	295.00	E	Klystron
WL-126 ··	280.00	E	Klystron
WL-135 ··	135.00	E	Klystron
WL-146 ··	160.00	E	Klystron
WL-147 ··	135.00	E	Klystron
WL-148 ··	135.00	E	Klystron
WL-172	122.00	B	Thyratron
WL-177 ··	225.00	E	Klystron
WL-187 ··	195.00	E	Klystron
WL-191 ··	395.00	E	Klystron
199	Order WL-8094/199		
ML-200	Order WL-5576/200		
WL-207 ·	330.00	E	Triode
FG-239B	Order WL-5555/653B		
FG-258A	Order WL-5553B/655		
FG-258B	Order WL-5553B/655		
FG-259B	Order WL-5554/679		
356	Order WL-5771/356		
WL-399	80.60	A	Vacuum Rectifier
WL-414	254.00	B	Thyratron
GL-415	Order WL-5550/681		
WL-450TH	85.00	E	Triode
WL-456/332	207.00	E	Vacuum Rectifier
WL-481B	10.90	F	Vacuum Rectifier
WL-502A	2.28	J	Thyratron
WL-575A	20.15	B	Vapor Rectifier
WL-579B	20.50	F	Vacuum Rectifier
600	Order WL-3B22/1C		
604	Order WL-7014/604		
604L	Order WL-7015/604L		
606	Order WL-7016/606		
606L	Order WL-7017/606L		
KU-610	30.75	F	Thyratron
613/304	222.00	E	Vacuum Rectifier
615	Order WL-7018/615		
616	Order WL-5575/100/616		
KU-618	17.10	F	Thyratron
WL-624	79.00	B	Thyratron
WL-627	27.50	B	Thyratron
WL-628	41.00	B	Thyratron
WL-629	18.25	F	Thyratron
WL-632B	33.00	B	Thyratron
635	Order WL-7019/635		
635L	Order WL-7020/635L		
635P	Order WL-6930/635P		
KX-642	17.00	F	Glow Tube

WES-1

Type	Suggested Industrial User Price	Warranty Class	Description
WL-651	$ Order WL-5552A/651		
WL-652	Order WL-5551A/652		
WL-653	Order WL-5555/653B		
WL-653B	Order WL-5555/653B		
WL-658	Order WL-5553/655		
WL-670A/6C	21.40	A	Gas Rectifier
WL-672A	39.85	B	Thyratron
WL-673	20.15	B	Vapor Rectifier
KU-676	63.80	B	Thyratron
WL-677	63.80	B	Thyratron
WL-678	49.00	E	Thyratron
679	Order WL-5554/679		
WL-681	Order WL-5550/681		
WL-682	Order WL-5550/681		
WL-686	Order WL-5550/681		
WL-710	Order WL-7307A/6011/710		
WL-710L	Order WL-7509A/710L		
WL-740	Order WL-6856/740		
740L	Order WL-7022/740L		
WL-759	48.75	B	Glow Tube
760	Order WL-6858/760		
760L	Order WL-7023/760L		
760P	Order WL-6859/760P		
WL-762	24.00	F	Pirani Gauge
WL-765	33.00	F	Pirani Gauge
WL-765A	33.00	F	Pirani Gauge
WL-803	49.20	E	Pentode
WL-807	2.95	J	Beam
WL-810	26.95	E	Triode
WL-811A	6.90	J	Triode
WL-812A	6.90	J	Triode
WL-813	23.15	E	Beam
WL-815	28.35	F	Twin-Beam
WL-816	2.95	J	Vapor Rectifier
WL-829B	19.00	E	Twin-Beam
WL-832A	15.90	E	Twin-Beam
WL-833A	53.65	E	Triode
WL-836	11.10	F	Vacuum Rectifier
WL-838	20.00	E	Triode
WL-857B *	218.50	E	Vapor Rectifier
WL-866A	2.65	J	Vapor Rectifier
WL-869B *	138.00	E	Vapor Rectifier
WL-869BL *	138.00	E	Vapor Rectifier
WL-872A	9.90	F	Vapor Rectifier
WL-880	Order WL-5658		
WL-885	2.00	J	Thyratron
WL-889A	235.00	E	Triode
WL-889RA	Order WL-5667		
WL-891 *	275.00	E	Triode
WL-891R *	430.00	E	Triode
WL-892 *	270.00	E	Triode
WL-892R *	425.00	E	Triode
WL-895	1695.00	E	Triode
WL-895R	2025.00	E	Triode
WL-922	3.45	J	Phototube
WL-923	3.80	J	Phototube
WL-927	4.70	J	Phototube
WL-930	3.80	J	Phototube
WL-931A	12.40	J	Phototube
WL-1000T	169.00	E	Triode
1022A	Order WL-5822A		
1051A	Order WL-5551A/652		
1052A	Order WL-5552A/651		
1053A	Order WL-5553B/655		
WL-2050	2.21	J	Thyratron
WL-2050A	2.21	J	Thyratron
WL-5513	572.00	E	Triode
WL-5550/681	49.00	B	Ignitron
WL-5551/652	Order WL-5551A/652		
WL-5551A/652	65.00	B	Ignitron
WL-5551A/652-PC	65.00	B	Plastic Coated Ignitron
WL-5552/651	Order WL-5552A/651		

Type	Suggested Industrial User Price	Warranty Class	Description
WL-5552A/651	$ 99.00	B	Ignitron
WL-5552A/651-PC	99.00	B	Plastic Coated Ignitron
WL-5553/655	Order WL-5553B/655		
WL-5553B/655	245.00	B	Ignitron
WL-5553B/655-PC	245.00	B	Plastic Coated Ignitron
WL-5554/679	215.00	D	Ignitron
WL-5555/653B	316.00	D	Ignitron
WL-5555A	316.00	D	Ignitron
WL-5557/17	9.50	B	Thyratron
WL-5558/32	17.50	B	Vapor Rectifier
WL-5559/57	23.00	B	Thyratron
WL-5560	Order WL-632B		
WL-5561/104	59.00	B	Vapor Rectifier
WL-5563A	50.00	E	Thyratron
WL-5575/100/616	225.00	E	Vapor Rectifier
WL-5576/200	245.00	E	Vapor Rectifier
WL-5604	570.00	E	Triode
WL-5606	288.00	E	Triode
WL-5619	423.00	E	Triode
WL-5632/C3J	12.70	A	Thyratron
WL-5636	6.10	F	Pentode
WL-5642(T)	3.82	J	Vacuum Rectifier
WL-5651	1.78	J	Voltage Reference
WL-5654/6AK5W	2.45	J	Pentode
WL-5658	595.00	E	Triode
WL-5664/C1B/A	19.20	A	Thyratron
WL-5665/C16J	52.50	A	Thyratron
WL-5667	370.00	E	Triode
WL-5668	350.00	E	Triode
WL-5669	515.00	E	Triode
WL-5670	2.50	J	Twin Triode
WL-5682	2625.00	E	Triode
WL-5683/C1J/A	Order WL-6014/5683/C1K		
WL-5684/C3J/A	Order WL-7306A/5684/C3J/A		
WL-5685/C6J/A	28.30	A	Thyratron
WL-5687	4.00	J	Twin Triode
WL-5691	8.75	J	Twin Triode
WL-5692	8.25	J	Twin Triode
WL-5693	6.60	J	Pentode
WL-5696	1.95	J	Thyratron
WL-5718	3.65	J	Triode
WL-5720/33	34.75	B	Thyratron
WL-5726/6AL5W/6097	1.55	J	Duo Diode
WL-5727/2D21W	2.90	J	Thyratron
WL-5736 *	164.75	E	Triode
WL-5751	2.55	J	Twin Triode
WL-5762/7C24	230.00	E	Triode
WL-5763	2.53	J	Beam
WL-5771/356	700.00	E	Triode
WL-5796	17.25	A	Thyratron
WL-5814A	2.35	J	Twin Triode
WL-5820A/5820	1100.00	K	Image Orthicon
WL-5820B	1200.00	K	Image Orthicon
WL-5822	Order WL-5822A		
WL-5822A	116.00	B	Ignitron
WL-5823	1.72	J	Gas Triode
WL-5824	3.60	J	Beam
WL-5830/41	504.00	E	Thyratron
WL-5846 *	67.75	B	Reference Cavity
WL-5859/5860	61.00	B	Vacuum Rectifier
WL-5877	23.50	A	Thyratron
WL-5879	1.95	J	Pentode
WL-5881	3.10	J	Beam
WL-5886	5.00	L	Pentode
WL-5891	1420.00	E	Triode
WL-5894	25.00	E	Twin Tetrode
WL-5902	4.80	F	Beam
WL-5918A	1115.00	E	Triode
WL-5934	22.00	F	Vacuum Rectifier
WL-5936	1145.00	E	Triode
WL-5939 *	56.40	B	Pre-TR
WL-5963	1.36	J	Twin Triode
WL-5964	1.55	J	Twin Triode
WL-5965	1.92	J	Twin Triode

Type	Suggested Industrial User Price	Warranty Class	Description
WL-5966	$ 28.00	F	Ion-Gauge
WL-5973	375.00	E	Vacuum Rectifier
WL-5986	Order WL-5986A		
WL-5986A	1115.00	E	Triode
WL-6011	Order WL-7307A/6011/710		
WL-6011/710	Order WL-7307A/6011/710		
WL-6012	7.65	J	Thyratron
WL-6014/C1K	Order WL-6014/5683/C1K		
WL-6014/5683/C1K	11.80	A	Thyratron
WL-6040 *	48.50	B	Reference Cavity
WL-6041 *	48.50	B	Reference Cavity
WL-6072 *	3.90	J	Twin Triode
WL-6080	5.33	J	Twin Triode
WL-6112	4.10	J	Twin Triode
WL-6136	2.70	J	Pentode
WL-6146 *	4.35	J	VHF Beam
WL-6146A	4.35	J	VHF Beam
WL-6146B/8298A	5.20	J	VHF Beam
WL-6159	4.80	J	VHF Beam
WL-6166A/7007	1005.00	E	VHF Beam
WL-6177 * **	150.00	▲	Magnetron
WL-6189/12AU7WA	3.65	J	Twin Triode
WL-6197	2.30	J	Pentode
WL-6198A	Order WL-7325 for		Indust. CCTV
WL-6198A	Order WL-7038 for		Studio Camera
WL-6201	2.55	J	Twin Triode
WL-6205	5.35	J	Pentode
WL-6228	3696.25	▲	Ignitron
WL-6249 * **	365.00	▲	Magnetron
WL-6293	5.95	E	VHF Beam
WL-6307 **	170.00	B	Proportional Counter
WL-6307A **	170.00	B	Proportional Counter
WL-6310 * **	135.00	E	Klystron
WL-6312 * **	135.00	E	Klystron
WL-6314 * **	135.00	E	Klystron
WL-6315 * **	135.00	E	Klystron
WL-6316 * **	135.00	E	Klystron
WL-6326A	515.00	G	Vidicon
WL-6336A	19.04	J	Twin Triode
WL-6350	1.85	J	Twin Triode
WL-6360	4.95	J	Twin Triode
WL-6376A **	835.00	B	Fission Chamber
WL-6377 **	1660.00	B	Comp. Ion. Chamber
WL-6379	1165.00	E	Triode
WL-6386	7.38	J	Twin Triode
WL-6399	170.00	E	Triode
WL-6420	445.00	E	Triode
WL-6421	525.00	E	Triode
WL-6421F	545.00	E	Triode
WL-6422	450.00	E	Triode
WL-6423	525.00	E	Triode
WL-6423F	545.00	E	Triode
WL-6424	518.00	E	Triode
WL-6425	645.00	E	Triode
WL-6425F	675.00	E	Triode
WL-6426	720.00	E	Triode
WL-6427	840.00	E	Triode
WL-6550	4.59	J	Beam Amplifier
WL-6567 ★	321.75	E	Triode
WL-6623	190.00	E	Triode
WL-6660/6BA6	1.01	J	Pentode
WL-6661/6BH6	1.34	J	Pentode
WL-6662/6BJ6	1.29	J	Pentode
WL-6663/6AL5	.92	J	Twin Diode
WL-6664/6AB4	1.15	J	Triode
WL-6669/6AQ5	1.06	J	Beam
WL-6676/6CB6A	1.06	J	Pentode
WL-6677/6CL6	1.85	J	Pentode
WL-6678/6U8A	1.62	J	Triode Pentode
WL-6679/12AT7	1.50	J	Triode
WL-6680/12AU7	1.22	J	Twin Triode
WL-6681/12AX7	1.26	J	Triode
★Part WL-22672 Set Connectors for 6567	23.25	–	–

Type	Suggested Industrial User Price	Warranty Class	Description
WL-6696	$ 1105.00	E	Triode
WL-6697	1330.00	E	Triode
WL-6780 * **	135.00	E	Klystron
WL-6781 * **	135.00	E	Klystron
WL-6807	32.25	B	Thyratron
WL-6808	32.90	A	Thyratron
WL-6849	850.00	G	Image Orthicon
WL-6856/740	20.80	A	Thyratron
WL-6857/740P	21.60	A	Thyratron
WL-6858/760	28.10	A	Thyratron
WL-6859/760P	29.80	A	Thyratron
WL-6860/C6J/F	30.00	A	Thyratron
WL-6883	4.30	J	VHF Beam
WL-6893	4.50	J	Beam
WL-6894	25.00	B	Vapor Rectifier
WL-6895	25.00	B	Vapor Rectifier
WL-6915 **	235.00	▲	Klystron
WL-6920	1590.00	E	Triode
WL-6922	4.87	J	Twin Triode
WL-6930/635P	14.15	F	Vapor Rectifier
WL-6937A **	950.00	B	Uncomp. Ion. Chamber
WL-6938 **	1785.00	B	Uncomp. Ion. Chamber
WL-6939	11.90	J	Twin Pentode
WL-6941A **	835.00	B	Uncomp. Ion. Chamber
WL-6954	8.75	J	Dual Pentode
WL-6971A **	835.00	B	Fission Counter
WL-6998 **	250.00	B	Fission Counter
WL-7007	1020.00	E	Tetrode
WL-7008 **	895.00	I	Magnetron
WL-7014/604	11.80	A	Gas Vapor Rectifier
WL-7015/604L	13.00	A	Gas Vapor Rectifier
WL-7016/606	21.40	A	Gas Vapor Rectifier
WL-7017/606L	23.50	A	Gas Vapor Rectifier
WL-7018/615	10.05	A	Gas Vapor Rectifier
WL-7019/635	13.00	A	Gas Vapor Rectifier
WL-7020/635L	13.50	A	Gas Vapor Rectifier
WL-7022/740L	21.40	A	Gas Vapor Thyratron
WL-7023/760L	29.40	A	Gas Vapor Thyratron
WL-7038	185.00	G	Vidicon
WL-7087 **	2690.00	B	Proportional Counter
WL-7087A **	2690.00	B	Proportional Counter
WL-7111 * **	675.00	I	Magnetron
WL-7163	2.50	J	Phototube
WL-7171	81.50	F	Ignitron
WL-7186 **	290.00	B	Fission Counter
WL-7187 **	835.00	B	Fission Counter
WL-7188 **	835.00	B	Fission Counter
WL-7198A	2095.00	G	Rug. Image Orthicon
WL-7215	176.00	E	Triode
WL-7243 **	780.00	B	Proportional Counter
WL-7255	176.00	E	Triode
WL-7268	2420.00	G	Display Storage
WL-7269	60.00	A	Thyratron
WL-7290	495.00	G	Vidicon
WL-7293	1300.00	K	Image Orthicon
WL-7297	24.00	A	Thyratron
WL-7306A/5684/C3J/A	13.10	A	Thyratron
WL-7307A/6011/710	12.70	A	Thyratron
WL-7317 **	215.35	B	Proportional Counter
WL-7321/C6J/L	29.40	A	Thyratron
WL-7325	185.00	G	Vidicon
WL-7328	Order WL-7328A		
WL-7328A	945.00	E	Triode
WL-7353 **	1660.00	B	Comp. Ion. Chamber
WL-7363 *	24.00	A	Thyratron
WL-7383	750.00	G	Permachon
WL-7413	1130.00	E	Pulse Triode
WL-7429 **	Price on Request	B	Proportional Counter
WL-7463	358.00	E	Triode
WL-7464	176.00	E	Triode
WL-7482	4455.00	E	Triode
WL-7509A/710L	14.20	B	Thyratron
WL-7540	730.00	E	Triode
WL-7556A/C3J/AL	14.60	A	Thyratron

WES-3

Type	Suggested Industrial User Price	Warranty Class	Description
WL-7560	$ 4455.00	E	Triode
WL-7560V	4500.00	E	Triode
WL-7565	205.00	E	Triode
WL-7604	73.50	E	Triode
WL-7606 **	1100.00	B	Uncomp. Ion. Chamber
WL-7611	1620.00	E	Image Orthicon
WL-7657 **	1200.00	B	Uncomp. Ion. Chamber
WL-7659	218.50	E	Vapor Rectifier
WL-7669	65.00	B	Coaxial Ignitron
WL-7669-PC	65.00	B	Plastic Coat. Coax. Ign.
WL-7670	77.20	B	Coaxial Ignitron
WL-7671	99.00	B	Coaxial Ignitron
WL-7671-PC	99.00	B	Plastic Coat. Coax. Ign.
WL-7676 **	65.00	F	Ion. Gauge
WL-7681	155.00	D	Ignitron
WL-7685	71.75	E	Triode
WL-7691	1470.00	E	Pulse Triode
WL-7703	190.00	▲	Fusion Ignitron
WL-7730	1.93	L	Twin Triode
WL-7731	2.49	L	Triode-Pentode
WL-7732	1.78	L	Pentode
WL-7735A	185.00	G	Vidicon
WL-7740	125.00	▲	Fusion Ignitron
WL-7741 **	2150.00	B	Uncomp. Ion. Chamber
WL-7748	695.00	E	Triode
WL-7750	805.00	E	Triode
WL-7903 **	28.00	F	Ion. Gauge
WL-7904 **	30.00	F	Ion. Gauge
WL-7982	1000.00	E	Triode
WL-8008	9.90	F	Vapor Rectifier
WL-8020	16.00	E	Vacuum Rectifier
WL-8032	4.95	J	VHF Beam
WL-8043	49.50	E	Thyratron
WL-8044	970.00	E	Triode
WL-8045	1310.00	E	Triode
WL-8057 **	28.00	F	Ion. Gauge
WL-8073	600.00	B	Dual Range Fission Count.
WL-8074 **	1200.00	B	Comp. Ion. Chamber
WL-8075 **	650.00	B	Uncomp. Ion. Chamber
WL-8094/199	335.00	E	Vacuum Rectifier
WL-8105 **	750.00	B	Comp. Ion. Chamber
WL-8137 **	590.00	B	Ion. Chamber
WL-8214 **	835.00	B	Ion. Chamber
WL-8298	5.25	J	VHF Beam
WL-8306	67.75	▲	Fusion Ignitron
WL-8461	3995.00	E	Pulse Triode
WL-9001	5.38	J	Pentode
WL-9002	4.14	J	Triode
WL-22602 **	75.00	P	Hollow Cathode
WL-22603 **	75.00	P	Hollow Cathode
WL-22604 **	121.00	P	Hollow Cathode
WL-22605 **	75.00	P	Hollow Cathode
WL-22606 **	95.00	P	Hollow Cathode
WL-22607 **	95.00	P	Hollow Cathode
WL-22608 **	95.00	P	Hollow Cathode
WL-22609 **	95.00	P	Hollow Cathode
WL-22610 **	75.00	P	Hollow Cathode
WL-22611 **	95.00	P	Hollow Cathode
WL-22619 **	28.00	F	Ion. Gauge
WL-22627	28.00	B	Ion. Gauge
WL-22663 **	95.00	P	Hollow Cathode
WL-22759	176.00	E	Triode

Part kit for initial installation of WL-8461:

Part No.	Qty.	User Unit	Item
22682	1	$ 10.95	Large Filament Connector
43-208	1	2.35	Gasket
22677	6	10.50	Small Filament Connector
22688	1	389.50	Water Jacket
22689	1	8.75	Grid Connector

Type	Suggested Industrial User Price	Warranty Class	Description
WL-22785	$ 95.00	–	Air Distributor
WL-22789	250.00	E	Triode
WL-22791 **	274.00	B	Proportional Counter
WL-22792 **	178.00	B	Proportional Counter
WL-22793 **	185.00	B	Proportional Counter
WL-22804 **	95.00	P	Hollow Cathode
WL-22805 **	95.00	P	Hollow Cathode
WL-22806 **	95.00	P	Hollow Cathode
WL-22809 **	75.00	P	Hollow Cathode
WL-22810 **	95.00	P	Hollow Cathode
WL-22811 **	95.00	P	Hollow Cathode
WL-22812 **	75.00	P	Hollow Cathode
WL-22813 **	75.00	P	Hollow Cathode
WL-22814 **	95.00	P	Hollow Cathode
WL-22815 **	75.00	P	Hollow Cathode
WL-22816 **	120.00	P	Hollow Cathode
WL-22817 **	125.00	P	Hollow Cathode
WL-22818 **	150.00	P	Hollow Cathode
WL-22819 **	95.00	P	Hollow Cathode
WL-22820 **	75.00	P	Hollow Cathode
WL-22821 **	95.00	P	Hollow Cathode
WL-22822 **	120.00	P	Hollow Cathode
WL-22823 **	125.00	P	Hollow Cathode
WL-22824 **	125.00	P	Hollow Cathode
WL-22825 **	125.00	P	Hollow Cathode
WL-22826 **	195.00	P	Hollow Cathode
WL-22827 **	150.00	P	Hollow Cathode
WL-22828 **	150.00	P	Hollow Cathode
WL-22829 **	150.00	P	Hollow Cathode
WL-22830 **	140.00	P	Hollow Cathode
WL-22831 **	125.00	P	Hollow Cathode
WL-22832 **	130.00	P	Hollow Cathode
WL-22833 **	150.00	P	Hollow Cathode
WL-22834 **	125.00	P	Hollow Cathode
WL-22835 **	125.00	P	Hollow Cathode
WL-22836 **	150.00	P	Hollow Cathode
WL-22837 **	130.00	P	Hollow Cathode
WL-22838 **	120.00	P	Hollow Cathode
WL-22839 **	150.00	P	Hollow Cathode
WL-22840 **	150.00	P	Hollow Cathode
WL-22841 **	130.00	P	Hollow Cathode
WL-22842 **	150.00	P	Hollow Cathode
WL-22843 **	150.00	P	Hollow Cathode
WL-22844 **	100.00	P	Hollow Cathode
WL-22845 **	150.00	P	Hollow Cathode
WL-22846 **	150.00	P	Hollow Cathode
WL-22847 **	100.00	P	Hollow Cathode
WL-22848 **	140.00	P	Hollow Cathode
WL-22849 **	100.00	P	Hollow Cathode
WL-22850 **	180.00	P	Hollow Cathode
WL-22851 **	150.00	P	Hollow Cathode
WL-22856 **	150.00	P	Hollow Cathode
WL-22857 **	140.00	P	Hollow Cathode
WL-22858 **	150.00	P	Hollow Cathode
WL-22859 **	120.00	P	Hollow Cathode
WL-22860 **	120.00	P	Hollow Cathode
WL-22862	1360.00	E	Triode
WL-22863 **	125.00	P	Hollow Cathode
WL-22864 **	125.00	P	Hollow Cathode
WL-22867 **	150.00	P	Hollow Cathode
WL-22870 **	115.00	P	Hollow Cathode
WL-22871 **	145.00	P	Hollow Cathode
WL-22872 **	170.00	P	Hollow Cathode
WL-22873 **	170.00	P	Hollow Cathode
WL-22874 **	150.00	P	Hollow Cathode
WL-22875 **	140.00	P	Hollow Cathode
WL-22876 **	115.00	P	Hollow Cathode
WL-22877 **	115.00	P	Hollow Cathode
WL-22878 **	115.00	P	Hollow Cathode
WL-22879 **	115.00	P	Hollow Cathode
WL-22880 **	170.00	P	Hollow Cathode
WL-22881 **	170.00	P	Hollow Cathode
WL-22882 **	160.00	P	Hollow Cathode
WL-22883 **	170.00	P	Hollow Cathode

WES-4

Type	Suggested Industrial User Price	Warranty Class	Description
WL-22884 **	$ 170.00	P	Hollow Cathode
WL-22885 **	170.00	P	Hollow Cathode
WL-22886 **	115.00	P	Hollow Cathode
WL-22887 **	115.00	P	Hollow Cathode
WL-22888 **	150.00	P	Hollow Cathode
WL-22889 **	170.00	P	Hollow Cathode
WL-22890 **	140.00	P	Hollow Cathode
WL-22891 **	115.00	P	Hollow Cathode
WL-22892 **	120.00	P	Hollow Cathode
WL-22893 **	115.00	P	Hollow Cathode
WL-22894 **	115.00	P	Hollow Cathode
WL-22895 **	115.00	P	Hollow Cathode
WL-22896 **	170.00	P	Hollow Cathode
WL-22897 **	200.00	P	Hollow Cathode
WL-22898 **	170.00	P	Hollow Cathode
WL-22899 **	170.00	P	Hollow Cathode
WL-22900 **	150.00	P	Hollow Cathode
WL-22901 **	115.00	P	Hollow Cathode
WL-22902 **	170.00	P	Hollow Cathode
WL-22903 **	160.00	P	Hollow Cathode
WL-22904 **	140.00	P	Hollow Cathode
WL-22905 **	120.00	P	Hollow Cathode
WL-22906 **	120.00	P	Hollow Cathode
WL-22907 **	215.00	P	Hollow Cathode
WL-22908 **	115.00	P	Hollow Cathode
WL-22909 **	115.00	P	Hollow Cathode
WL-22910 **	170.00	P	Hollow Cathode
WL-22911 **	160.00	P	Hollow Cathode
WL-22912 **	170.00	P	Hollow Cathode
WL-22913 **	140.00	P	Hollow Cathode
WL-22914 **	140.00	P	Hollow Cathode
WL-22915 **	170.00	P	Hollow Cathode
WL-22916 **	130.00	P	Hollow Cathode
WL-22917 **	150.00	P	Hollow Cathode
WL-22923	32.00	F	Ion. Gauge
WL-22925 **	140.00	P	Hollow Cathode
WL-22926 **	125.00	P	Hollow Cathode
WL-22927 **	120.00	P	Hollow Cathode
WL-22928 **	95.00	P	Hollow Cathode
WL-22929 **	95.00	P	Hollow Cathode
WL-22930 **	121.00	P	Hollow Cathode
WL-22931 **	150.00	P	Hollow Cathode
WL-22932 **	130.00	P	Hollow Cathode
WL-22933 **	120.00	P	Hollow Cathode
WL-22934 **	95.00	P	Hollow Cathode
WL-22935 **	150.00	P	Hollow Cathode
WL-22936 **	95.00	P	Hollow Cathode
WL-22937 **	95.00	P	Hollow Cathode
WL-22938 **	150.00	P	Hollow Cathode
WL-22939 **	130.00	P	Hollow Cathode
WL-22940 **	150.00	P	Hollow Cathode
WL-22941 **	120.00	P	Hollow Cathode
WL-22942 **	150.00	P	Hollow Cathode
WL-22951 **	115.00	P	Hollow Cathode
WL-22952 **	140.00	P	Hollow Cathode
WL-22953 **	115.00	P	Hollow Cathode
WL-22954 **	115.00	P	Hollow Cathode
WL-22955 **	145.00	P	Hollow Cathode
WL-22956 **	170.00	P	Hollow Cathode
WL-22957 **	150.00	P	Hollow Cathode
WL-22958 **	140.00	P	Hollow Cathode
WL-22959 **	115.00	P	Hollow Cathode
WL-22960 **	$ 170.00	P	Hollow Cathode
WL-22961 **	115.00	P	Hollow Cathode
WL-22962 **	115.00	P	Hollow Cathode
WL-22963 **	170.00	P	Hollow Cathode
WL-22964 **	150.00	P	Hollow Cathode
WL-22965 **	170.00	P	Hollow Cathode
WL-22966 **	140.00	P	Hollow Cathode
WL-22967 **	170.00	P	Hollow Cathode
WL-22968 **	95.00	P	Hollow Cathode
WL-22969 **	140.00	P	Hollow Cathode
WL-22970 **	160.00	P	Hollow Cathode
WL-22971 **	120.00	P	Hollow Cathode
WL-22972 **	140.00	P	Hollow Cathode
WL-22973 **	150.00	P	Hollow Cathode
WL-22974 **	170.00	P	Hollow Cathode
WL-22975 **	130.00	P	Hollow Cathode
WL-22976 **	130.00	P	Hollow Cathode
WL-22977 **	150.00	P	Hollow Cathode
WL-22978 **	170.00	P	Hollow Cathode
WL-22979 **	150.00	P	Hollow Cathode
WL-22980 **	170.00	P	Hollow Cathode
WL-22981 **	150.00	P	Hollow Cathode
WL-22982 **	170.00	P	Hollow Cathode
WL-22983 **	160.00	P	Hollow Cathode
WL-22984 **	180.00	P	Hollow Cathode
WL-22985 **	150.00	P	Hollow Cathode
WL-22986 **	170.00	P	Hollow Cathode
WL-22987 **	150.00	P	Hollow Cathode
WL-22988 **	170.00	P	Hollow Cathode
WL-22989 **	150.00	P	Hollow Cathode
WL-22990 **	170.00	P	Hollow Cathode
WL-22991 **	120.00	P	Hollow Cathode
WL-22992 **	140.00	P	Hollow Cathode
WL-22996 **	150.00	P	Hollow Cathode
WL-22997 **	180.00	P	Hollow Cathode
WL-22998 **	120.00	P	Hollow Cathode
WL-23007 **	180.00	P	Hollow Cathode
WL-23008 **	200.00	P	Hollow Cathode
WL-23009 **	180.00	P	Hollow Cathode
WL-23010 **	200.00	P	Hollow Cathode
WL-23014	65.00	B	Coaxial Ignitron
WL-23014-PC	65.00	B	Coaxial Ignitron
WL-23015	99.00	B	Coaxial Ignitron
WL-23015-PC	99.00	B	Coaxial Ignitron
WL-23017	316.00	B	Coaxial Ignitron
WL-23018	155.00	B	Coaxial Ignitron
WL-23027 **	160.00	P	Hollow Cathode
WL-23028 **	180.00	P	Hollow Cathode
WL-23029	218.50	E	Vapor Rectifier
WL-23034 **	150.00	P	Hollow Cathode
WL-23035 **	140.00	P	Hollow Cathode
WL-23036 **	165.00	P	Hollow Cathode
WL-23039 **	20.00	–	Adapter Kit for Hollow Cathode Tubes.
WL-23040 **	18.00	–	Cable Harness for Hollow Cathode Tubes.
WL-23041 **	95.00	P	Hollow Cathode
WL-23042 **	115.00	P	Hollow Cathode
WL-23043 **	150.00	P	Hollow Cathode
WL-23046 **	145.00	P	Hollow Cathode
WL-23049 **	150.00	P	Hollow Cathode
WL-23059 **	125.00	–	Hollow Cathode
WL-23060 **	125.00	–	Hollow Cathode

HUGHES-PETERS, INC.

INDUSTRIAL CATHODE RAY TUBES

Type	Suggested Industrial User Price	Warranty Class	Type	Suggested Industrial User Price	Warranty Class	Type	Suggested Industrial User Price	Warranty Class	Type	Suggested Industrial User Price	Warranty Class
3JP1	$ 23.20	G	5UP7	$ 26.25	G	7TP4	$ 75.80	G	12ABP1A	$ 62.50	G
3JP1A	23.50	G	5WP11	99.40	G	7VP1	29.50	G	12ABP7	46.50	G
3WP1	28.30	G	5WP15	99.40	G	7VP31	29.50	G	12ABP7A	52.50	G
3WP2	28.30	G	5ZP16	92.25	G	8HP4	31.50	G	12ABP14	52.50	G
5CEP11	800.00	G	5ZP24	92.25	G	8KP4	31.50	G	12ABP14A	62.50	G
5CEP15	800.00	G	7ABP7	50.00	G	10KP7A/			12ABP19	55.50	G
5CEP16	800.00	G	7ABP7A	52.50	G	10KP7	39.50	G	12ABP19A	65.50	G
5CEP24	800.00	G	7ABP14	55.00	G	10KP7B	52.50	G	12SP7B	46.50	G
5DEP1	15.00	G	7ABP14A	62.50	G	10SP4	87.50	G	12SP7D	56.50	G
5DEP2	29.50	G	7ABP19	55.00	G	10UP14A	79.50	G	14WP4	52.50	G
5DEP7	29.50	G	7ABP19A	62.50	G	10WP4	42.50	G	14WP7	85.50	G
5FP4A	27.75	G	7AUP4	79.50	G	10WP7A	47.50	G	16AKP7	85.50	G
5FP7A	27.75	G	7AUP7	79.50	G	10WP14	52.50	G	16ALP7	99.50	G
5FP11A	27.75	G	7ABP7A	49.50	G	10WP14A	59.50	G	17DWP4	52.50	G
5FP14A	27.75	G	7BP7B	49.50	G	10WP19	52.50	G	17DWP7	99.50	G
5FP15A	27.75	G	7MP7	40.45	G	10WP19A	59.50	G	21EWP4	79.50	G
5UP1	13.25	G	7MP14	49.50	G	12ABP1	52.50	G			

KEY TO ABBREVIATIONS

**- Accommodation Types not Recommended for Stocking by Distributors.
*- Government Qualification Approval Type Prices Upon Request.
(T)- Federal Excise Tax included in price.
▲- Negotiated Warranty.

Industrial Receiving And Reliable Tubes			
0A2WA	5902	6201	6677/6CL6
0B2WA	5963	6205	6678/6U8A
5R4GYB	5964	6550	6679/12AT7
6AS6	5965	6660/6BA6	6680/12AU7
6AS7GA	6072	6661/6BH6	6681/12AX7
12AY7	6080	6662/6BJ6	
5651	6112	6663/6AL5	7730
5654/6AK6W	6136	6664/6AB4	7731
5670	6189/12AU7WA	6669/6AQ5	7732
5726/6AL5W/6097	6197	6676/6CB6A	7733
5751			

IGNITRON THERMOSTAT KITS

		Sug. Industrial Price
312-51	Water Saver (terminal block)	$8.35
312-52	Protector (terminal block)	7.20
503-58	Water Saver (flying leads)	6.60
503-59	Protector (flying leads)	4.65
503-161	Protector (flying leads) Hightemp.	5.75

RADIATOR & CRATE CREDIT

The following credits will be allowed for the prepaid return of radiator or crate in good usable condition. The normal procedure will be credit issuance unrelated to any new order for similar tubes; however, the right is reserved to apply any radiator credits only to such replacement orders for similar tubes. Tubes for radiator credit should be returned by truck freight in accordance with Return Authorization issued by Electronic Tube Division field representative.

Tube Type	*Radiator Credit*	*Crate Credit*
WL-889RA	$ 20.00	$ –
WL-891R	20.00	10.00
WL-892R	20.00	10.00
WL-893AR	70.00	30.00
WL-5604	35.00	10.00
WL-5667	20.00	–
WL-5669	20.00	10.00
WL-5682	100.00 Note 1	100.00
WL-5891	$ 65.00	$ 35.00
WL-5918A	–	10.00
WL-5936	–	10.00
WL-5986A	–	10.00
WL-6166	25.00‡	–
WL-6166A/7007	25.00‡	–
WL-6421	20.00	–
WL-6423	20.00	10.00
WL-6423F	20.00	10.00
WL-6427	30.00	10.00
WL-6697	50.00	–
WL-6920	25.00‡	–
WL-7007	25.00‡	–
WL-7463	20.00	10.00
WL-7560	100.00 Note 1	100.00
WL-7560V	100.00 Note 1	100.00
WL-7691	25.00‡	–
WL-7750	25.00‡	–
WL-8461	50.00 Note 1	100.00
WL-22803	50.00 Note 1	100.00

Note 1: Types so designated have no radiator; credit is for used tube.
‡ - Both crate and radiator must be returned to obtain this allowance.

WES-G

FOR SUPERIOR PRODUCTS—LOOK FOR THE BIG A

ARTRONICS COMPANY, INC.

ultrasonic cleaner

MODEL LP-1
$55

FOR THE FIRST TIME . . .
ULTRASONIC CLEANING AT REASONABLE COST.



ART 1

EXCLUSIVE FEATURES: Automatic 5-minute industrial time switch turns unit off when cleaning cycle is finished.
Easy-to-handle size makes filling or emptying a simple operation.
Stainless steel worktop and sides protect unit against spills and splashes. Full one-pint stainless steel cleaning tank cannot be marred or harmed by any normal cleaning agent or solvent, warm or cold.

CONSOLE DIMENSIONS: 9½" x 5" x 4⅝".
Completely self-contained. #304 stainless steel.
Shipping weight — 6 lbs.

GENERATOR SPECIFICATIONS: 105-125 volts, 50/60 cps, 0.5 amp.
90 Kc nominal, 30 watts RF input.
No tuning required.
No tubes or transistors.

TANK SPECIFICATIONS: 3⅛" x 3⅛" x 2⅛".
#304 stainless steel, one-pint capacity.
Lead titanate crystal, 280 degrees F. Curie temperature.

APPLICATIONS: Ideal for removing grease, tar, wax, sulphides, fluxes, and fingerprints from components, miniature mechanisms, small instruments, and an infinite variety of other precision parts. Indispensable for white room uses.

Mil-W-76B Plastic Wire

TYPE MW — UNCOVERED PLASTIC



DESCRIPTION: Solid or extra flexible stranded tinned copper, color coded **medium wall** polyvinylchloride insulation. **(Nom. wall thickness .016".)**

CHARACTERISTICS: Temperature rating −40°C to +80°C, Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture and fungus.

STRANDED

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOMINAL O.D.	*STOCK COLORS
1550	MW-C 24(7)U	24	7/32	.059″	1-30
1551	MW-C 22(7)U	22	7/30	.064″	1-30
1553	MW-C 20(10)U	20	10/30	.073″	1-30
1555	MW-C 18(16)U	18	16/30	.084″	1-30
1557	MW-C 16(26)U	16	26/30	.095″	1-30
1559	MW-C 14(41)U	14	41/30	.110″	1-19, 28, 29, 30
1560	MW-C 12(65)U	12	65/30	.125″	1-19, 28, 29, 30

SOLID

1561/24	MW-C 24(1)U	24	1	.055″	1-30
1561	MW-C 22(1)U	22	1	.060″	1-30
1563	MW-C 20(1)U	20	1	.066″	1-30
1565	MW-C 18(1)U	18	1	.074″	1-10
1567	MW-C 16(1)U	16	1	.083″	1-10

***STOCK COLORS**

1—White
2—Black
3—Red
4—Green
5—Yellow
6—Light Blue
7—Brown
8—Orange
9—Gray (slate)
10—Violet (purple)
11—White/Black
12—White/Red
13—White/Green
14—White/Yellow
15—White/Blue
16—White/Brown
17—White/Orange
18—White/Gray
19—White/Violet
20—White/Black/Red
21—White/Black/Green
22—White/Black/Yellow
23—White/Black/Blue
24—White/Black/Brown
25—White/Black/Orange
26—White/Black/Gray
27—White/Black/Violet
28—Tan
29—Pink
30—Dark Blue

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.
ALSO AVAILABLE TO ORDER CUT, STRIPPED, MARKED AND TINNED

* Other striped color combinations available to order.

TYPE MW — SHIELDED



DESCRIPTION: Extra flexible stranded tinned copper, color coded **medium wall** polyvinylchloride insulation, braided tinned copper shield overall, 80% coverage. **(Nom. wall thickness .016".)**

CHARACTERISTICS: Temperature rating −40°C to +80°C, Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOMINAL O.D.	*STOCK COLORS
1350	MW-C 24(7)S	24	7/32	.075″	White
1351	MW-C 22(7)S	22	7/30	.085″	White
1352	MW-C 20(10)S	20	10/30	.095″	White
1353	MW-C 18(16)S	18	16/30	.105″	White
1354	MW-C 16(26)S	16	26/30	.115″	White
1355	MW-C 14(41)S	14	41/30	.130″	White
1356	MW-C 12(65)S	12	65/30	.145″	White

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.
ALSO AVAILABLE TO ORDER CUT, STRIPPED AND TINNED

* Other solid colors and striped combinations available to order.

PRICES

Alpha No.	Sugg. Resale per 1000′	Alpha No.	Sugg. Resale per 1000′	Alpha No.	Sugg. Resale per 1000′
1550	7.44	1559	37.07	1565	13.86
1551	8.66	1560	60.63	1567	19.58
1553	11.43	1561/24	6.93	1350	22.44
1555	16.46	1561	7.10	1351	23.76
1557	24.26	1563	9.53	1352	26.40

Alpha No.	Sugg. Resale per 1000′
1353	31.35
1354	42.08
1355	49.50
1356	66.00

ALPHA electronic WIRE

481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351
© U.C.P., Inc.

Mil-W-16878D Teflon† Wire

TYPE E — EXTRUDED (600 VOLTS)



DESCRIPTION: Single conductor stranded silver plated copper, extruded TFE Teflon insulation.

CHARACTERISTICS: Temperature rating −65°C to +200°C. Voltage rating 600 volts. Resistant to acid, alkalis, oil, flame, moisture, solvents and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. O.D.	*STOCK COLORS
2850	E-32	32	7/40	.010″	.029″	1-19 as listed
2851	E-30	30	7/38	.010″	.032″	1-19 as listed
2852	E-28	28	7/36	.010″	.036″	1-19 as listed
2853	E-26	26	7/34	.010″	.040″	1-19 as listed
2854	E-24	24	19/36	.010″	.045″	1-19 as listed
■ 2854/7	E-24	24	7/32	.010″	.044″	1-19 as listed
2855	E-22	22	19/34	.010″	.051″	1-19 as listed
■ 2855/7	E-22	22	7/30	.010″	.050″	1-19 as listed
2856	E-20	20	19/32	.010″	.059″	1-19 as listed
■ 2856/7	E-20	20	7/28	.010″	.058″	1-19 as listed
2857	E-18	18	19/30	.010″	.070″	1-19 as listed
2858	E-16	16	19/29	.010″	.077″	1-19 as listed
2859	E-14	14	19/27	.012″	.094″	1-6 & 11-19
2859/12	E-12	12	19/25	.012″	.113″	1 & 11-19
2859/10	E-10	10	37/26	.012″	.134″	1 & 11-19

***STOCK COLORS**

1—White
2—Black
3—Red
4—Green
5—Yellow
6—Light Blue
7—Brown
8—Orange
9—Gray (slate)
10—Violet (purple)
11—White/Black
12—White/Red
13—White/Green
14—White/Yellow
15—White/Blue
16—White/Brown
17—White/Orange
18—White/Gray
19—White/Violet

* Other solid colors and striped combinations available to order.

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.
ALSO AVAILABLE TO ORDER CUT, MARKED AND STRIPPED
■ NEW

TYPE EE — EXTRUDED (1000 VOLTS)



DESCRIPTION: Single conductor stranded silver plated copper, TFE extruded Teflon insulation.

CHARACTERISTICS: Temperature rating −65°C to +200°C. Voltage rating 1000 volts. Resistant to acid, alkalis, oil, flame, moisture, solvents and fungus.

ALPHA NO.	TYPE DESIGNATION	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. O.D.	*STOCK COLORS
2874	EE-24	24	19/36	.014″	.055″	1-19
2875	EE-22	22	19/34	.014″	.062″	1-19
2876	EE-20	20	19/32	.014″	.070″	1-19
2877	EE-18	18	19/30	.014″	.080″	1-19
2878	EE-16	16	19/29	.014″	.089″	1 & 11-19
2879	EE-14	14	19/27	.017″	.106″	1 & 11-19
2879/12	EE-12	12	19/25	.017″	.124″	1 & 11-19
2879/10	EE-10	10	37/26	.017″	.145″	1 & 11-19
2879/8	EE-8	8	133/29	.020″	.210″	White only

***STOCK COLORS**

1—White
2—Black
3—Red
4—Green
5—Yellow
6—Light Blue
7—Brown
8—Orange
9—Gray (slate)
10—Violet (purple)
11—White/Black
12—White/Red
13—White/Green
14—White/Yellow
15—White/Blue
16—White/Brown
17—White/Orange
18—White/Gray
19—White/Violet

* Other solid colors and striped combinations available to order.

STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.
ALSO AVAILABLE TO ORDER CUT, MARKED AND STRIPPED

† T.M. DuPont

PRICES

Alpha No.	Sugg. Resale per 1000′						
2850	70.95	2855	102.30	2859	264.00	2877	163.35
2851	75.90	2855/7	90.00	2859/12	405.90	2878	222.75
2852	79.20	2856	132.00	2859/10	643.50	2879	297.00
2853	80.85	2856/7	120.00	2874	94.05	2879/12	462.00
2854	88.28	2857	157.41	2875	109.73	2879/10	775.50
2854/7	78.00	2858	206.25	2876	139.59	2879/8	1386.00

ALPHA Electronics WIRE

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Alpha RG Coaxial Cables



Now Alpha Wire, the industry's one total prime wire source, manufactures a complete line of coaxial cable. Through the most advanced manufacturing techniques, Alpha Wire now serves your every requirement for all types of coaxial cable.

For more than forty years Alpha Wire has maintained a world-wide reputation for prompt service. All the coaxial cable types, as well as the complete line of Alpha Wire, cable and tubing is ALWAYS IN STOCK.

TEFLON DIELECTRIC

ALPHA NO.	RG TYPE	COND.	NOM. WALL THICK.	NOM. JKT. THICK.	JACKET TYPE	MAX. O.D.	CAP. NOM.	IMPED. OHMS	MAX. OPER. VOLTAGE
9161	161/U	7/.004*	.020	.006	Nylon**	.090	27.5	50±2	1200
9178B	178B/U	7/.004	.012	.010	Extruded FEP	.075	27.9	50±2	1000
9179B	179B/U	7/.004	.021	.010	Extruded FEP	.105	20.4	75±3	1200
9180B	180B/U	7/.004	.045	.010	Extruded FEP	.145	15.3	93±2	850
9187A	187A/U	7/.004	.024	.012	Fused TFE Tape	.110	19.5	75±3	1200
9188A	188A/U	7/.0067	.020	.012	Fused TFE Tape	.110	27.5	50±2	1200
9195A	195A/U	7/.004	.045	.014	Fused TFE Tape	.155	14.5	95±3	1500
9196A	196A/U	7/.004	.011	.012	Fused TFE Tape	.080	28.5	50±2	1000
9316	316/U	7/.0067	.020	.010	Extruded FEP	.102	27.5	50±2	1200

* Silver Coated Cadmium Bronze
** Operating Temperature: −55°C. — +105°C.
Conductors Silver Plated Copperweld Except RG 161/U, as shown.

ALPHA electronic WIRE

PRICES – per 1000'

9161	121.50	9179B	187.50	9187A	185.10	9195A	315.75
9178B	114.00	9180B	279.30	9188A	181.50	9196A	124.43
						9316	207.60

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1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625



Shielded Control Cable

GENERAL PURPOSE MULTI-CONDUCTOR RUBBER INSULATED AND RUBBER JACKET

DESCRIPTION: Each conductor, stranded tinned copper, color coded rubber insulation, cabled with fillers where necessary, cotton wrap, braided tinned copper shield, cotton wrap, tough black rubber jacket overall.

CHARACTERISTICS: Suggested Operating Temperature: −20°C to +60°C.

APPLICATIONS: Cables are extremely flexible for control circuits, video and audio interconnecting cable, broadcast and heavy duty studio use.

SHIELDED MULTI-CONDUCTOR CABLE

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOM. O.D.
1250/18	2	18	41/34	.020″	.035″	.295″
1250	2	20	26/34	.020″	.035″	.270″
1251	3	20	26/34	.020″	.035″	.285″
1252	4	20	26/34	.020″	.035″	.305″
1253	5	20	26/34	.020″	.035″	.330″
1254	6	20	26/34	.020″	.035″	.345″
1255	7	20	26/34	.020″	.035″	.355″
1255/8	8	20	26/34	.020″	.035″	.385″
1255/10	10	20	26/34	.020″	.035″	.440″
1255/12	12	20	26/34	.020″	.065″	.525″
1255/15	15	20	26/34	.020″	.065″	.595″
1255/20	20	20	26/34	.020″	.065″	.660″

STANDARD SPOOL PUT-UP: 100 FT., 250 FT., 500 FT., 1000 FT.

See color code of conductors below.



Unshielded Control Cable

GENERAL PURPOSE MULTI-CONDUCTOR RUBBER INSULATED AND RUBBER JACKET

DESCRIPTION: Each conductor stranded tinned copper, color coded rubber insulation, cabled with fillers, where necessary, cotton wrap, tough black rubber jacket overall.

CHARACTERISTICS: Suggested operating temperature −20°C to +60°C.

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOM. O.D.
1244	2	20	26/34	.020″	.035″	.240″
1245	3	20	26/34	.020″	.035″	.255″
1246	4	20	26/34	.020″	.035″	.275″
1247	5	20	26/34	.020″	.035″	.300″
1247/6	6	20	26/34	.020″	.035″	.315″
1247/7	7	20	26/34	.020″	.035″	.325″
1247/8	8	20	26/34	.020″	.035″	.360″
1247/10	10	20	26/34	.020″	.035″	.410″
1247/12	12	20	26/34	.020″	.035″	.435″
1247/15	15	20	26/34	.020″	.035″	.505″
1247/20	20	20	26/34	.020″	.035″	.570″

STANDARD SPOOL PUT-UP: 100 FT., 250 FT., 500 FT., 1000 FT.

COLOR CODE OF CONDUCTORS

1—Black	5—Yellow	9—Slate	13—White/Green (Braid)	17—White/Purple (Braid)
2—White	6—Blue	10—Purple	14—White/Yellow (Braid)	18—White/Slate (Braid)
3—Red	7—Brown	11—White/Black (Braid)	15—White/Blue (Braid)	19—Black/Red (Braid)
4—Green	8—Orange	12—White/Red (Braid)	16—White/Brown (Braid)	20—Black/Yellow (Braid)

PRICES

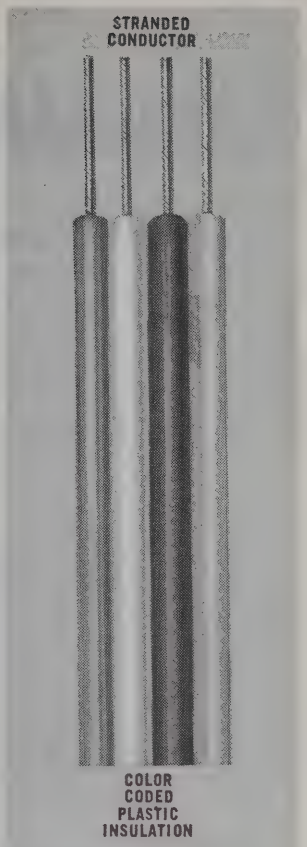
Alpha No.	Sugg. Resale per 500′	Alpha No.	Sugg. Resale per 500′	Alpha No.	Sugg. Resale per 500′	Alpha No.	Sugg. Resale per 500′
1250/18	79.70	1255	104.70	1244	47.73	1247/8	114.35
1250	47.85	1255/8	121.50	1245	51.00	1247/10	199.65
1251	53.63	1255/10	263.18	1246	61.17	1247/12	272.25
1252	62.30	1255/12	363.00	1247	78.05	1247/15	399.30
1253	79.86	1255/15	471.90	1247/6	94.38	1247/20	544.50
1254	96.60	1255/20	589.88	1247/7	103.46		

ALPHA electronic WIRE

© U.C.P., Inc.

Flat Ribbon Cable

MULTI-CONDUCTOR — PLASTIC INSULATION
CONDUCTORS PER MIL-W-16878D, Type C



DESCRIPTION: Each conductor stranded tinned copper, color coded .016" polyvinyl-chloride insulation, conductors bonded together to form flat ribbon cable.

CHARACTERISTICS: Temperature rating −55°C to +105°C. Voltage rating 1000 volts. Resistant to acids, alkalis, oil, flame, moisture, solvents, and fungus.

APPLICATIONS: Saves time, weight, and space on circuit connections, interconnecting assemblies and systems, wiring harnesses for racks, sliding drawer and drop panels. Conductors fully color coded and easily separated for neat terminations.

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOMINAL O.D.
3504	4	22	7/30	.016"	.065" x .260"
3508	8	22	7/30	.016"	.065" x .520"
3512	12	22	7/30	.016"	.065" x .780"
3516	16	22	7/30	.016"	.065" x 1.040"
3520	20	22	7/30	.016"	.065" x 1.300"

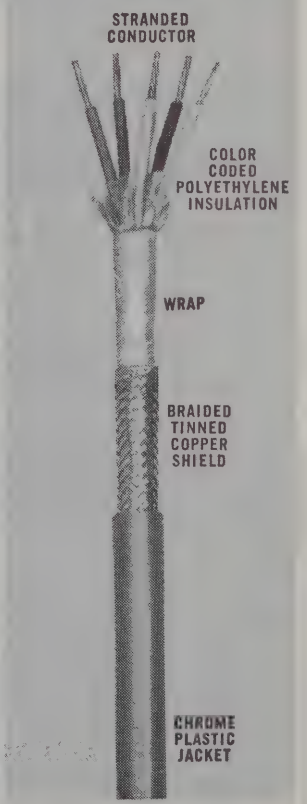
STANDARD SPOOL PUT-UP: 100 FT., 500 FT., 1000 FT.

COLOR CODE OF CONDUCTORS

1—White
2—Black
3—Red
4—Green
5—Yellow
6—Light Blue
7—Brown
8—Orange
9—Gray (slate)
10—Violet (purple)
11—White/Black
12—White/Red
13—White/Green
14—White/Yellow
15—White/Blue
16—White/Brown
17—White/Orange
18—White/Gray
19—White/Violet
20—White/Black/Red

Shielded Control Cable

GENERAL PURPOSE MULTI-CONDUCTOR
PLASTIC JACKETED CABLE



DESCRIPTION: Each conductor, stranded tinned copper, color coded, polyethylene insulation, cabled with fillers where necessary, rayon wrap, braided tinned copper shield, chrome gray polyvinylchloride jacket overall.

CHARACTERISTICS: Suggested Operating Temperature: −20°C to +60°C. Suggested Operating Voltage: 600 Volts.

ALPHA NO.	NO. OF COND.	CONDUCTOR SIZE	CONDUCTOR STRAND	NOM. WALL THICKNESS	NOM. JKT. THICKNESS	NOM. O.D.
1712	2	20	26/34	.014"	.030"	.230"
1713	3	20	26/34	.014"	.035"	.250"
1715	4	20	26/34	.014"	.035"	.260"
1716	5	20	26/34	.014"	.035"	.275"
1717	6	20	26/34	.014"	.035"	.300"
1719	8	20	26/34	.014"	.035"	.330"
1721	10	20	26/34	.014"	.035"	.375"
1723	12	20	26/34	.014"	.035"	.380"
1726	15	20	26/34	.014"	.035"	.410"
1728	20	20	26/34	.014"	.035"	.455"

STANDARD SPOOL PUT-UP: 100 FT., 250 FT., 500 FT., 1000 FT.

COLOR CODE OF CONDUCTORS

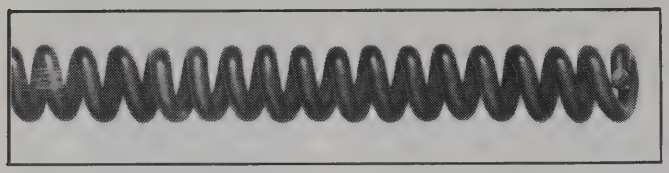
1—Black
2—White
3—Red
4—Green
5—Yellow
6—Blue
7—Brown
8—Orange
9—Slate
10—Purple
11—White/Black
12—White/Red
13—White/Green
14—White/Yellow
15—White/Blue
16—White/Brown
17—White/Purple
18—White/Slate
19—Black/Red
20—Black/Yellow

ALPHA electronic WIRE

PRICES

Alpha No.	Sugg. Resale per 500'	Alpha No.	Sugg. Resale per 500'	Alpha No.	Sugg. Resale per 500'	Alpha No.	Sugg. Resale per 500'
3504	47.22	3520	235.95	1716	56.10	1723	275.88
3508	85.85	1712	42.65	1717	114.35	1726	443.85
3512	133.22	1713	42.90	1719	143.39	1728	544.50
3516	190.58	1715	49.92	1721	181.50		

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RETRACTILE COIL CORDS

POWER CORDS—NEOPRENE JACKET U.L. APPROVED

RETRACTED LENGTHS 2 & 4 FEET—EXTENDED LENGTHS 12 & 25 FEET

DESCRIPTION: Long-lasting service is assured with this quality multi-conductor power cord. Each conductor is stranded copper, with rubber installation, and a rugged weather and oil resistant neoprene jacket overall.

APPLICATION: Used on electric tools, portable drills, soldering wires, electrical appliances, household appliances, etc., to eliminate loose hanging wires and to prevent wires from tangling and twisting.

CHARACTERISTICS: Suggested operating temperature: - 20°C to + 60°C.

ALPHA NO. 2 FT. LGTHS.	ALPHA NO. 4 FT. LGTHS.	ALPHA NO. †1 FT. LGTHS.	NO. OF CONDS.	CONDUCTOR SIZE	CONDUCTOR STRAND	U.L. TYPE	AMP RATING	VOLT RATING	NOM. COIL O.D.	NOM. O.D. CORD
660/2	660/4	660/1	2	18	41/34	SVO	7	300	7/8"	.260"
760/2	760/4		3	18	41/34	SVO	7	300	1"	.275"
661/2	661/4	661/1	2	18	41/34	SJO	7	300	1-3/16"	.320"
662/2	662/4	662/1	3	18	41/34	SJO	7	300	1-3/8"	.350"
663/2	663/4		4*	18	41/34	SJO	5.6	300	1-7/16"	.385"
762/2	762/4		3	18	41/34	SO	7	600	1-5/8"	.405"
763/2	763/4		4*	18	41/34	SO	5.6	600	1-5/8"	.435"
664/2	664/4	664/1	2	16	65/34	SJO	10	300	1-3/8"	.360"
665/2	665/4	665/1	3	16	65/34	SJO	10	300	1-7/16"	.390"
666/2	666/4		4*	16	65/34	SJO	8	300	1-1/2"	.425"
670/2	670/4		3	16	41/34	SO	10	600	1-13/16"	.470"
671/2	671/4		4*	16	65/34	SO	8	600	1-7/8"	.500"
672/2	672/4		2	14	41/30	SO	15	600	2-1/8"	.540"
673/2	673/4		3	14	41/30	SO	15	600	2-1/8"	.560"
674/2	674/4		4*	14	41/30	SO	12	600	2-1/4"	.605"
675/2	675/4		2	12	65/30	SO	20	600	2-1/4"	.605"
676/2	676/4		3	12	65/30	SO	20	600	2-3/8"	.635"
677/2	677/4		4*	12	65/30	SO	16	600	2-3/8"	.678"

COLOR CODE OF CONDUCTORS
1—Black 2—White
3—Green 4—Red

*If all four conductors normally carry current, amp rating is as shown. If one lead is used as a ground, amp rating is the same as 2 and 3 conductor cords.

†A 12" retracted length with a 12" straight lead on each end for easy stripping and termination. Cord extends to approximately 6 feet.

RETRACTILE TEST LEAD WIRE

RETRACTED LENGTH 12"—EXTENDED LENGTH 6 FEET

DESCRIPTION: A high grade quality rubber insulation for maximum flex life extruded over a single conductor of extra flexible tinned copper which gives long life to this retractile test lead wire. Available in a 12" retracted length with a 6" straight lead on each end, the cord extends to approximately 6 feet.

ALPHA NO.	CONDUCTOR SIZE	CONDUCTOR STRAND	AMP RATED	VOLT RATING	NOM. COIL O.D.	NOM. O.D. CORD	COLOR CODE
650	20	41/36	4	5,000	¾"	.165"	Black-Red

COLOR CODE
SPECIFY BLACK OR RED.

RETRACTILE POWER CORD SETS U.L. APPROVED

RETRACTED LENGTH 18"—EXTENDED LENGTH 7½ FEET

DESCRIPTION: Coiled power cord with a sturdy molded male plug on one end. On the other end we have removed a portion of the neoprene jacket, exposed the conductors and stripped them for easy termination. Operating voltage, 300 volts.

APPLICATION: Same as power cords, but with a plug on one end.

ALPHA NO.	NO. OF CONDS.	CONDUCTOR SIZE	CONDUCTOR STRAND	U.L. TYPE	NOM. COIL O.D.	NOM. O.D. CORD
654	2	18	41/34	SVO	7/8"	.260"
655	2	18	41/34	SJO	1-3/16"	.320"
656	3	18	41/34	SJO	1-3/8"	.350"
657	2	16	65/34	SJO	1-3/8"	.360"
658	3	16	65/34	SJO	1-7/16"	.390"

COLOR CODE OF CONDUCTORS
1—Black 2—White 3—Green

RETRACTILE COIL CORDS

RETRACTILE COMMUNICATION COIL CORDS

RETRACTED LENGTHS 2 & 4 FEET—EXTENDED LENGTHS 12 & 25 FEET

DESCRIPTION: Multi-conductor communication cord manufactured with extra flexible #23 AWG-21/36 tinned soft cadmium copper for maximum flex life. Insulated with rubber for communication circuits of maximum 120 working volts. The overall jacket is a specially compounded cured neoprene jacket giving long life to the retractile cord.

APPLICATION: Used in communication equipment, such as telephone car carriers, mobile radio equipment, ham operations, head sets, citizen band units and radio transmitter to receiver head sets, communication cords eliminate hazards and inconveniences caused by tangled straight cords.

ALPHA NO. 2 FT. LGTHS.	ALPHA NO. 4 FT. LGTHS.	NO. OF CONDS.	CONDUCTOR SIZE	CONDUCTOR STRAND	AMP RATING	VOLTAGE RATING	NOM. COIL O.D.	CORD O.D.	COLOR CODE OF CONDUCTORS
680/2	680/4	2	23	21/36	1	120	3/4"	.215"	1—Black
681/2	681/4	3	23	21/36	1	120	13/16"	.220"	2—White
682/2	682/4	4	23	21/36	1	120	15/16"	.250"	3—Red
683/2	683/4	5	23	21/36	1	120	1-1/16"	.285"	4—Green
684/2	684/4	6	23	21/36	1	120	1-1/8"	.305"	5—Blue
685/2	685/4	7	23	21/36	1	120	1-1/4"	.320"	6—Yellow
									7—Brown

RETRACTILE COMMUNICATION CORDS (SHIELDED)

RETRACTED LENGTHS 2 & 4 FEET—EXTENDED LENGTHS 12 & 25 FEET

DESCRIPTION: Same as above, except that shielded conductors are individually shielded with a cadmium copper shield to eliminate external electrical interference. Shield can be pigtailed for direct soldering connections.

APPLICATION: When shielded communication cords are needed.

ALPHA NO. 2 FT. LGTHS.	ALPHA NO. 4 FT. LGTHS.	NO. OF CONDS.	CONDUCTOR SIZE	CONDUCTOR STRAND	VOLTAGE RATING	SHIELDING	NOM. COIL O.D.	NOM. O.D. CORD	COLOR CODE OF CONDUCTORS
690/2	690/4	1	24	41/40	75	Shielded	3/8"	.160"	White
692/2	692/4	2	1-23 1-24	21/36 41/40	120 75	Unshielded Shielded	7/8"	.240"	Black White
694/2	694/4	3	2-23 1-24	21/36 41/40	120 75	Unshielded Shielded	7/8"	.240"	Black & Red White
696/2	696/4	4	2-23 2-24	21/36 41/40	120 75	Unshielded Individually Shielded	1"	.270"	Red & Black White & Green

RETRACTILE COMMUNICATION CORDS

PREPARED FOR EASY INSTALLATION AND REPLACEMENT

RETRACTED LENGTH 12"—EXTENDED LENGTH 6 FEET

DESCRIPTION: Same as communication cords except each end is prepared as indicated.

ALPHA NO.	NO. OF CONDS.	AWG	NOM. COIL O.D.	NOM. CORD O.D.	PREPARATION
686	3	23-21/36	13/16"	.220"	**1 end:** total length 1½". Conductors stripped and tinned. **Other end:** total length 1½" jacket removed.
687	4	23-21/36	15/16"	.250"	**1 end:** total length 1". Conductors stripped and tinned. **Other end:** total length 1½" jacket removed.
688	5	23-21/36	1-1/16"	.285"	**1 end:** total length 4⅛". Conductors stripped and tinned. **Other end:** total length 4⅛" conductors stripped and tinned.

MINIATURE RETRACTILE COMMUNICATIONS CORDS

RETRACTED LENGTH 2 FEET—EXTENDED LENGTH 10 FEET

DESCRIPTION: A small diameter plastic cord with stranded tinned copper conductors for maximum flexibility, insulated and jacketed with polyvinylchloride. Each cord is available in a 2 ft. retracted length with a 6" straight lead on each end and extends to approximately 10 feet.

APPLICATION: For low voltage power and communication equipment where miniaturization is required due to space and weight limitations.

ALPHA NO.	NO. OF CONDS.	CONDUCTOR SIZE	CONDUCTOR STRAND	AMP RATING	VOLT RATING	NOM. COIL O.D.	NOM. CORD O.D.
651	2	28	19/40	0.5	100	½"	.135"
652	4	28	19/40	0.5	100	½"	.150"

COLOR CODE OF CONDUCTORS
1—Black 2—White
3—Green 4—Red

For 3 conductor, use 4 conductor with one lead unused

PRICES

Alpha No.	Sugg. Resale
660/2	4.08
660/4	7.26
660/1	2.18
760/2	6.35
760/4	11.25
661/2	4.53
661/4	8.16
661/1	2.54
662/2	5.63
662/4	10.52
662/1	3.18
663/2	6.71
663/4	12.71
762/2	10.34
762/4	19.23
763/2	11.61
763/4	21.59
664/2	5.25
664/4	10.44
664/1	3.08
665/2	7.07
665/4	13.61
665/1	3.44
666/2	9.08
666/4	16.70
670/2	10.16
670/4	18.87
671/2	11.25
671/4	21.05
672/2	11.27
672/4	20.87
673/2	12.71
673/4	23.60
674/2	14.52
674/4	27.23
675/2	16.88
675/4	31.94
676/2	21.05
676/4	40.29
677/2	23.33
677/4	44.82
654	3.81
655	4.53
656	6.89
657	4.89
658	7.44
650	1.07
680/2	3.99
680/4	6.53
681/2	4.53
681/4	7.62
682/2	5.18
682/4	8.88
683/2	6.71
683/4	11.97
684/2	8.34
684/4	14.88
685/2	9.26
685/4	16.70
690/2	5.72
690/4	9.98
692/2	7.62
692/4	13.79
694/2	10.52
694/4	19.59
696/2	12.08
696/4	22.68
686	3.00
687	4.89
688	5.45
651	3.26
652	4.08

ALPHA ELECTRONIC WIRE

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Alphlex® Polyvinylchloride Plastic Tubing (PVC-105)

CONFORMS TO MIL-I-631D †

DESCRIPTION: The superior mechanical, thermal, and electrical properties of Alphlex PVC-105, coupled with its economical cost have led to an ever increasing use of this all-purpose insulating material. Another major advantage of Alphlex PVC-105 is its high degree of flexibility, which is maintained even under severe environmental conditions.

Rated for temperatures as high as 105°C, PVC-105 has a high dielectric strength that remains unaffected by increasing temperature throughout its range. PVC-105 maintains a high resistance to the agents of heat, oil, chemical corrosion and fungi with no loss in tensile strength, or flexibility. Other features include an exceptional resistance to abrasion and indefinite shelf life.

Alphlex PVC-105 is compounded with first quality, non-migratory resinous type plasticizers. Carefully selected stabilizers and modifiers added in the manufacturing process, counteract chemical and environmental degradation. Under adverse conditions Alphlex PVC-105 retains its flexibility which permits it to cling to and protect irregular shapes. An unusually simple to handle insulating material, PVC-105 "snakes" well under all environmental conditions.

APPLICATIONS: Designed and manufactured for general electronic, aircraft and electrical applications involving temperatures as high as 105°C. Especially useful to protect wires and cables subject to abrasion or where a flexible tubing with a high degree of resistivity to oil, chemicals or solvents is necessary.



DIMENSIONS CHART

ALPHLEX NUMBER	SIZE	NOM. INSIDE DIA. (Inch.)	NOM. WALL THICK-NESS (Inch.)	*STOCK COLORS	STANDARD PUT-UPS
PVC-105/24	24	.022	.013	1 - 6	100′, 500′, 1000′ Spools
PVC-105/22	22	.027	.012	1 - 6	100′, 500′, 1000′ Spools
PVC-105/20	20	.034	.016	1 - 6	100′, 500′, 1000′ Spools
PVC-105/19	19	.038	.016	1 - 6	100′, 500′, 1000′ Spools
PVC-105/18	18	.042	.016	1 - 6	100′, 500′, 1000′ Spools
PVC-105/17	17	.047	.016	1 - 6	100′, 500′, 1000′ Spools
PVC-105/16	16	.053	.016	1 - 6	100′, 500′, 1000′ Spools
PVC-105/15	15	.059	.016	1 - 6	100′, 500′, 1000′ Spools
PVC-105/14	14	.066	.016	1 - 6	100′, 500′, — Spools
PVC-105/13	13	.076	.016	1 - 6	100′, 500′, — Spools
PVC-105/12	12	.085	.016	1 - 6	100′, 500′, — Spools
PVC-105/11	11	.095	.016	1 - 6	100′, 500′, — Spools
PVC-105/10	10	.106	.016	1 - 6	100′, 500′, — Spools
PVC-105/9	9	.118	.020	1 - 6	100′, 500′, — Spools
PVC-105/8	8	.133	.020	1 - 6	100′, 500′, — Spools
PVC-105/7	7	.148	.020	1 - 6	100′, 500′, — Spools
PVC-105/6	6	.166	.020	1 - 6	100′, 500′, — Spools
PVC-105/5	5	.186	.020	1 - 6	100′, 500′, — Spools
PVC-105/4	4	.208	.020	1 - 6	100′, 250′, — Coils
PVC-105/3	3	.234	.020	1 - 6	100′, 250′, — Coils
PVC-105/2	2	.263	.020	1 - 6	100′, 250′ Coils
PVC-105/1	1	.294	.020	1,2,3	100′, 250′ Coils
PVC-105/0	0	.330	.020	1,2,3	100′, 250′ Coils
PVC-105/5/16″	5/16″	.312	.025	1,2,3	100′, 250′ Coils
PVC-105/3/8″	3/8″	.375	.025	1,2,3	100′, 250′ Coils
PVC-105/7/16″	7/16″	.438	.025	1,2,3	25′, 100′, — Coils
PVC-105/1/2″	1/2″	.500	.025	1,2,3	25′, 100′, — Coils
PVC-105/9/16″	9/16″	.562	.030	1,2,3	25′, 100′, — Coils
PVC-105/5/8″	5/8″	.625	.030	1,2,3	25′, 100′, — Coils
PVC-105/3/4″	3/4″	.750	.035	1,2,3	25′, 50′, — Coils
PVC-105/7/8″	7/8″	.875	.035	1,2,3	25′, 50′, — Coils
PVC-105/1″	1″	1.000	.035	1,2,3	25′, 50′, — Coils
PVC-105/1 1/8″	1 1/8″	1.125	.035	1,2	25′, 50′, — Coils
PVC-105/1 1/4″	1 1/4″	1.250	.040	1,2	25′, 50′, — Coils
PVC-105/1 3/8″	1 3/8″	1.375	.040	1,2	25′, 50′, — Coils
PVC-105/1 1/2″	1 1/2″	1.500	.045	1,2	25′, 50′, — Coils
PVC-105/1 3/4″	1 3/4″	1.750	.055	1,2	25′, 50′, — Coils
PVC-105/2″	2″	2.000	.060	1,2	25′, 50′, — Coils
PVC-105/2 1/4″	2 1/4″	2.250	.065	1,2	25′, 50′, — Coils
PVC-105/2 1/2″	2 1/2″	2.500	.070	1,2	25′, 50′, — Coils

*** STOCK COLORS** 1—Clear 2—Black 3—White 4—Yellow 5—Red 6—Green

† MIL-I-631D, Type F, Form U, Grade C, Class I, Category 1

SEE PAGE 1706 FOR PVC-105 PRICES

1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625
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Alphlex® Teflon Extruded Tubing

CONFORMS TO MIL-I-22129B

DESCRIPTION: Alphlex Teflon Tubing is unmatched by any other type of tubing for use in electrical applications at high frequencies and temperatures. Teflon is rated for continuous operation at 250°C, and retains an exceptional toughness and its flexibility throughout its temperature range.

Alphlex Teflon Tubing has the further advantage of a high degree of resistance to flexural fatigue and repetitive stresses; coefficient of friction lower than that of any other known solid; and a dielectric constant and power factor lower than that of any other known solid. This tubing will not crack or become brittle during aging.

Because of its resistance to soldering iron temperature, Alphlex Teflon Tubing will not shrink back during the soldering process. Alphlex Teflon Tubing will not melt and flow as do conventional thermoplastic materials. At high frequencies, its dielectric strength is many times that of other insulating materials.

Alphlex Teflon Tubing is chemically inert, has zero moisture absorption and its insulation resistance properties are unaffected by heat aging or temperature use up to 250°c.



APPLICATIONS: A thin flexible insulation, Alphlex Teflon Tubing permits a miniaturization and compactness of design never before possible. Invaluable in any application where a high heat resistant, flexible, non-flammable, chemical solvent and corrosion-resistant material is required.

ALPHLEX® THIN WALL TEFLON TUBING (TFT-200)

ALPHLEX NUMBER	SIZE	NOM. INSIDE DIA. (Inch.)	NOM. WALL THICK-NESS (Inch.)	STOCK COLORS	STANDARD PUT-UPS
TFT-200/30	30	.012	.009	Nat., Yel., Blk., Red	100′ Spools
TFT-200/28	28	.015	.009	Nat., Yel., Blk., Red	100′ Spools
TFT-200/26	26	.018	.010	Nat., Yel., Blk., Red	100′ Spools
TFT-200/24	24	.022	.010	Nat., Yel., Blk., Red	100′ Spools
TFT-200/22	22	.027	.010	Nat., Yel., Blk., Red	100′ Spools
TFT-200/20	20	.034	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/19	19	.038	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/18	18	.042	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/17	17	.047	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/16	16	.053	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/15	15	.059	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/14	14	.066	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/13	13	.076	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/12	12	.085	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/11	11	.095	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/10	10	.106	.012	Nat., Yel., Blk., Red	100′ Spools
TFT-200/9	9	.118	.015	Nat., Yel., Blk., Red	100′ Coils*
TFT-200/8	8	.133	.015	Nat., Yel., Blk., Red	100′ Coils*
TFT-200/7	7	.148	.015	Natural Only	100′ Coils*
TFT-200/6	6	.166	.015	Natural Only	100′ Coils*
TFT-200/5	5	.186	.015	Natural Only	100′ Coils*
TFT-200/4	4	.208	.015	Natural Only	100′ Coils*
TFT-200/3	3	.234	.015	Natural Only	100′ Coils*
TFT-200/2	2	.263	.015	Natural Only	100′ Coils*
TFT-200/1	1	.294	.015	Natural Only	100′ Coils*
TFT-200/0	0	.330	.015	Natural Only	100′ Coils*

* RANDOM LENGTHS PACKED IN 100′ COILS

ALPHLEX® STANDARD WALL TEFLON TUBING (TFT-250)

Similar in characteristics to TFT-200 (Thin Wall Tubing), but for use in application where additional dielectric values and mechanical strength are necessary.

ALPHLEX NUMBER	SIZE	NOM. INSIDE DIA. (Inch.)	NOM. WALL THICK-NESS (Inch.)	STOCK COLORS	STANDARD PUT-UPS
TFT-250/24	24	.022	.012	Natural Only	100′ Spools
TFT-250/22	22	.027	.012	Natural Only	100′ Spools
TFT-250/20	20	.034	.016	Natural Only	100′ Spools
TFT-250/19	19	.038	.016	Natural Only	100′ Spools
TFT-250/18	18	.042	.016	Natural Only	100′ Spools
TFT-250/17	17	.047	.016	Natural Only	100′ Spools
TFT-250/16	16	.053	.016	Natural Only	100′ Spools
TFT-250/15	15	.059	.016	Natural Only	100′ Spools
TFT-250/14	14	.066	.016	Natural Only	100′ Spools
TFT-250/13	13	.076	.016	Natural Only	100′ Spools
TFT-250/12	12	.085	.016	Natural Only	100′ Spools
TFT-250/11	11	.095	.016	Natural Only	100′ Spools
TFT-250/10	10	.106	.016	Natural Only	100′ Spools
TFT-250/9	9	.118	.020	Natural Only	100′ Coils*
TFT-250/8	8	.133	.020	Natural Only	100′ Coils*
TFT-250/7	7	.148	.020	Natural Only	100′ Coils*
TFT-250/6	6	.166	.020	Natural Only	100′ Coils*
TFT-250/5	5	.186	.020	Natural Only	100′ Coils*
TFT-250/4	4	.208	.020	Natural Only	100′ Coils*
TFT-250/3	3	.234	.020	Natural Only	100′ Coils*
TFT-250/2	2	.263	.020	Natural Only	100′ Coils*
TFT-250/1	1	.294	.020	Natural Only	100′ Coils*
TFT-250/0	0	.330	.020	Natural Only	100′ Coils*

* RANDOM LENGTHS PACKED IN 100′ COILS

PRICES

Alpha No.	Sugg. Resale per 100′	Alpha No.	Sugg. Resale per 100′	Alpha No.	Sugg. Resale per 100′	Alpha No.	Sugg. Resale per 100′
TFT-200/30	9.00	TFT-200/12	18.48	TFT-250/24	10.01	TFT-250/9	45.86
TFT-200/28	8.00	TFT-200/11	20.45	TFT-250/22	11.23	TFT-250/8	45.43
TFT-200/26	7.70	TFT-200/10	22.04	TFT-250/20	15.19	TFT-250/7	49.56
TFT-200/24	7.70	TFT-200/9	24.95	TFT-250/19	16.31	TFT-250/6	53.55
TFT-200/22	9.50	TFT-200/8	27.52	TFT-250/18	18.70	TFT-250/5	58.99
TFT-200/20	12.00	TFT-200/7	29.45	TFT-250/17	20.39	TFT-250/4	64.09
TFT-200/19	12.50	TFT-200/6	31.82	TFT-250/16	21.78	TFT-250/3	70.89
TFT-200/18	12.98	TFT-200/5	34.85	TFT-250/15	22.26	TFT-250/2	73.14
TFT-200/17	14.18	TFT-200/4	38.10	TFT-250/14	24.03	TFT-250/1	81.26
TFT-200/16	14.53	TFT-200/3	41.74	TFT-250/13	25.33	TFT-250/0	91.38
TFT-200/15	14.58	TFT-200/2	48.13	TFT-250/12	27.41		
TFT-200/14	16.04	TFT-200/1	52.71	TFT-250/11	30.43		
TFT-200/13	17.17	TFT-200/0	59.14	TFT-250/10	33.02		

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NEW

Irradiated Polyolefin Tubing

NEW ALL-PURPOSE SHRINKABLE TUBING — FIT-221

- **SHRINKS 50% (2:1 RATIO) WITH ONLY 5% LONGITUDINAL SHRINKAGE**
- **FEWER SIZES COVERING MORE APPLICATIONS**

DESCRIPTION: Alphlex FIT-221 Shrinkable Tubing, when heated, forms a tight-mechanical bond, even over irregularly shaped materials. FIT-221 is available in a range of colors and in clear.

FIT-221 is an all-purpose polyolefin extruded tubing that is simple to use and provides a tight mechanical bond. FIT-221 is an irradiated, thermally stable, modified polyolefin base product. FIT-221 Clear may be used so that jacketed, printed components or cable data is clearly visible and inspection of insulated components, cables or terminations is simplified.

The tubing is supplied in an expanded form and easily slips over the object to be covered. When a temperature of approximately 275°F (135°C) is applied, it immediately returns to its predetermined size (approximately one-half smaller) and forms a permanent tight-fitting mechanical bond. FIT-221 Tubing will not cold-flow or melt but retains form stability throughout its temperature range. No radioactivity exists in or on the material and it will not emit radiation. Longitudinal shrinkage is 5% maximum when completely recovered.

Controlled shrinkage to the correct predetermined size takes place within seven seconds at 225°F to 255°F. Shrinkage will begin at 235°F, but at a somewhat slower rate. When using an oven, temperature may range from 235°F to 300°F. Prolonged exposure to these temperatures will not affect the physical or electrical properties of FIT-221 Shrinkable Tubing. FIT-221 Clear Tubing remains transparent over its entire operating range of −55°C to 135°C.

FLAMMABILITY: Although FIT-221 Clear is a high temperature material, it is flammable and will burn. However, when the tubing is shrunk over non-flammable or flame-resistant components, such as connectors, terminals and wire, the entire assembly will not support combustion.

All Types of FIT Tubing are available from stock and may be cut and/or marked to your specifications.

DIMENSIONS CHART

ALPHLEX NO. FIT-221	EQUIVALENT TO FIT-275/270	SIZE	MIN. I.D. BEFORE SHRINKAGE (Inches)	RECOVERED I.D. AFTER SHRINKAGE (Inches)	RECOVERED NOM. WALL THICKNESS (Inches)	STANDARD PACKAGE* 4′ LENGTHS TOT. FTG.	STANDARD PACKAGE* 4′ LENGTHS NO. OF LGTHS.	STANDARD PACKAGE* 6″ LENGTHS TOT. FTG.	STANDARD PACKAGE* 6″ LENGTHS NO. OF LGTHS.
FIT-221-3/64″	FIT-275-24	3/64	.046	.023	.016	100′	25	20′	40
FIT-221-1/16″	FIT-275-22, 20	1/16	.063	.031	.017	100′	25	18′	36
FIT-221-3/32″	FIT-275-18, 16	3/32	.093	.046	.020	100′	25	16′	32
FIT-221-1/8″	FIT-275-14	1/8	.125	.062	.020	100′	25	14′	28
FIT-221-3/16″	FIT-275-12, 10	3/16	.187	.093	.020	100′	25	12′	24
FIT-221-1/4″	FIT-275-8	1/4	.250	.125	.025	100′	25	10′	20
FIT-221-3/8″	FIT-275-6, 4	3/8	.375	.187	.025	100′	25	8′	16
FIT-221-1/2″	FIT-275-2, 5/16″	1/2	.500	.250	.025	20′	5	7′	14
FIT-221-3/4″	FIT-275-3/8″, 7/16″	3/4	.750	.375	.030	20′	5	6′	12
FIT-221-1″	FIT-275-1/2″, 5/8″	1	1.000	.500	.035	20′	5	4′	8
FIT-221-1 1/2″	FIT-275-3/4″, 7/8″	1 1/2	1.500	.750	.040	20′	5	2.5′	5
FIT-221-2″	FIT-275-1″, 1 1/4″	2	2.000	1.000	.045	20′	5	1.5′	3
FIT-221-3″	FIT-275-1 1/2″, 1 3/4″	3	3.000	1.500	.050	8′	2	1′	2
FIT-221-4″	FIT-275-2″	4	4.000	2.000	.055	8′	2	.5′	1

STOCK COLORS — Black White, Red, Yellow, Blue, and Clear

*STANDARD PACKAGE FIT-221 Tubing is available ONLY in the specified packages. When ordering, indicate package desired (6 inches or 4 foot).

PRICES — 4′ Lengths

Alpha No.	Footage	Sugg. Resale	Alpha No.	Footage	Sugg. Resale	Alpha No.	Footage	Sugg. Resale
FIT-221—3/64	100	14.10	FIT-221—1/4	100	27.95	FIT-221—1 1/2	20	23.10
FIT-221—1/16	100	14.80	FIT-221—3/8	100	31.00	FIT-221—2	20	31.90
FIT-221—3/32	100	17.15	FIT-221—1/2	20	8.25	FIT-221—3	8	20.24
FIT-221—1/8	100	18.35	FIT-221—3/4	20	11.00	FIT-221—4	8	29.48
FIT-221—3/16	100	22.35	FIT-221—1	20	15.40			

ALPHA electronic WIRE

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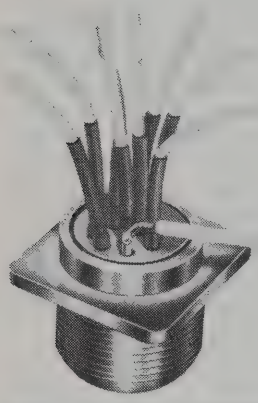
FIT® SHRINKABLE TUBING

Irradiated Polyolefin Semi-Rigid Tubing FIT-295

All Types of FIT Tubing are available from stock and may be cut and/or marked to your specifications.

FOR MAXIMUM STRENGTH AT ALL STRESS POINTS

SHRINKAGE RATIO 2:1 (50% Shrinkage)



DESCRIPTION: Alphlex FIT-295 Shrinkable Tubing is designed to provide maximum mechanical strength at stress or connection points. An extremely strong, heavy wall, abrasion-resistant, extruded tubing FIT-295 is supplied in expanded form and easily slips over the object to be covered.

When a temperature of approximately 275°F (135°C) is applied, Alphlex FIT-295 immediately returns to its predetermined size (approximately ½ smaller) and forms a permanent tight-fitting mechanical bond. FIT-295 will not cold-flow or melt but retains form stability throughout its temperature range. No radioactivity exists in or on the material and it will not emit radiation. Longitudinal shrinkage is less than 5% when completely recovered.

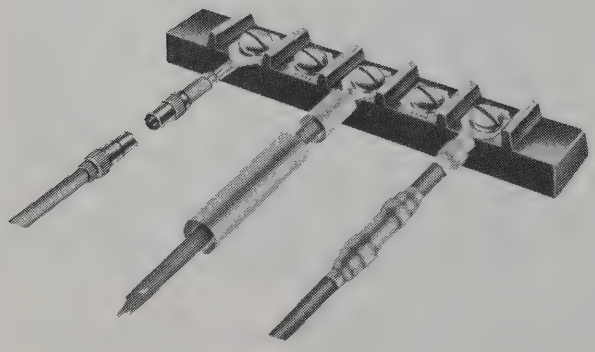
Controlled shrinkage to the correct predetermined size takes place within seven seconds at 275°F to 300°F. When using an oven, temperature may range from 235°F to 300°F. Prolonged exposure to these temperatures will not affect the physical or electrical properties of FIT-295 Tubing.

FLAMMABILITY: Although FIT-295, Clear, is a high temperature material, it is flammable and will burn. However, when the tubing is shrunk over non-flammable or flame-resistant components, such as connectors, terminals and wires, the entire assembly will not support combustion.

DIMENSIONS CHART

ALPHLEX NUMBER	STOCK COLORS	SIZE (Inches)	MINIMUM I.D. BEFORE SHRINKING (Inches)	RECOV'D I.D. SHRINKING (Inches)	NOMINAL THICKNESS (Inches)	STNDRD. PKG.* 4 FT. LENGTHS TOT. FTG.	STNDRD. PKG.* 4 FT. LENGTHS NO. LGTHS.	STNDRD. PKG.* 6 IN. LENGTHS TOT. FTG.	STNDRD. PKG.* 6 IN. LENGTHS NO. LGTHS.
FIT-295-3/64	Yellow, Clear	3/64	.046	.023	.020	100′	25	20′	40
FIT-295-1/16	White, Clear	1/16	.063	.032	.020	100′	25	18′	36
FIT-295-3/32	Blue, Clear	3/32	.093	.045	.020	100′	25	16′	32
FIT-295-1/8	Red, Clear	1/8	.125	.063	.020	100′	25	14′	28
FIT-295-3/16	Green, Clear	3/16	.187	.093	.025	100′	25	12′	24
FIT-295-1/4	Slate, Clear	1/4	.250	.125	.025	100′	25	10′	20
FIT-295-3/8	Brown, Clear	3/8	.375	.187	.030	100′	25	8′	16
FIT-295-1/2	White, Clear	1/2	.500	.250	.030	20′	5	7′	14

***STANDARD PACKAGE**
FIT-295 Tubing is available only in the specified standard packages. When ordering indicate package desired (6 inch or 4 foot.)



PACKAGED ASSORTMENTS

FIT-295-MS — Contains an assortment of 6" lengths in all sizes. Every length identified as to size.

ALPHLEX NO.	TUBING SIZE RANGE	LENGTHS PER BOX
FIT-295-MS-1	3/64" thru 1/2" (8 sizes)	5 lengths per size (40 lengths)
FIT-295-MS-2	3/8" thru 1" (4 sizes)	6 lengths per size (24 lengths)

PRICES — 4′ Lengths

Alpha No.	Footage	Sugg. Resale	Alpha No.	Footage	Sugg. Resale
FIT-295—3/64	100	14.10	FIT-295—3/16	100	22.35
FIT-295—1/16	100	14.80	FIT-295—1/4	100	27.95
FIT-295—3/32	100	17.15	FIT-295—3/8	100	31.00
FIT-295—1/8	100	18.35	FIT-295—1/2	20	8.25

ALPHA electronic WIRE

© U.C.P., Inc.

Irradiated Polyvinylchloride Tubing FIT-105

All Types of FIT Tubing are available from stock and may be cut and/or marked to your specifications.

HIGHLY FLEXIBLE — IDEAL FOR CABLE JACKETING

Conforms to MIL-1-631D, Type F, Form U, Grade C, Class 1, Cat. 1

SHRINKAGE RATIO 2:1 (50% Shrinkage)

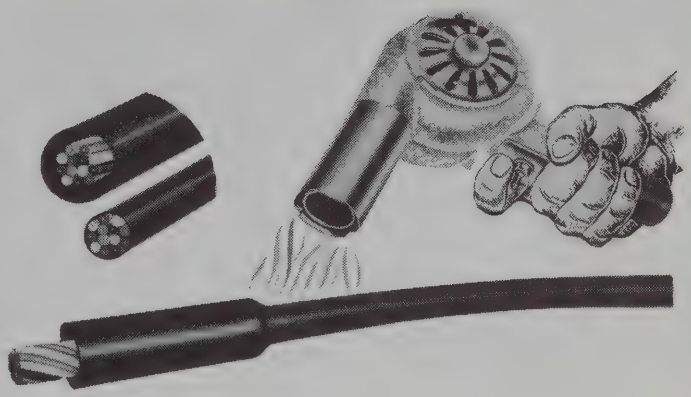
DESCRIPTION: Alphlex FIT-105 is an easy-to-use modified polyvinylchloride that provides a snug, extremely flexible insulation.

Because of its flexibility, strength and its ability to shrink 50% on application of heat, FIT-105 is ideally suited for insulating components and cables with a wide variation in shape and diameter.

Because of the 50% expanded diameter of FIT-105 Tubing, it is an extremely useful cable jacketing material. Cable cores may be pulled through FIT-105 Tubing with comparative ease and shrunk down to form a jacket with all the qualities of the finest extruded plastic jackets.

The tubing is supplied in expanded form and in continuous lengths. When a temperature of approximately 347°F (175°C) is applied, Alphlex FIT-105 Tubing immediately returns to its predetermined size (approximately 50% smaller), and forms a permanent, tight-fitting mechanical bond. FIT-105 Tubing will not cold-flow or melt but retains form stability within its temperature range. No radioactivity exists in or on the material and it will not emit radiation. Longitudinal shrinkage is less than 10%.

Controlled shrinkage to the correct predetermined size takes place within seven seconds at 325°F, or above. When using an oven, temperature may range from 325°F to 350°F.



DIMENSIONS CHART

ALPHLEX NO. (BLACK ONLY)	SIZE (Inches)	MINIMUM I.D. BEFORE SHRINKING (Inches)	RECOVERED I.D. AFTER SHRINKING (Inches)	NOMINAL WALL THICKNESS (Inches)	STANDARD PUT-UP (Feet)
FIT-105-3/64	3/64	.046	.023	.020	25, 100, 500
FIT-105-1/16	1/16	.062	.031	.020	25, 100, 500
FIT-105-3/32	3/32	.093	.046	.020	25, 100, 200
FIT-105-1/8	1/8	.125	.062	.025	25, 100, 200
FIT-105-3/16	3/16	.187	.093	.025	25, 100, 200
FIT-105-1/4	1/4	.250	.125	.025	25, 100, 200
FIT-105-3/8	3/8	.375	.187	.030	25, 100, 200
FIT-105-1/2	1/2	.500	.250	.030	25, 100
FIT-105-3/4	3/4	.775	.375	.035	25, 100
FIT-105-1	1	1.000	.500	.040	25, 100
FIT-105-1 1/2	1 1/2	1.500	.750	.045	25, 100
FIT-105-2	2	2.000	1.000	.050	10, 25, 50

STOCK COLOR — BLACK

LONG LENGTHS — MAXIMUM THREE LENGTHS PER PUT-UP.

PRICES

Alpha No.	Footage	Sugg. Resale
FIT-105—3/64	500	31.75
FIT-105—3/64	100	9.15
FIT-105—3/64	25	2.95
FIT-105—1/16	500	33.25
FIT-105—1/16	100	9.50
FIT-105—1/16	25	3.06
FIT-105—3/32	200	20.30
FIT-105—3/32	100	10.90
FIT-105—3/32	25	3.48
FIT-105—1/8	200	21.50
FIT-105—1/8	100	11.50
FIT-105—1/8	25	3.65
FIT-105—3/16	200	26.30
FIT-105—3/16	100	13.90
FIT-105—3/16	25	4.35
FIT-105—1/4	200	33.00
FIT-105—1/4	100	17.25
FIT-105—1/4	25	5.33
FIT-105—3/8	200	36.50
FIT-105—3/8	100	19.00
FIT-105—3/8	25	5.84
FIT-105—1/2	100	20.75
FIT-105—1/2	25	6.58
FIT-105—3/4	100	27.75
FIT-105—3/4	25	8.61
FIT-105—1	100	40.00
FIT-105—1	25	12.20
FIT-105—1 1/2	100	65.75
FIT-105—1 1/2	25	19.73
FIT-105—2	50	56.60
FIT-105—2	25	28.80
FIT-105—2	10	11.57

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Irradiated Kynar* Tubing

FIT-350

NEW

FIT SHRINKABLE TUBING

HIGH TEMPERATURE TUBING

A tough, thin wall tubing with outstanding cut-through and abrasion resistance. Semi-rigid polyvinylidene fluoride.

10 sizes cover complete range of .032 — 1 inch

Clear and non-flammable

All FIT-350 Tubing available from stock and may be cut and/or marked to your specifications.

SHRINKAGE RATIO 2:1 (50% Shrinkage)

DESCRIPTION: Alphlex FIT-350 is a new shrinkable tubing with outstanding temperature and physical characteristics and high dielectric strength. **Longitudinal shrinkage is only 5%.**

FIT-350 is an extremely tough extruded tubing that can be repeatedly flexed, bent, or twisted without loss of its mechanical or electrical strength. Supplied as a clear tubing, FIT-350 may be used where inspection or identification of the item covered is necessary.

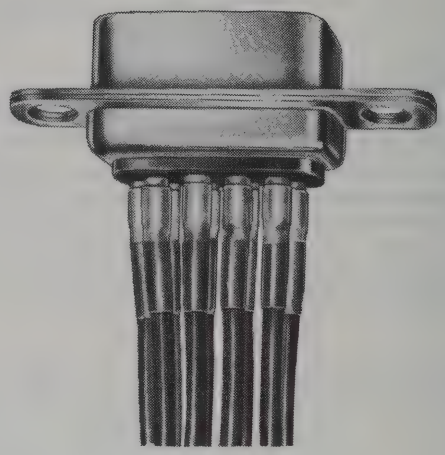
When a temperature of approximately 347°F. (175°C.) is applied, the tubing immediately returns to its predetermined size (approximately one-half smaller) and forms a permanent, tough mechanical bond.

FIT-350 will never cold flow or melt and will not split when shrunk over sharp or irregularly shaped objects.

FIT-350 is non-flammable and will operate continuously at temperatures from −55°C to +175°C. It will withstand intermittent heat shock at temperatures up to 350°C.

Compared with other fluorocarbon tubing types, FIT-350 has markedly superior abrasion, cut-through, and cold flow properties.

SHRINKING METHODS: The use of a hot air gun (Alpha HG-1) is recommended as being generally the easiest heating method. However, excellent results may be achieved by the use of an oven, radiant heat, dipping in hot liquids, or heating with a soldering iron, burner, or even the flame of a match.

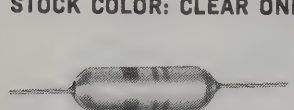


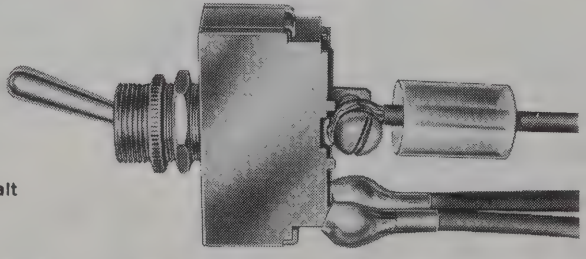
DIMENSIONS CHART

ALPHA NO.	MIN. I.D. BEFORE SHRINKAGE (Inches)	RECOVERED I.D. AFTER SHRINKAGE (Inches)	RECOVERED NOM. WALL THICKNESS (Inches)	STANDARD PACKAGE* 4′ LENGTHS TOTAL FOOTAGE	STANDARD PACKAGE* 4′ LENGTHS NO. OF LENGTHS	STANDARD PACKAGE 6″ LENGTHS TOTAL FOOTAGE	STANDARD PACKAGE 6″ LENGTHS NO. OF LENGTHS
FIT-350-3/64″	.046	.023	.010	100′	25	16′	32
FIT-350-1/16″	.063	.031	.010	100′	25	14′	28
FIT-350-3/32″	.093	.046	.010	100′	25	12′	24
FIT-350-1/8″	.125	.062	.010	100′	25	10′	20
FIT-350-3/16″	.187	.093	.010	100′	25	8′	16
FIT-350-1/4″	.250	.125	.012	100′	25	6′	12
FIT-350-3/8″	.375	.187	.012	100′	25	4′	8
FIT-350-1/2″	.500	.250	.012	20′	5	2′	4
FIT-350-3/4″	.750	.375	.017	20′	5	1′	2
FIT-350-1″	1.000	.500	.019	20′	5	.5′	1

STANDARD PACKAGE: FIT-350 tubing is available only in the specified packages. When ordering, indicate package desired (6 inches or 4 foot).

STOCK COLOR: CLEAR ONLY







*T.M. Pennsalt

PRICES—4′ Lengths

Alpha No.	No. of Lengths	Footage	Sugg. Resale
FIT-350—3/64	25	100	14.70
FIT-350—1/16	25	100	16.05
FIT-350—3/32	25	100	19.30
FIT-350—1/8	25	100	21.20
FIT-350—3/16	25	100	32.85
FIT-350—1/4	25	100	41.20
FIT-350—3/8	25	100	58.90
FIT-350—1/2	5	20	22.46
FIT-350—3/4	5	20	41.27
FIT-350—1	5	20	75.88

ALPHA electronic WIRE

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Belden | shielded sound and broadcast audio cables

GRAY HORIZONTAL PANEL INDICATES THAT THE BELDFOIL SHIELDED CABLES ARE ALSO RECOMMENDED FOR INSTRUMENTATION APPLICATIONS

TWO CONDUCTOR SHIELDED CABLES

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Percent Shield Coverage	Nom. *Cap. (mmf Ft)	Nom. **Cap. (mmf Ft)	Suggested Working Voltage	Standard Spool Lengths in ft
With JACKET	8640	26 (Solid)	.002	.020	.089	Red, Clear	100	80	140	100	250, 500
BELDFOIL[e]		*Solid copper, BELDSOL†† (solderable—no stripping required) insulated BELDFOIL aluminum-Mylar shield, 30 AWG solid tinned Copperweld▲ ground drain wire, **WHITE** vinyl jacket. Maximum operating temperature 105° C.* **Ideal for Instrumentation and Audio Console Work where Subminiaturization is Required.**									
	8450	22 (Solid)	.006	.018	.118	Blk, Red	100	40	76	200	100, 250, 500, 1000
	8451	22 (7x30)	.008	.020	.135	Blk, Red	100	34	67	200	100, 250, 500, 1000
BELDFOIL[e] Miniature Broadcast Audio Cable		*Tinned copper, Polypropylene insulated, conductors cabled, stranded tinned copper ground drain wire, BELDFOIL aluminum-Mylar shield, paper wrap,* **BLACK** *or* **GRAY** *vinyl jacket.* **Belden's Miniature Type Broadcast Audio Cable occupies 1/2 to 2/3 less space than required by Standard Broadcast Audio Cables. The Beldfoil Shield combines high cable reliability with ease of termination.**									
	8437	22 (Solid)	.015	.025	.200	Blk, Red	88	48	85	200	500, 1000
	8441	22 (16x34)	.015	.025	.210	Blk, Red	88	49	86	200	100, 500, 1000
Broadcast Audio Cable		*Tinned copper, vinyl insulated, conductors cabled, 8437 solid tinned copper drain wire, 8441 stranded tinned copper drain wire, tinned copper brass shield, black vinyl jacket.*									
	NEW 8641	24 (7x32)	.014	.025	.160	Blk, Wht	100	22	42	350	100, 500, 1000
	8761	22 (7x30)	.014	.025	.167	Blk, Wht	100	24	47	350	500, 1000
	8762	20 (7x28)	.014	.028	.196	Blk, Wht	100	27	49	350	100, 250, 500, 1000
BELDFOIL[e]	8760	18 (16x30)	.018	.028	.222	Blk, Wht	100	24	44	450	250, 500, 1000
	8719	16 (19x29)	.025	.030	.274	Blk, Wht	100	24	47	600	500, 1000
	8720	14 (19x27)	.032	.035	.340	Blk, Wht	100	24	47	750	500, 1000
		Tinned copper polyethylene insulated, BELDFOIL aluminum-Myler shield, stranded tinned copper ground drain wire, (24 AWG for 8641, 22 AWG for 8761, and 20 AWG for 8760 and 8762, 18 AWG for 8719, 16 AWG for 8720), chrome vinyl jacket.									
	8739	22 (Solid)	.015	.025	.160	Blk, Red	94.0	38	66	350	100, 500, 1000
	8737	22 (7x30)	.015	.025	.170	Blk, Red	89.3	40	70	350	100, 250, 500, 1000
	8759	20 (7x28)	.015	.025	.195'	Blk, Red	81.0	47	79	350	100, 500, 1000
	8790	18 (7x26)	.020	.028	.231	Red, Wht	76.5	53	92	450	100, 250, 500, 1000
	8780	16 (19x29)	.023	.030	.266	Blk, Wht	84.1	57	98	450	100, 500, 1000
		Tinned copper, vinyl insulated, tinned copper spiral wrapped shield, chrome vinyl jacket.									
	8390 TEFLON	22 (19x34)	.015	.015	.180	Blk, Wht	90	23	40	1000	25, 100, 500
High Temperature		*Stranded tinned copper, FEP teflon■ insulated, cabled tinned copper braid shield, white FEP teflon jacket.* **+200°C maximum, —70°C minimum operating temperature. Ideal where chemical resistance is needed and/or extremely high or low temperatures are required.**									
	8208	18 (16x30)	.020	.025	.255	Red, Wht	69	46	77	200	100, 500, 1000
		Tinned copper, rubber insulated, braided tinned copper shield, chrome vinyl jacket.									
Without JACKET	8738	22 (Solid)	.015	—	.130	Blk, Red	72.8	35	61	350	1000
	8758	20 (7x28)	.015	—	.165	Blk, Red	63.8	42	72	350	100, 500, 1000
	8789	18 (7x26)	.020	—	.204	Blk, Wht	74	50	89	450	500, 1000
	8779	16 (19x29)	.023	—	.225	Blk, Wht	83	63	112	600	500, 1000
		Tinned copper, vinyl insulated, braided tinned copper shield.									

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*Capacitance between conductors.
**Capacitance between 1 conductor and other conductor connected to shield.
'Belden U.S. Patent 3,032,604.
††Belden trademark—Reg. U.S. Pat. Off.
▲Trademark of Copperweld Steel Co.
■Dupont Tradename for fluorocarbon resins.

For underground burial recommendations of all types of vinyl, polyethylene, and neoprene jacketed cables, please write for Bulletin #6 Electronic Wire Section.

shielded instrumentation, strain gauge, sound and audio cables

Belden

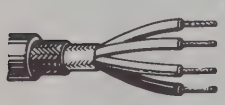
GRAY HORIZONTAL PANEL INDICATES THAT THE BELDFOIL SHIELDED CABLES ARE ALSO RECOMMENDED FOR INSTRUMENTATION APPLICATIONS

THREE CONDUCTOR SHIELDED

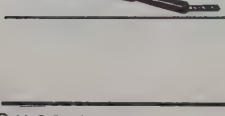
Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Percent Shield Coverage	Nom. Cap. (mmf ft)	Nom. Cap. (mmf ft)	Suggested Working Voltage	Standard Spool Lengths in ft
	8731	22 (Solid)	.015	.025	.178	Blk, Red, Wht	76.2	36	63	350	500, 1000
	8791	18 (7x26)	.020	.028	.236	Blk, Red, Wht	78.2	47	84	450	100, 500, 1000
	Tinned copper, vinyl insulated, conductors cabled, tinned copper spiral wrapped shield, chrome vinyl jacket.										
 BELDFOIL©	8771	22 (7x30)	.014	.025	.175	Blk, Red, Wht	100	23	41	350	250, 500, 1000
	8772	20 (7x28)	.014	.028	.200	Blk, Red, Wht	100	27	51	350	500, 1000
	8770	18 (16x30)	.018	.028	.236	Blk, Red, Wht	100	24	48	450	500, 1000
	Tinned copper, polyethylene insulated, conductors cabled, BELDFOIL aluminum-Mylar shield, stranded tinned copper ground drain wire (22 AWG for 8771, and 20 AWG for 8770 and 8772), chrome vinyl jacket.										
	8735	22 (7x30)	.015	.025	.199	Blk, Red, Wht	70	34	60	350	15, 50, 100, 500, 1000
	Tinned copper, vinyl insulated, conductors cabled, tinned copper braid shield, chrome vinyl jacket.										
	8391 TEFLON	22 (19x34)	.015	.015	.190	Blk, Red, Wht	90	20	35	1000	25, 100, 500
	Stranded tinned copper, FEP teflon■ insulated, cabled tinned copper braid shield, white FEP teflon jacket. **HIGH TEMPERATURE +200°C maximum, —70°C minimum operating temperature. Ideal where chemical resistance is needed and/or extremely high or low temperatures are required.**										

QUADS

STRAIN GAUGE CABLES

Description	Trade Number	No. of Cond.	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Percent Shield Coverage	Nom. Cap. (mmf ft)	Nom. **Cap. (mmf ft)	Suggested Working Voltage	Standard Spool Lengths in ft
	8434	4	25 (7x33) 3 copper 4 copper-weld	.013	.020	.179	Red, Blk, Grn, Wht	100	25	40	400	100, 500, 1000
	Tinned copper, polyethylene insulated, black and red conductors under BELDFOIL aluminum-Mylar shield, stranded ground wire, green and white conductors under over-all BELDFOIL aluminum-Mylar shield, chrome vinyl jacket.											
 BELDFOIL©	8723	4	22 (7x30) copper	.008	.019	.165	Red, Blk, Grn, Wht	100	35	62	400	100, 500, 1000
	Tinned copper, polypropylene insulated, black and red under a BELDFOIL aluminum-Mylar shield. Green and white under a BELDFOIL aluminum-Mylar shield, each pair separate, stranded tinned copper drain wire, chrome vinyl jacket.											
 BELDFOIL©	NEW 8729	4	22 (19x34)	.015	.050	.250	Wht, Blk, Red, Grn	100	22	42	600	500, 1000
	Tinned copper, polyethylene insulated, cabled BELDFOIL aluminum-Mylar shield. 18 AWG stranded tinned copperweld ground drain wire, white vinyl jacket.											
	8404	4	20 (26x34)	.015	.033	.255	Red, Blk, Grn, Wht	87	25	45	600	15, 100, 250, 500, 1000
	Tinned copper, polyethylene insulated, cabled, rayon braid, tinned copper braid shield, chrome vinyl jacket.											
	8407	4	16 (65x34)	.032	.043	.422	Red, Blk, Grn, Wht	84	37	65	600	100, 250
	Tinned copper, separator, rubber insulated, cabled, rayon braid, tinned copper braid shield, cotton wrap, black neoprene jacket.											
	8424	4	20 (26x34)	.020	.040	.295	Red, Blk, Grn, Wht	83.5	55	95	600	15, 50, 100, 250, 500, 1000
	Tinned copper, cotton wrap, rubber insulated, rayon braid, tinned copper braid shield, cotton wrap, black rubber jacket.											
	8392 TEFLON	4	22 (19x34)	.015	.015	.205	Red, Blk, Grn, Wht	90	20	35	1000	25, 100, 500
	Stranded tinned copper, FEP teflon■ insulated, cabled tinned copper braid shield, white FEP teflon jacket. **HIGH TEMPERATURE +200°C maximum, —70°C minimum operating temperature. Ideal where chemical resistance is needed and/or extremely high or low temperatures are required.**											

AUDIO AND SOUND CABLES

Description	Trade Number		AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Percent Shield Coverage	Nom. Cap. (mmf ft)	Nom. **Cap. (mmf ft)	Suggested Working Voltage	Standard Spool Lengths in ft
 BELDFOIL©	8724	2 shielded 2 unshielded	22 (7x30) 22 (7x30)	.008 .008	.019	.165	Red, Blk, Grn, Wht	100	34	67	200	250, 500, 1000
	8722	2 shielded 2 unshielded	20 (7x28) 20 (7x28)	.015 .015	.028	.260	Red, Blk, Grn, Wht	100	60	99	350	500, 1000
	Tinned copper, 8722 vinyl insulated, 8724 polypropylene insulated, BELDFOIL aluminum-Mylar shield over 2 conductors, stranded tinned copper ground drain wire (22 AWG for 8722 and 24 AWG for 8724), chrome vinyl jacket.											
	8732	2 shielded 2 unshielded	22 (7x30) 22 (7x30)	.015 .015	.030	.188x .296	Blk, Wht Blk, Wht	62	21	37	350	100, 500, 1000
	Tinned copper, polyethylene insulated, tinned copper braid shield over 2 conductors, chrome vinyl jacket.											

*Capacitance between conductors.
**Capacitance between 1 conductor and other conductor connected to shield.

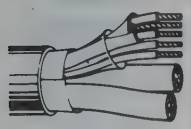
\Belden U.S. Patent 3,032,604.
■Du Pont Tradename for fluorocarbon resins.

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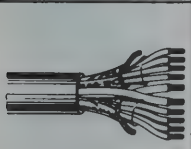
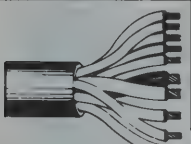
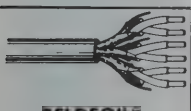
Belden | multi-purpose and special audio and sound cables

GRAY HORIZONTAL PANEL INDICATES THAT THE BELDFOIL SHIELDED CABLES ARE ALSO RECOMMENDED FOR INSTRUMENTATION APPLICATIONS

MULTIPLE QUADS AUDIO AND SOUND CABLES

Description	Trade Number	No. of Cond.	AWG & (Stranding)	Cond Color Coding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Percent Shield Coverage	Suggested Working Voltage	Nom. *Cap. (mmf ft)	Nom. **Cap. (mmf ft)	Standard Spool Lengths in ft
 BELDFOIL⊖	8726	12 (3 QUADS)	22 (7x30)	Red, Blk, Grn, Wht	.008	.035	.330	100	200	34	67	100, 500, 1000
	8727	28 (7 QUADS)	22 (7x30)	Red, Blk, Grn, Wht	.008	.040	.450	100	200	34	67	100, 500, 1000
		22 AWG tinned copper, polypropylene insulation, cabled in quads, BELDFOIL shield over black and red conductors, 24 AWG stranded tinned copper drain wire. Each quad is 8724 (on page 4) with clear Mylar tape wrap instead of vinyl jacket. Shields color coded, overall chrome vinyl jacket.										

SPECIAL AUDIO AND SOUND CABLES

	8734	1 shielded 2 unshielded	22 (7x30) 22 (7x30)	Wht Blk, Red	.015 .015	.025	.194	82	350	—	79	100, 500, 1000
		Tinned copper, vinyl insulated, tinned copper braid shield over 1 conductor, 3 conductors cabled, chrome vinyl jacket.										
 BELDFOIL⊖	8763	2 shielded 1 unshielded	20 (7x28) 20 (7x28)	Blk, Red Wht	.014 .014	.028	.210	100	350	26	48	500, 1000
		Tinned copper, polyethylene insulated, BELDFOIL aluminum-Mylar shield over 2 conductors, 20 stranded tinned copper ground drain wire, chrome vinyl jacket.										
 BELDFOIL⊖	8733	3 shielded	22 (7x30)	Blk, Red, White	.014	.030	.205	100	350	—	51	100, 500, 1000
		Tinned copper, polyethylene insulated, each conductor separately BELDFOIL aluminum-Mylar shielded. Ground wire for each conductor is tinned cadmium bronze ribbon under BELDFOIL "Z" fold, chrome vinyl jacket.										
 BELDFOIL⊖	8788	3 shielded 2 unshielded	22 (7x30)	Blk, Red, Grn, Yel, Blue	.015	.028	.236	100	350	—	125	500
		Tinned copper, vinyl insulated 3 conductors each separately BELDFOIL shielded, ground drain wire for each conductor is tinned cadmium bronze ribbon under BELDFOIL "Z" fold, 2 conductors unshielded, cabled around a vinyl filler, chrome vinyl jacket.										
	8783	3 (3 unshielded)	1-20 (10x30) 2-16 (26x30)	Blue, Grn, Org	.020 .020	.025	.250	—	450	—	—	100, 500
		Tinned copper, vinyl insulated, conductors cabled, chrome vinyl jacket.										
 BELDFOIL⊖	8786	6 (2 unshielded) (4 shielded)	22 (7x30) 24 (7x32)	Blu, Wht Blk, Grn, Red, Yel	.015 .015	.028	.256	100	350	—	—	100, 500
		Tinned copper, vinyl insulated, 4 conductors twisted under BELDFOIL aluminum-Mylar shield, 2 conductors unshielded, 22 AWG drain wire, chrome vinyl jacket.										
 BELDFOIL⊖	8787	10 (4 shielded) (4 shielded) (2 unshielded)	24 (7x32) 24 (7x32) 22 (7x30)	Gry, Wht, Blu, Grn Red, Brn, Yel, Org Wht, Blu	.012 .012 .015	.030	.290	100	350	—	—	500
		Tinned copper, 22 AWG conductors vinyl insulated, 24 AWG conductors polyethylene insulated, cabled in 2 quads, each with transparent Mylar tape wrap, 24 AWG tinned copper ground wire. Red BELDFOIL shield over one quad, green BELDFOIL shield over the other quad; plus 2 unshielded conductors, chrome vinyl jacket.										
	8784	10 (10 unshielded)	2-16 (26x30) 1-20 (10x30) 7-22 (7x30)	Blk, Wht Gray Red, Grn, Org, Yel, Blu, Purple Brown	.016 .018 .013	.040	.295	—	300	—	—	500
		Tinned copper, vinyl insulated, conductors cabled vinyl jacket.										
 BELDFOIL⊖	8640	2	26 (Solid) 1 Pair	Red, Clear	.002	.020	.089	100	100	80	140	250, 500
	8642	6	26 (Solid) 3 Pair	Red, Clear	.002	.025	.140	100	100	80	140	250, 500
		Solid copper, BELDSOL†† (solderable—no stripping required), BELDFOIL aluminum-Mylar shield on each pair, red, brown, orange textile marker and isolating Mylar tape for each pair on 8642, Copperweld ground drain wire, WHITE vinyl jacket.										

Ideal for instrumentation and audio console work where subminiaturization is required.
105° C maximum operating temperature.

⊖Belden U.S. Patent 3,032,604.
††Belden Trademark—Reg. U.S. Pat. Off.

*Capacitance between conductors.
**Capacitance between 1 conductor and other conductor connected to shield.

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miniature coaxial and shielded paired instrumentation and sound cables

Belden

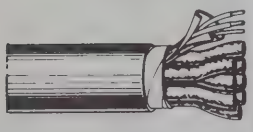
COLOR CODING FOR PAIRED CABLES

GRAY HORIZONTAL PANEL INDICATES THAT THE BELDFOIL SHIELDED CABLES ARE ALSO RECOMMENDED FOR INSTRUMENTATION APPLICATIONS

Pair Number	Color Combination	Pair Number	Color Combination	Pair Number	Color Combination
1	Black paired with Red	10	Red paired with Blue	19	White paired with Blue
2	Black paired with White	11	Red paired with Yellow	20	White paired with Yellow
3	Black paired with Green	12	Red paired with Brown	21	White paired with Brown
4	Black paired with Blue	13	Red paired with Orange	22	White paired with Orange
5	Black paired with Yellow	14	Green paired with White	23	Blue paired with Yellow
6	Black paired with Brown	15	Green paired with Blue	24	Blue paired with Brown
7	Black paired with Orange	16	Green paired with Yellow	25	Blue paired with Orange
8	Red paired with White	17	Green paired with Brown	26	Brown paired with Yellow
9	Red paired with Green	18	Green paired with Orange	27	Brown paired with Orange

MULTIPLE PAIR INDIVIDUALLY SHIELDED AUDIO AND SOUND CABLES

22 GAUGE VINYL INSULATION



BELDFOIL

Description	Trade Number	No. of Pairs	Stranding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Nom. *Cap. (mmf/ft)	Nom. **Cap. (mmf/ft)	Standard Spool Lengths in ft
	8767	3	Solid	.013	.030	.270	40	77	100, 250, 500, 1000
	8768	6	Solid	.013	.037	.394	40	77	100, 250, 500, 1000
	8764	9	Solid	.013	.040	.440	40	77	100, 250, 500, 1000
	8765	11	Solid	.013	.040	.485	40	77	100, 250, 500, 1000
	8766	15	Solid	.013	.045	.540	40	77	100, 250, 500, 1000

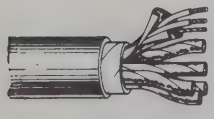
#22 tinned copper, vinyl insulated, cabled in pairs, each pair and its ground wire under BELDFOIL aluminum-Mylar shield, over-all chrome vinyl jacket. 300 Volts suggested working voltage.

Insulation resistance between shields . . . . 100 megohms/M'
Capacitance between adjacent shields . . . . . 115 mmf/ft
Voltage breakdown between adjacent shields . . . . . 1500 volts
Working voltage between adjacent shields . . . . . 50 volts

Vinyl insulation is used for ease of stripping and soldering. Recommended for audio frequency applications requiring excellent circuit isolation. Maximum operating temperature 80° C.

MULTIPLE PAIR INDIVIDUALLY SHIELDED AUDIO AND DATA CABLES

22 GAUGE POLYPROPYLENE INSULATION



BELDFOIL

Description	Trade Number	No. of Pairs	Stranding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Nom. *Cap. (mmf/ft)	Nom. **Cap. (mmf/ft)	Standard Spool Lengths in ft
	8777	3	(7x30)	.010	.030	.270	30	55	100, 250, 500, 1000
	8778	6	(7x30)	.010	.037	.394	30	55	100, 250, 500, 1000
	8774	9	(7x30)	.010	.040	.440	30	55	100, 250, 500, 1000
	8775	11	(7x30)	.010	.040	.485	30	55	100, 250, 500, 1000
	8776	15	(7x30)	.010	.045	.540	30	55	100, 250, 500, 1000
	8769	19	(7x30)	.010	.055	.620	30	55	100, 250, 500, 1000
	8773	27	(7x30)	.010	.070	.760	30	55	§Cut to customer's specified length. Maximum length 1000

#22 gauge tinned copper, polypropylene insulated, cabled in pairs, each pair and its ground wire under "Z" fold BELDFOIL aluminum-Mylar shield, over-all chrome vinyl jacket. 300 volts suggested working voltage.

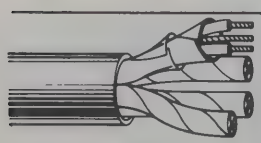
Insulation resistance between shields . . 100 megohms/M'
Capacitance between adjacent shields . . . . . 115 mmf/ft
Voltage breakdown between adjacent shields . . 1500 volts
Working voltage between adjacent shields . . . . . 50 volts

Recommended for audio, pulse, and radio frequency applications requiring superior circuit isolation. Polypropylene insulation is used for excellent high frequency properties and mechanical toughness. Maximum operating temperature 105° C.

SPECIAL INSTRUMENTATION CABLES

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Percent Shield Coverage	Nom. *Cap. (mmf/ft)	Nom. **Cap. (mmf/ft)	Suggested Working Voltage	Standard Spool Lengths in ft
	**8700**	28 (Solid) Coaxial	.005	.008	.054	Black	80	48		100	25,50,100,250

Solid tinned copper, polypropylene insulation, copper braid, black vinyl jacket.
May be steam sterilized for medical research.



BELDFOIL

8725	4 pairs 20 (7x28)	.015	.030	.360	Red, Blk Grn, Wht Wht/Red Wht/Blk Wht/Grn Wht/Yel	100	27	49	400	500 1000

Tinned copper conductors, Polypropylene insulated, four groups of two conductors with #22 AWG drain wire. Each group individually BELDFOIL shielded with Mylar tape wrap, chrome vinyl jacket. **105°C Maximum operating temperature.**

**Capacitance between conductors.*
***Capacitance between 1 conductor and other conductor connected to shield.*
''Belden U.S. Patent 3,032,604.
§Minimum length 25'
25' to 199', plus 25', minus 0.
200' or over, plus 50', minus 0.

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Belden | unshielded paired sound cables

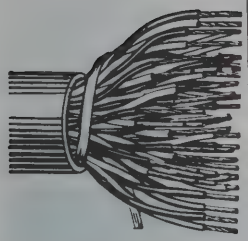
MULTIPLE PAIR UNSHIELDED SOUND CABLES

TYPICAL APPLICATIONS: Balanced line sound systems.

Made with 80 C vinyl plastic compounds for high dielectric strength and the best physical properties, such as free stripping, small diameter, and tear resistance. It also resists the effects of water, sun, oil, grease, and ozone. The conductors are paired with a short-lay twist for conductor balance, providing a quiet circuit, free from cross talk.

ALL CONSTRUCTIONS:
Tinned copper, vinyl insulated cabled in pairs, chrome vinyl jacket.

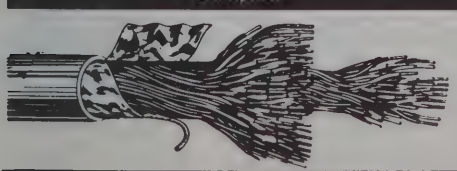




1 to 27 Pairs: Trade Number	No. of Pairs	AWG & Stranding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Suggested Working Voltage	Standard Spool Lengths in ft
8740	1	22 Solid	.015	.025	.150	200	100, 250, 500, 1000
8741	2	22 Solid	.015	.028	.201	200	100, 250, 500, 1000
8742	3	22 Solid	.015	.030	.240	200	100, 250, 500, 1000
8690	3	18 (16x30)	.018	.037	.362	400	100, 500, 1000
8757	4	22 Solid	.015	.030	.255	200	500, 1000
8743	6	22 Solid	.010	.035	.305	200	100, 250, 500, 1000
8747	6	22 (7x30)	.010	.035	.340	200	100 250, 500, 1000
8691	6	18 (16x30)	.018	.045	.550	400	100, 500, 1000
8744	9	22 Solid	.010	.037	.354	200	100, 250, 500, 1000
8748	9	22 (7x30)	.010	.037	.389	200	100, 250, 500, 1000
8692	9	18 (16x30)	.018	.055	.638	400	100, 500, 1000
8753	11	22 Solid	.010	.037	.384	200	100, 250, 500, 1000
8754	13	22 Solid	.010	.037	.409	200	100, 250, 500, 1000
8745	15	22 Solid	.010	.040	.420	200	100, 250, 500, 1000
8749	15	22 (7x30)	.010	.040	.425	200	100, 250, 500, 1000
8755	19	22 Solid	.010	.040	.480	200	500, 1000
8756	23	22 Solid	.010	.040	.510	200	500, 1000
8746	27	22 Solid	.010	.045	.550	200	§Cut to customer's specified length. Maximum length 1500'
8750	27	22 (7x30)	.010	.045	.595	200	§Cut to customer's specified length. Maximum length 1500'

For color coding please refer to page 6

38 AND 51 PAIR CABLES



Description	Trade Number	No. of Pairs	Conductors	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Standard Spool Lengths in ft
	NEW 8752	38	Solid Tinned Copper	.008	.045	.600	§Cut to customer's specified length. Maximum length 1500'
	8751	51	Solid Tinned Copper	.010	.050	.725	

#22 tinned copper, 8751 vinyl insulated, 8752 polypropylene insulated, cabled in pairs, BELDFOIL aluminum-Mylar shield over cabled pairs, #22 (7x30) stranded ground drain wire, chrome vinyl jacket. 200 Volts suggested working voltage. Color coding available on request.

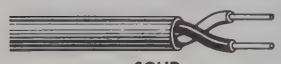
§Minimum length 25'.
25' to 199', plus 25', minus 0.
200' or over, plus 50', minus 0.

For color coding information on 8751 and 8752 write for Technical Data Electronic Wire Section SO-4

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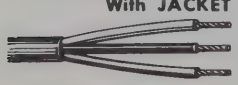
two and three conductor unshielded cables | **Belden**

TWO CONDUCTOR UNSHIELDED CABLES

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Conductor Color Coding	Nominal O.D. (Inch)	Suggested Working Voltage	Standard Spool Lengths in ft
	**8782**	24 (7x32)	.017	—	Chrome, Sand, White, Clear 1 condr. tinned	.058x .115	300	25, 50, 100, 500, 1000
	8781	22 (Solid)	.016	—	Chrome 1 condr. tinned	.060x .120	100	100, 500, 1000
Copper, vinyl insulated, PARALLEL	**NEW 8649**	20 (7x28)	.020	—	Chrome, Clear 1 condr. tinned	.073x .146	300	100, 500, 1000
Without JACKET	**8481**	22 (Solid)	.015	—	Brn, Tan	.112	350	100, 500, 1000
	8482	19 (Solid)	.015	—	Brn, Tan	.130	350	100, 500, 1000
	**8492**	19 (Solid)	.025	—	Brown or White 1 condr. tinned	.170	600	1000
	8460	18 (7x26) tinned	.020	—	Blk, Wht	.175	450	100, 500, 1000
Copper, vinyl insulated, TWISTED.	**8470**	16 (19x29) tinned	.023	—	Blk, Wht	.195	600	500, 1000
With JACKET	**8740**	22 (Solid) tinned	.015	.025	Blk, Red	.150	200	100, 250, 500, 1000
	**8442**	22 (7x30) tinned	.015	.025	Blk, Red	.165	350	500, 1000
SOLID	**8205**	20 (10x30) tinned	.018	.025	Blk, Red	.190	350	100, 500, 1000
	8486	19 (Solid)	.015	.025	Brn, Tan	.162	350	500, 1000
	**8461**	18 (7x26) tinned	.020	.028	Blk, Wht	.226	450	100, 500, 1000
STRANDED	**8471**	16 (19x29) tinned	.023	.030	Blk, Wht	.256	600	500, 1000
Copper, vinyl insulated, CABLED, chrome vinyl jacket	**8473**	14 (19x27) tinned	.031	.035	Blk, Wht	.332	600	500, 1000

For additional 2 conductor cables see PORTABLE CORDAGE on page 12, and DUPLEX PRIMARY WIRE on page 26

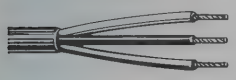
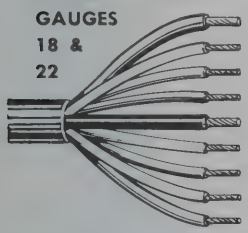
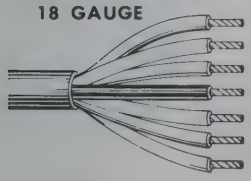
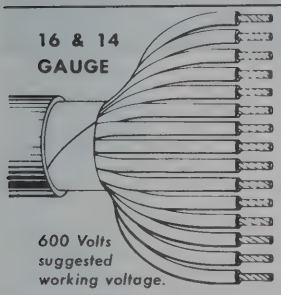
THREE CONDUCTOR UNSHIELDED CABLES

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Conductor Color Coding	Nominal O.D. (Inch)	Suggested Working Voltage	Standard Spool Lengths in ft
	**8701**	22 (Solid)	.016	—	Chrome 1 condr. tinned	.060x .190	100	100, 500, 1000
	8475	16 (19x29) bare	.023	—	Wht, Brn, Red	.102x .295	300	100, 500
Copper, vinyl insulated, PARALLEL								
Without JACKET	**8483**	19 (Solid)	.015	—	Brn, Gray, Tan	.132	350	100, 500, 1000
								
Bare copper, vinyl insulated, CABLED								
With JACKET	**8443**	22 (7x30) tinned	.010	.025	Blk, Grn, Red	.150	200	25, 100, 250, 500, 1000
	**8487**	19 (Solid) bare	.015	.025	Brn, Gray, Tan	.180	350	500, 1000
Copper, vinyl insulated, CABLED, chrome vinyl jacket.								

For additional 3 conductor cables see PORTABLE CORDAGE on page 12.

Belden | multiple unshielded cables and telephone cables

MULTIPLE CONDUCTOR CONTROL AND AUDIO CABLES (NOT PAIRED)

Description and Gauge	Trade Number	No. of Cond.	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Color Code or Chart No.	Standard Spool Lengths in ft.
 *Bare copper, polyethylene insulated, cabled, rose gray vinyl jacket.*	**NEW 8795**	2	22 (Solid)	.016	.022	.160	Red, Grn	500, 1000
	8794	3	22 (Solid)	.016	.022	.168	Red,Grn, Yel	500, 1000
			Telephone cable					
All Constructions: *Tinned copper, vinyl plastic insulated, cabled, vinyl jacket.* **22 GAUGE**  *200 Volts suggested working voltage.*	**8443**	3	22 (7x30)	.010	.025	.150	1	25, 100, 250, 500, 1000
	8444	4	22 (7x30)	.010	.025	.168	1	25, 100, 250, 500, 1000
	8445	5	22 (7x30)	.010	.025	.180	1	25, 100, 250, 500, 1000
	8456	10	22 (7x30)	.010	.030	.260	1	100, 500, 1000
	8457	12	22 (7x30)	.010	.030	.260	1	100, 500, 1000
	8458	15	22 (7x30)	.010	.040	.320	2	100, 500, 1000
	8459	25	22 (7x30)	.010	.040	.370	2	100, 500, 1000
COMBINATION GAUGES 18 & 22 	**8446**	6	4-22 (7x30) 2-18 (16x30)	.010 .018	.025	.222	1	15, 100, 250, 500, 1000
	8447	7	5-22 (7x30) 2-18 (16x30)	.010 .018	.028	.246	1	100, 250, 500, 1000
	8448	8	6-22 (7x30) 2-18 (16x30)	.010 .018	.028	.250	1	15, 100, 250, 500, 1000
	8449	9	7-22 (7x30) 2-18 (16x30)	.010 .018	.028	.261	1	15, 100, 250, 500, 1000
18 GAUGE  *400 Volts suggested working voltage.*	**8465**	5	18 (16x30)	.018	.030	.272	1	100, 250, 500, 1000
	8467	7	18 (16x30)	.018	.035	.320	1	100, 250, 500, 1000
	8469	9	18 (16x30)	.018	.035	.375	1	100, 250, 500, 1000
	8466	12	18 (16x30)	.018	.040	.402	2	100, 250, 500, 1000
	8468	15	18 (16x30)	.018	.045	.490	2	100, 500, 1000
16 & 14 GAUGE  *600 Volts suggested working voltage.*	**8620**	4	16 (19x29)	.030	.045	.375	2	100, 500, 1000
	8621	7	16 (19x29)	.030	.045	.455	2	100, 500, 1000
	8622	12	16 (19x29)	.030	.060	.600	2	100, 500, 1000
	8623	15	16 (19x29)	.030	.060	.650	2	100, 500, 1000
	8624	19	16 (19x29)	.030	.065	.715	2	100, 500, 1000
	8627	4	14 (19x27)	.045	.045	.495	2	100, 500, 1000
	8628	7	14 (19x27)	.045	.060	.630	2	100, 500, 1000
	8629	12	14 (19x27)	.045	.065	.770	2	100, 500, 1000

For 22 AWG and 18 AWG Combinations—22 AWG is rated at 200 volts and 18 AWG is rated at 400 volts.

COLOR CODE
Chart No. 1

Conductor	Color
1st	Black
2nd	Red
3rd	Green
4th	White
5th	Brown
6th	Blue
7th	Orange
8th	Yellow
9th	Purple
10th	Gray
11th	Pink
12th	Tan

18 Gauge conductors in cables 8446 through 8449 are Black and Red.

IPCEA COLOR CODE
(Insulated Power Cable Engineers Association)

Chart No. 2

Conductor	Color	Conductor	Color	Conductor	Color
1st	Black	9th	Green/Black	17th	White/Red
2nd	White	10th	Orange/Black	18th	Orange/Red
3rd	Red	11th	Blue/Black	19th	Blue/Red
4th	Green	12th	Black/White	20th	Red/Green
5th	Orange	13th	Red/White	21st	Orange/Green
6th	Blue	14th	Green/White	22nd	Blk/Wht/Red
7th	White/Black	15th	Blue/White	23rd	Wht/Blk/Red
8th	Red/Black	16th	Black/Red	24th	Red/Blk/Wht
				25th	Grn/Blk/Wht

BELDEN PAGE 9

 © U.C.P., Inc.

rubber and plastic microphone
and shielded power supply cables

Belden

RUBBER AND NEOPRENE MICROPHONE AND SHIELDED POWER SUPPLY CABLES

Description	Trade Number	No. of Cond.	AWG (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Percent Shield Coverage	Suggested Working Voltage	Impedance (Ohms)	Cap (mmf/ft)	Cap (mmf/ft)	Standard Spool Lengths in ft
SINGLE CONDUCTOR 	**8410**	1	25(7x33)	.063	.025	.245	80	3000	52	—	33	25, 50, 100, 250, 500
	3 strands copper, 4 strands Copperweld tinned, cellulose yarn braid, rubber insulated, rayon braid, tinned copper braid shield, cellulose yarn wrap, black rubber jacket.											
MINIATURE 	**8413**	2	24(45x40)	.019	.025	.190	100	300	—	38	71	15, 25, 50, 100, 250, 500
	8406	3	24(45x40)	.019	.025	.223	100	300	—	43	76	100, 250, 500
	Tinned cadmium bronze, cotton serve, rubber insulated, cabled with fillers, conductive textile serve, tinned copper braid shield, cotton serve, black rubber jacket.											
MULTIPLE CONDUCTOR 	**8412**	2	20(26x34)	.020	.043	.268	84	600	—	42	68	25, 50, 100, 250, 500, 1000
	8423	3	20(26x34)	.020	.040	.277	84	600	—	50	85	15, 50, 100, 250, 500, 1000
	8424	4	20(26x34)	.020	.040	.295	83.5	600	—	55	95	15, 50, 100, 250, 500, 1000
Tinned copper, cotton wrap, rubber insulated, rayon braid, tinned copper braid shield, cotton wrap, black rubber jacket.	**8425**	5	20(26x34)	.020	.040	.323	76	600	—	44	80	100, 250
	8426	6	20(26x34)	.020	.040	.349	* 90	600	—	40	78	100, 250
	8427	7	20(26x34)	.020	.043	.360	90	600	—	40	75	100, 250
	8418	8	20(26x34)	.020	.043	.386	92	600	—	42	75	100, 250
	8428	2	18(41x34)	.022	.038	.295	91	600	—	47	80	100, 500, 1000
NEOPRENE HEAVY DUTY	**8407**	4	16(65x34)	.032	.043	.422	84	600	—	37	65	100, 250
	Tinned copper, separator, rubber insulated, cabled, rayon braid, tinned copper braid shield, cotton wrap, black neoprene jacket.											

VINYL MICROPHONE AND SHIELDED POWER SUPPLY CABLES

Description	Trade Number	No. of Cond.	AWG (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Percent Shield Coverage	Suggested Working Voltage	Impedance (Ohms)	Cap (mmf/ft)	Cap (mmf/ft)	Standard Spool Lengths in ft
SINGLE CONDUCTOR 	**8411**	1	25(7x33)	.020	.020	.144	72	3500	52	—	34	15, 25, 50, 100, 250, 500, 1000
	8401	1	25(7x33)	.043	.025	.200	74	5000	57	—	25	15, 25, 50, 100, 250, 500, 1000
	3 strands copper, 4 strands Copperweld, tinned, cellulose yarn braid, polyethylene insulated, tinned copper braid shield, chrome vinyl jacket.											
MINIATURE 	**8420**	2	24(45x40)	.015	.020	.185	77	500	—	22	40	15, 25, 50, 100, 250, 500
	Tinned cadmium bronze, cotton wrap, polyethylene insulated, cabled with fillers, rayon braid, tinned copper braid shield, chrome vinyl jacket.											
MULTIPLE CONDUCTOR 	**8422**	2	22(16x34)	.023	.023	.231	87	1000	—	18	32	15, 25, 50, 100, 250, 500, 1000
	8403	3	20(26x34)	.015	.033	.244	89	600	—	25	45	15, 50, 100, 250, 500, 1000
Tinned copper, polyethylene insulated, cabled, rayon braid, tinned copper braid shield, chrome vinyl jacket.	**8404**	4	20(26x34)	.015	.033	.255	87	600	—	25	45	15, 100, 250, 500, 1000
	8405	5	20(26x34)	.015	.035	.275	83	600	—	25	45	250, 500, 1000

RUBBER—PLASTIC—NEOPRENE

PLASTIC CABLES RECOMMENDED FOR: Lower capacitance, lower loss, greater ozone and oil resistance, lighter weight, smaller diameter.
RUBBER CABLES RECOMMENDED FOR: Greater abrasion and impact resistance, and extra limpness so cable will lie flat on stage or studio floor.
NEOPRENE CABLES RECOMMENDED FOR: Outside use, cold weather applications. Resistant to effects of sun, oil, and ozone.

*Capacitance between conductors. **Capacitance between 1 conductor and remaining conductors (if any) connected to shield.

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Belden | retractile (coiled) cables and cords

NEOPRENE RETRACTILE (COILED) MICROPHONE CABLES



Description	Trade Number	No. of Cond.	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Nom. Coil O.D. (Inch)	Percent Shield Coverage	Cap (mmf cord)	Retracted Length	Practical Extended Length	Standard Put-Up
	8409	4 unshielded	28 (7x36)	.005	.050	.165	9/16	No shield	—	12″	6′	1
		Tinned copper, nylon insulated, neoprene jacket.										
	8415	4 unshielded	23 (21x36)	.020	.055	.250	7/8	No shield	—	11½″	6′	1, 50
	8499	1 shielded	24 (45x40)	.019	.043	.160	1 1/16	80	285	7½″	4′	1
	8497	3 1 shielded 2 unshielded	23 (21x36)	.020	.046	.250	7/8	100	480	11½″	6′	1, 50
	8491	4 2 individually shielded 2 unshielded	23 (21x36)	.020	.050	.300	1 1/16	100	480	12″	6′	1
	NEW 8490	5 unshielded	23 (21x36)	.020	.045	.265	7/8	No shield	—	11½″	6′	1
		Tinned cadmium bronze, rubber insulated, paper tape wrap, black neoprene jacket. 8499 has a spiral tinned copper shield. 8497 and 8491 have a double BELDFOIL ⊖ tape shield with a (21x36) tinned cadmium bronze drain wire for each shield conductor.										

TYPICAL APPLICATIONS

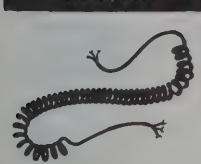
- Hams
- Citizen Band
- Hand Mikes
- Desk Mikes
- Language Labs
- Mobile Controls
- Mobile Communications
- Industry Applications

NEOPRENE RETRACTILE (COILED) POWER CONTROL CABLES

Longer lengths are available on request.

Trade Number	No. of Cond.	UL Type	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Nom. Coil O.D. (Inch)	Retracted Length	Practical Extended Length	Standard Put-Up
8601	2	SVO	18 (41x34)	.016	.045	.270	1	12″	6′	1
8602	3	SJO	18 (41x34)	.031	.045	.360	1 3/8	12″	6′	1
8603	3	SJO	16 (65x34)	.031	.045	.370	1½	12″	6′	1
8604	3	SJO	16 (65x34)	.031	.045	.370	1½	22″	12′	1
	Bare copper, paper wrap, rubber insulation, cabled with fillers, paper tape wrap, black neoprene jacket. 6″ straight portion each end. Jacket removed 1½″ each end.									

VINYL RETRACTILE (COILED) TELEPHONE CORDS



Description	Trade Number	No. of Cond.	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Nom. Coil O.D. (Inch)	Retracted Length	Practical Extended Length	Standard Put-Up
	8495	3	23 (21x36)	.020	.041	.220	7/8	10″	4½′	1
	8494	4	23 (21x36)	.020	.043	.245	7/8	10″	4½′	1
	Bare cadmium bronze, vinyl insulated, cabled, paper wrapped, black vinyl jacket. 8494 one end stripped 7¾″, spade terminals attached and hook strain relief clamped over jacket. Other end stripped 6¼″ and spade terminals attached. 8495 one end stripped 2¾″, spade terminals attached and hook strain relief clamped over jacket. Other end stripped 3 7/16″ and spade terminals attached.									

Color coding of individual conductors for cables on this page and microphone cables on page 10: (1) White, (2) Black, (3) Red, (4) Green, (5) Blue, (6) Brown, (7) Yellow, (8) Orange.

****Capacitance of shielded conductor.* ⊖*Belden U.S. Patent 3,032,604.*

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phonograph, hi-fi and stereo cables
portable cordage and test prod wire

Belden

HI-FI AND STEREO CABLES

Description	Trade Number	No. of Cond.	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Cond. Color Coding	Nom. Cap. between condrs. (mmf/ft)	Nom. Cap. condr. to other condr. & shield (mmf/ft)	Standard Spool Lengths in ft
Phono Pick-Up Arm Cables	**8430**	2	32 (7x40)	.009	—	.050	Blk; Red	21	—	10, 25, 250
Tinned copper, vinyl insulated, twisted pair.	→	4	Use two 8430s for maximum channel isolation, one for each channel.							
	8429	2	32 (7x40)	.009	—	.057	Blk, Red	22	38	10, 25, 250
Tinned copper, vinyl insulated, twisted pair, tinned copper braid shield.	**8419**	3	32 (7x40)	.009	—	.067	Blk, Red, Wht	30	50	10, 25, 250
	→	4	Use two 8429s for maximum channel isolation, one for each channel.							
	8431	1	24 (16x36)	.015	—	.095	—	96	—	10, 15, 25 100, 500
			Tinned copper, rubber insulated, tinned copper braid shield, brown cotton braid.							
Hi-Fi Connecting Cable	**8421**	1	25 (7x33)	.025	.025	.180	—	18	—	15, 25, 50, 100, 250
			3 strands tinned copper and 4 tinned Copperweld, cellular polyethylene insulated, tinned copper spiral wrapped shield, chrome vinyl jacket.							
Dual Channel Audio Cable for stereo and language labs	**8416**	2	25 (7x33)	.018	.020	.106 x .213	1 Wht 1 Red	35 each channel	—	15, 25, 50, 100, 250
			3 strands tinned copper and 4 tinned Copperweld, polyethylene insulated, individual tinned copper spiral wrapped shield, chrome vinyl jacket, polarity rib on red conductor.							
BELDFOIL© **Miniature Audio Connecting Cable totally shielded**	**8417**	1	25 (7x33)	.020	.026	.140	Chrome	25	—	15, 25, 50, 100, 250
			3 strands tinned copper and 4 tinned Copperweld, cellular polyethylene insulated double BELDFOIL aluminum-Mylar shield, inner shield, folded 26 AWG stranded tinned copper ground drain wire, chrome vinyl jacket.							

RUBBER-VINYL MULTI-CONDUCTOR PORTABLE CORDAGE—300V-60C

Description	Trade Number	U.L. Type	Insulation	No. of Conductors	AWG & Stranding	Insulation Thickness (Inch)	Conductor Coding	Jacket Thickness (Inch)	Nominal O.D. (Inch)	Color	Standard Spool Lengths in ft
	8462	SP-1	Rubber	2	18 (41x34) Tinned	.031	Polarity Ribbed	—	.123 x .223	Brown or Ivory	25, 100, 250
	8888	SPT-1	Vinyl	2	18 (41x34)	.031	Polarity Ribbed	—	.110 x .207	Brn, Ivory, or Gray	25, 100, 250
			Two conductors, stranded copper, parallel, insulated with one conductor polarity ribbed.								
	8452	SV	Rubber	2	18 (41x34)	.016	Blk, Wht	.031	.245	Black	25, 50, 100, 250, 500, 1000
	8478	SJ	Rubber	2	18 (41x34)	.031	Blk, Wht	.031	.298	Black	100, 250, 1000
	8472	SJ	Rubber	2	16 (65x34)	.031	Blk, Wht	.031	.325	Black	25, 100, 250
	8474	—	Rubber	2	14 (41x30)	.031	Blk, Wht	.035	.360	Black	100, 250
Stranded copper, rubber insulated, cabled with fillers, rubber jacket	**8453**	SV	Rubber	3	18 (41x34) Tinned	.016	Blk, Wht, Green	.031	.265	Black	50, 100, 500
	8454	—	Rubber	4	18 (41x34) Tinned	.016	Blk, Wht, Brn, Red	.031	.265	Black	50, 100, 500, 1000
	8455	—	Rubber	5	3—20 (26x34) 2—18 (41x34) Tinned	.015 .015	Brn, Grn, White Blk, Red	.031	.280	Black	100, 250

TEST PROD WIRE

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Breakdown Voltage	Suggested Working Voltage	Standard Package	Standard Spool Lengths in ft
	8899	18 (65x36)	.045	.144	20,000	5,000	—	10, 14*, 25** 100**, 500** 1000
Tinned copper, separator, rubber insulated, red or black.			* 7′ of red and 7′ of black. **Also available in green or yellow					
	8897	18 (65x36)	.045	.144	20,000	5,000	—	500, 1000
			Manufactured per MIL-W-13169					
	8898	18 (65x36)	.088	.230	29,000	10,000	—	10, 25, 100, 500
Miniature	**8890**	24 (45x40)	.019	.066	10,000	1,000	—	25, 100, 500
		Stranded tinned copper, cotton separator, rubber insulated, red or black.						
COILED With Prods	**8878**	20 (42x36)	.063	.173	20,000	5,000	1 pair Red and Black	—
		Tinned copper, rubber insulated, red or black. Retracted length 8″. Stretches to 5′.						
Without Prods	**8879**	20 (42x36)	.063	.173	20,000	5,000	1 pair Red and Black	—
		Tinned copper, rubber insulated, red or black. Retracted length 8″. Stretches to 5′.						

© Belden U.S. Patent 3,032,604

All breakdown voltages and suggested working voltages are AC RMS values.

Belden | tv camera cable and 75 ohm video cables

TV CAMERA CABLES

Belden TV Broadcasting and closed circuit TV Camera Cables are precision engineered to assure reliable performance and long service life. In addition to lighter weight, greater flexibility, and easier termination these cables are designed to maintain high conductor insulation resistance regardless of changes in ambient temperatures.

Trade number 8283



Designed to meet the critical electrical and physical requirements necessary for color television broadcast applications.

82 Conductor TV Color Camera Cable

4-14 AWG (19x27) tinned copper, vinyl plastic insulated, color coded.
3-16 AWG (26x30) tinned copper, vinyl plastic insulated, color coded.
BELDFOIL aluminum-Mylar wrapped shield around the above 7 conductors cabled with stranded tinned copper drain wire.
8 coaxial cables. Nom. impedance 53.5 ohms, color coded.
67-22 AWG (7x30) tinned copper, vinyl plastic insulated, color coded, 7 under conductive textile shield with stranded ground wire.
Tinned copper braid shield.
Chrome vinyl plastic jacket. 1.22" Nom. O.D.
§Cut to customer's specified length.
Maximum length 1000'.

Trade Number 8280

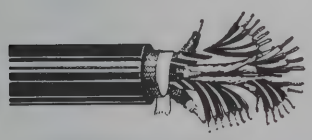


A smaller, lighter weight cable designed to make long runs easier. For black and white (Monochrome) systems.

28 Conductor TV Camera Cable

4-18 AWG (16x30) tinned copper, vinyl insulated, color coded.
21-22 AWG (7x30) tinned copper, vinyl insulated, cabled in 3 groups of 7, color coded.
3 coaxial cables. Nom. impedance 51 ohms, color coded.
Tinned copper braid shield.
Chrome vinyl jacket. .750" Nom. O.D.
§Cut to customer's specified length.
Maximum length 1500'.

Trade Number NEW 8286

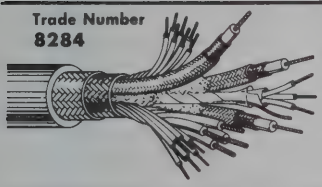


A 75 ohm cable designed to remain flexible in cold weather. Recommended for transistorized TV cameras.

NEW 28 Conductor Hypalon ♦ TV Camera Cable

4-18 AWG (16x30) tinned copper, vinyl insulated, color coded.
BELDFOIL aluminum-Mylar wrapped shield around 4 conductors with stranded drain wire, Mylar tape over this shielded group.
21-22 AWG (7x30) tinned copper, vinyl insulated, cabled in 3 groups of 7, color coded, one group of 7 has a BELDFOIL aluminum-Mylar wrapped shield overall with a stranded drain wire, Mylar tape over this shielded group.
3 coaxial cables. Nom. impedance 75 ohms.
Tinned copper braid shield.
Black Hypalon jacket. .730" O.D.
§Cut to customer's specified length.
Maximum length 1000'.

Trade Number 8284

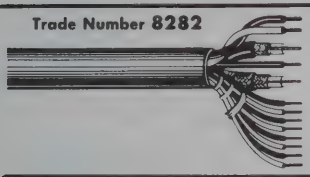


Designed specifically for color TV transmission. This cable incorporates circuit isolation assuring the reduction in AC hum level and cross talk essential for color TV broadcasting.

24 Conductor TV Camera Cable

17-22 AWG (7x30) tinned copper, vinyl insulated, color coded.
3 under BELDFOIL shield with stranded drain wire.
4-16 AWG (26x30) tinned copper, vinyl insulated, color coded.
3 coaxial cables. Nom. impedance 53.5 ohms, color coded.
Tinned copper braid shield.
Heavy cotton braid.
Chrome vinyl plastic jacket. .800" Nom. O.D.
§Cut to customer's specified length.
Maximum length 1000'.

Trade Number 8282



Especially engineered for TV Eye Cameras. Recommended for remote control, monitor and cue line applications.

13 Conductor TV Eye Cable

9-22 AWG (7x30) tinned copper, vinyl insulated, color coded.
2-18 AWG (16x30) tinned stranded copper conductor vinyl insulated. Black and Red.
1-RG-58A/U cable 50-ohm coax.
1-72-ohm coax, stranded conductor, Mylar tape wrapped.
Chrome vinyl jacket. .470" Nom. O.D.
§Cut to customer's specified length.
Maximum length 2000'.

This series of cables is also recommended as interconnecting cables in complex electronic applications. Each cable contains coaxial cables for RF and Video signals, pulse voltages or high voltage lines as well as many conductor groups for control and power circuits.

§Minimum length 25'. 25' to 199', plus 25', minus 0. 200' or over, plus 50, minus 0. ♦Dupont Trademark

75 OHM PRECISION VIDEO CABLE

TYPICAL APPLICATIONS: Video signal transmission in Color and Monochrome TV studios. Provides high quality carrier of video signal with superior picture definition and eliminates problems of periodicity. Cable is manufactured with rigid control of concentricity and all dimensional tolerances. The black polyethylene jacket is manufactured with a non-contaminating, non-migratory compound. 100% SWEEP TESTED.

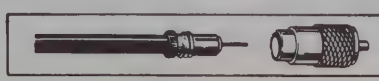
Description	Trade Number	AWG & (Stranding) Material	Nom O.D. (Inch)	Percent Shield Coverage	Nom. Impedance (Ohms)	Nom. Velocity of Propagation	Nom Cap (mmf/ft)	Nom Attenuation per 100' kc or mc	Nom Attenuation per 100' db	Standard Spool Lengths in ft
	8281	20 (Solid) copper	.304	96.4	75	66%	21.	10 KC 100 KC 1 MC 10 MC 100 MC	.06 .08 .25 .78 2.70	500, 1000
		Conductor, polyethylene insulated, tinned copper double braid shield, black polyethylene jacket.								
 Miniature	8279	23 (7x31) Tinned compacted conductor	.220	96	75	66%	21.	10 KC 100 KC 1 MC 10 MC 100 MC	.14 .15 .35 1.30 4.90	100, 250 500

Compacted conductor, polyethylene insulated, tinned copper braid shield, black polyethylene jacket. Fits RG 59/U connectors.
Compacted conductor combines impedance uniformity of solid conductor and "nick-resistance" of stranded conductor.



For Use on 8281 Only

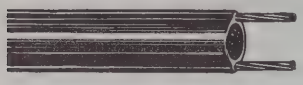
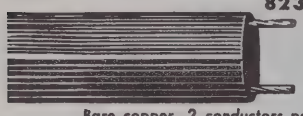
8299 Adapter for use with PL-259 connector. 25 in a box.



 © U.C.P., Inc.

300 ohm transmission line cables | Belden

TWIN LEAD WIRES

Description & Trade Number	AWG & (Stranding)	Color	Nom. O.D. (Inch)	Nom. Velocity of Propagation	Nom. Capacitance (mmf/ft)	Nom. Attenuation per 100 mc	db	Standard Package Lengths in ft
Permohm★ 8285  *Copperweld, 2 conductors parallel, orange polyethylene insulation and web between conductors, cellular polyethylene oval jacket.*	22 (7x30)	Brown	.255 x .468	73.3%	5.3	100 300 500 700 900	1.4 2.8 3.8 4.8 5.6	50, 75, 100 coils in counter dispenser 250, 500 coils 1000 spool
	PERMOHM Encapsulated twin lead for strong, clear signals on all channels despite salt spray, industrial contamination, rain, ice and fringe area reception. An excellent color, UHF or VHF cable. **First choice for all weather, all channel T.V. reception**							
Celluline★★ 8275  *Copperweld; 2 conductors parallel, polyethylene jacket with inert gas filled unicellular polyethylene core.*	20 (7x28)	Brown	.300 x .400	80%	4.6	100 200 300 400 500 700 900	1.05 1.64 2.12 2.5 2.98 3.62 4.3	50, 75, 100 coils in counter dispenser 250, 500 1000 spools
	CELLULINE Maintains uniform electrical characteristics by eliminating all possible moisture between conductors. Installation is easier as no end-sealing is necessary. Losses are lower because of its lower dielectric constant (1.5). *The thick outer wall of brown polyethylene protects the cable from abrasion and sun damage, and the round shape offers less wind resistance. The result is a longer lasting, more efficient line which helps maintain a strong UHF or VHF reception for black and white or color.*							
8235  *Bare copper, 2 conductors parallel, polyethylene insulated.*	18 (7x26)	Brown	.185 x .520	77%	5.0	100 200 300 400 500 700 900	.85 1.35 1.80 2.20 2.60 3.25 3.85	100 coil 500 spool
	Amateur transmitting and receiving twin lead—1KW(RF) rated.							
Weldohm†† 8230  *Copperweld; 2 conductors parallel, polyethylene insulated.*	20 (7x28)	Brown	.072 x .400	80%	4.4	100 200 300 400 500 700 900	1.1 1.7 2.2 2.7 3.1 3.7 4.5	25, 50, 75, 100 pancake coils in a sleeve 250, 500 1000 spools
	WELDOHM This cable is 1½ times STRONGER and has 2½ times more FLEX LIFE than equivalent twin lead with all copper conductors, without changing the RF electrical characteristics. Tests prove its superior resistance to the pulling, whipping, and twisting that is so important to a long lasting installation.							
8225  *Bare copper, 2 conductors parallel, polyethylene insulated.*	20 (7x28)	Brown	.058 x .400	80%	4.4	100 200 300 400 500 700 900	1.1 1.7 2.2 2.7 3.1 3.7 4.5	25, 50, 75, 100 pancake coils in a sleeve 250, 500 1000 spools
	Brown polyethylene for the best weathering.							
8226  *Bare copper, 2 conductors parallel, polyethylene insulated.*	20 (7x28)	Ivory, Clear	.058 x .400	80%	4.4	Same as 8225		25, 50, 75, 100 pancake coils in a sleeve
	For indoor use only							

†† *Belden Trademark—Reg. U.S. Pat. Off.*

★ *Belden Trademark, Reg. U.S. Pat. Off., and Belden U.S. Pat. 2,782,251.*

★★ *Belden Trademark, Reg. U.S. Pat. Off., and Belden U.S. Pat. 2,814,666.*

BELDEN MERCHANDISERS

WITH TERMINALS



10 Pancake Coils per Box

300 ohm Line Package Coils
8225
8226 (New Indoor Ivory)
8230 (Weldohm)
Put-ups 25′, 50′, 75′, 100′
Antenna Rotor Cables
8464 (4 conductor, flat)
Put-ups 50′, 75′, 100′
8463 (5 conductor, flat).
Put-ups 50′, 75′, 100′



300 ohm Line Coils
8275 (Celluline)
8285 (Permohm)
Put-ups 50′, 75′, 100′

10 Coils per box

BELDEN PAGE 14

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Belden | transmission line cables and antenna rotor cables

72 OHM TRANSMISSION LINE CABLES

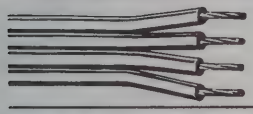
Description	Trade Number	AWG & (Stranding)	Nom. O.D. (Inch)	Nom. Velocity of Propagation	Nom. Capacitance (mmf ft)	Nom. Attenuation per 100' mc	Nom. Attenuation per 100' db	Standard Spool Lengths in ft
72 OHM LINE 	8222	20 (7x28)	.075 x .128	69%	20.3	100 200 300 400	7.7 11.0 13.6 15.9	100, 500
		Bare copper, 2 conductors parallel, brown polyethylene insulated.						
72 OHM 1 KW (RF) RATED 	8210	13 (7x21)	.166 x .278	68%	21.0	100 200 300 400 500 700 900	3.8 6.0 7.8 9.3 11.0 13.7 16.0	100, 250
		Bare copper, 2 conductors parallel, brown polyethylene insulated.						

SHIELDED 100 OHM TRANSMISSION LINE

Description	Trade Number	AWG & (Stranding)	Nom. O.D. (Inch)	Nom. Velocity of Propagation	Percent Shield Coverage	Nom. Capacitance (mmf ft)	Nom. Attenuation per 100' mc	Nom. Attenuation per 100' db	Standard Spool Lengths in ft
	8227	20 (7x28)	.325	62%	83	15.5	100 200 300 400	4.1 6.4 8.4 10.2	500

One conductor tinned, one bare copper, polyethylene insulated, cabled, polyethylene jacket, tinned copper braid shield, black vinyl jacket.
This shielded transmission line offers low-loss signal transmission which remains unaffected by outside signals or noise fields. Recommended for RF applications requiring a cross-talk free, balanced operation.

ANTENNA ROTOR CABLE

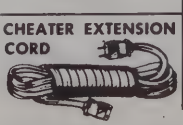
Description	Trade Number	No. of Cond.	AWG & (Stranding)	Cond. Coding	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Suggested Working Voltage	Standard Package Lengths in ft
	8464	4	20 (7x28)	1 cond. tinned and insulation ribbed	—	—	.070 x .390	200	50, 75, 100 pancake coils 500, 1000 spools
		Bare copper, parallel, chrome vinyl insulated.							
	8463	5	20 (7x28)	1 cond. tinned	—	—	.070 x .375	200	50, 75, 100 pancake coils 500, spools
		Bare copper, parallel, brown polyethylene insulated. Suggested working voltage 200 volts.							
	8484	4	20 (7x28)	Blk, Grn, Red, Wht	.010	.020	.180	200	100, 500, 1000 spools
	8485	5	20 (7x28)	Blk, Grn, Red, Wht, Yel	.010	.020	.190	200	100, 500, 1000 spools
	8488	8	22 (7x30)	Blk, Blu, Brn, Grn, Org, Red, Wht, Yel	.010	.020	.205	200	100, 500, 1000 spools
Bare copper, vinyl insulated, cabled, chrome vinyl jacket.									

ALUMINUM GROUND WIRE

Packaged in counter dispensers of 10-50' connected coils, or spools of 500 ft. Wire on spools is marked every 100' for easy measuring.

Description	Trade Number	Nom. O.D. (Inch)	Standard Package Lengths in ft
 *8 AWG solid, soft annealed aluminum*	8018	.128	500 in 10-50 connected coils 500 spools

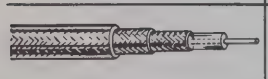
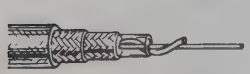
TV AND CHEATER CORDS

Description	Trade Number	Length in ft.	Standard Package
CHEATER CORDS 	8874	6	1 in polyethylene bag with description. *SP-1 brown rubber parallel cord with male plug and TV connector.*
	8895	6	1 in polyethylene bag with description. 100 bulk hanked.
	8889	9	*SPT-1 brown plastic parallel cord with male plug and TV connector.*
 Polarized	8873	6	1 in polyethylene bag with description. 100 bulk hanked. *SPT-1 brown plastic parallel cord with Polarized male plug and TV connector.*
CHEATER EXTENSION CORD 	8875	6	1 in polyethylene bag with description. *SPT-1 red plastic parallel cord with male and female TV connectors.*

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RG/U, transmission line cables | **Belden**

RG/U CABLES

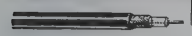
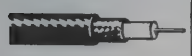
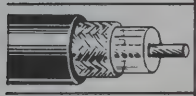
Description	Trade Number	RG No.	AWG & (Stranding) Material	Insulation	No. of Shields & Material	Jacket	Nom. O.D. (Inch)	Nom. Imp. (Ohms)	Nom. Vel. of Prop.	Nom. Cap. (mmf ft.)	Nom. Attenuation per 100' mc	Nom. Attenuation per 100' db	Standard Spool Lengths in ft.
	**8264** JAN-C-17A	5A/U	16 (Solid) silver coated copper	Polyethylene	2 silver-coated copper	Gray non-contaminating vinyl	.328	50	66%	28.5	100 200 400	2.40 3.50 5.25	500 1000
	**8237** JAN-C-17A	8/U	13 (7x21) bare copper	Polyethylene	1 bare copper	Black vinyl	.405	52	66%	29.5	100 200 400	2.10 3.30 4.50	50, 100, 250, 500 1000
	**8242** JAN-C-17A	9/U	13 (7x21) silver coated copper	Polyethylene	2 inner-silver-coated outer-bare copper	Gray non-contaminating vinyl	.420	51	66%	30.0	100 200 400	2.10 3.30 4.50	100 1000
	8243 MIL-C-17D	9B/U	13 (7x21) silver coated copper	Polyethylene	2 silver coated copper	Black non-contaminating vinyl	.420	50	66%	30.0	100 200 400	2.10 3.30 4.50	500 1000
	**8238** JAN-C-17A	11/U	18 (7x26) tinned copper	Polyethylene	1 bare copper	Black vinyl	.405	75	66%	20.5	100 200 400	1.90 2.85 4.35	100 250, 500 1000
	8261 MIL-C-17D	11A/U	18 (7x26) tinned copper	Polyethylene	1 bare copper	Black non-contaminating vinyl	.405	75	66%	20.5	100 200 400	1.90 2.85 4.35	100 500 1000
	**8239** JAN-C-17A	54A/U	18 (7x.0152) bare copper	Polyethylene	1 tinned copper	Clear polyethylene	.245	58	66%	26.5	100 200 400	3.10 4.40 6.70	500 1000
	**8245** JAN-C-17A	55/U	20 (Solid) bare copper	Polyethylene	2 tinned copper	Clear polyethylene	.201	53.5	66%	28.5	100 200 400	4.10 6.20 9.50	500 1000
	**8240** JAN-C-17A	58/U	20 (Solid) bare copper	Polyethylene	1 tinned copper	Black vinyl	.195	53.5	66%	28.5	100 200 400	4.10 6.20 9.50	25, 50, 100 250, 500 1000
	**8259** JAN-C-17A	58A/U	20(19x.0071) tinned copper	Polyethylene	1 tinned copper	Black vinyl	.195	50	66%	30.8	100 200 400	5.30 8.20 12.60	25, 50 100, 500 1000
	8262 MIL-C-17D	58C/U	20(19x.0071) tinned copper	Polyethylene	1 tinned copper	Black non-contaminating vinyl	.195	50	66%	28.5	100 200 400	5.30 8.20 12.60	500 1000
	**8241** JAN-C-17A	59/U	22 bare Copperweld	Polyethylene	1 bare copper	Black vinyl	.242	73	66%	21.0	100 200 400	3.75 5.60 8.30	25, 50, 100 250, 500 1000
	8263 MIL-C-17D	59B/U	.023 bare Copperweld	Polyethylene	1 bare copper	Black non-contaminating vinyl	.242	75	66%	20.5	100 200 400	3.75 5.60 8.30	500 1000
	**8254** JAN-C-17A	62/U	22 bare Copperweld	Semi-solid Polyethylene	1 bare copper	Black vinyl	.242	93	84%	13.5	100 200 400	3.10 4.40 6.30	100 500 1000
	8255 MIL-C-17-D	62B/U	24 (7x32) bare Copperweld	Semi-solid Polyethylene	1 bare copper	Black non-contaminating vinyl	.242	93	84%	13.5	100 200 400	3.10 4.40 6.30	500 1000
	**8257** JAN-C-17A	71/U	22 bare Copperweld	Semi-solid Polyethylene	2 tinned copper	Clear Polyethylene	.245	93	84%	13.5	100 200 400	3.10 4.40 6.30	500 1000
	8258 MIL-C-17-D	71B/U	22 bare Copperweld	Semi-solid Polyethylene	2 tinned copper	Black polyethylene	.245	93	84%	13.5	100 200 400	3.10 4.40 6.30	500 1000

Manufactured to current Government specifications and subsequent revisions.

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Belden | RG/U, transmission line cables

RG/U CABLES

Description	Trade Number	RG No.	AWG & (Stranding) Material	Insulation	No. of Shields & Material	Jacket	Nom. O.D. (Inch)	Nom. Imp. (Ohms)	Nom. Vel. of Prop.	Nom. Cap. (mmf/ft)	Nom. Attenuation per 100' mc	Nom. Attenuation per 100' db	Standard Spool Lengths in ft.
 Navy Drawing RE-49B716	8216	174/U	7x34 bare Copper-weld	Poly-ethylene	1 tinned copper	Black vinyl	.100	50	65.5%	30.4	100 200 400	8.8 13.0 20.0	100 500 1000
	NEW 8218	—	27 7x35 bare Copper-weld	Poly-ethylene	1 tinned copper	Black vinyl	.150	75	66%	20.5	100 200 400	5.7 8.4 12.5	100 500 1000
	8265 MIL-C-17-D	178B/U	30 (7x38) Silver coated Copper-weld	TFE TEFLON	1 Silver coated copper	Brown FEP TEFLON	.072	50	69.5	29	400	29.0 Max.	100 500
	8266 MIL-C-17-D	180B/U	30 (7x38) Silver coated Copper-weld	TFE TEFLON	1 Silver coated copper	Brown FEP TEFLON	.142	95	69.5	15	400	17.0 Max.	100 500
	8269 MIL-C-17-D	188A/U	26 (7x.0067) Silver coated Copper-weld	TFE TEFLON	1 Silver coated copper	White TFE TEFLON	.106	50	69.5	29	400	20.0 Max.	100 500
	8270 MIL-C-17-D	196A/U	30 (7x38) Silver coated Copper-weld	TFE TEFLON	1 Silver coated copper	White TFE TEFLON	.076	50	69.5	-29	400	29.0 Max.	100 500
	8267 MIL-C-17-D	213/U	13 (7x21) bare copper	Poly-ethylene	1 bare copper	Black non-contaminating vinyl	.405	50	66%	28.5	100 200 400	2.10 3.30 4.50	500 1000
	8268 MIL-C-17-D	214/U	13 (7x.0296) Silver coated copper	Poly-ethylene	2 Silver coated copper	Black non-contaminating vinyl	.425	50	66%	30	100 200 400	2.10 3.30 4.50	500 1000

Manufactured to current Government specifications and subsequent revisions.

REQUEST QUOTATIONS ON PRODUCTION QUANTITIES OF RG/U CABLES NOT LISTED.

RG/U COAXIAL CABLES

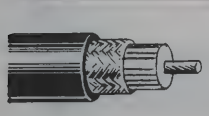
Belden's RG/U cables are manufactured and laboratory tested in accordance with existing military specifications. These cables combine low capacitance and low attenuation. The virgin polyethylene insulation assures constant electrical characteristics regardless of changes in frequency or temperature.

A variety of available jacket types include abrasion resistant polyethylene, polyvinylchloride (recommended for chemical and weather resistance) and a special non-contaminating vinyl compounded for applications above 3000 megacycles.

Typical applications: Flexible test leads, patch cords and high voltage leads (consult applicable Mil Spec for dielectric rating of individual RG/U types). Excellent for audio applications.

Note: Maximum temperature rating of polyethylene is 80°C (176°F). The polyethylene insulation begins to soften above this temperature.

FOAM CORE RG-8/U AND RG-58A/U TYPE TRANSMISSION LINE

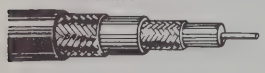
Description	Trade Number	AWG & (Stranding) Material	Percent Shield Coverage	Nom. O.D. (Inch)	Nom. Impedance (Ohms)	Nom. Velocity of Propagation	Nom. Cap. (mmf ft)	Nom. Attenuation per 100' mc	Nom. Attenuation per 100' db	Standard Spool Lengths in ft.
	8214	11 (7x19)	96.8	.403	50	78%	26	50 100 200 300 400	1.20 1.80 2.60 3.30 3.80	50, 100 500 1000
		Foam core RG-8/U type—for use in citizens' band and amateur radio as a 50 ohm antenna cable.								
	NEW 8219	20 (19x32)	96	.195	50	78%	26	50 100 200 300 400	3.6 4.8 7.6 8.5 10.1	100 500 1000
Conductor, cellular polyethylene insulated, bare copper braid shield, black vinyl jacket.		**Foam core RG-58A/U type for use in citizens' band and amateur radio as a 50 ohm antenna cable.**								

1730 1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625 © U.C.P., Inc.

foam coaxial RG/U types and high voltage cables | **Belden**

FOAM COAXIAL RG/U TYPES AND CLOSED CIRCUIT TV CABLES

ALL CABLES IN THIS GROUP ARE SWEEP TESTED

Description	Trade Number	AWG & (Stranding) Material	Percent Shield Coverage	Nom. O.D (Inch)	Nom. Impedance (Ohms)	Nom. Velocity of Propagation	Nom. Cap. (mmf ft)	Nom. Attenuation per 100 mc	Nom. Attenuation per 100 db	Standard Spool Lengths in ft
	**8211** Black	22 (Solid) Copperweld	94.6	.242	80	78%	16.3	50 100 200 300 400	2.4 3.4 4.8 5.8 6.7	500, 1000, 2000
		Fits the same connectors as RG-59/U Foam core RG-59/U type								
Conductor, cellular polyethylene insulated, bare copper braid shield, polyethylene jacket (except 8217 extra limp vinyl jacket).	**8212** Black	20 (Solid) Copperweld	94.6	.242	75	78%	17.3	50 100 200 300 400	2.3 3.2 4.5 5.5 6.3	500, 1000, 2000
		Foam core RG-59/U type								
	8217 White	22 (Solid) Copperweld	94.6	.242	80	78%	16.3	50 100 200 300 400	2.4 3.4 4.8 5.8 6.7	100, 500, 1000
		Fits the same connectors as RG-59/U Foam core RG-59/U type								
	8213 Black	14 (Solid) copper	96.8	.405	75	78%	17.3	50 100 200 300 400	1.0 1.5 2.3 2.9 3.4	500, 1000, 2000
		Foam core RG-11/U type								
	**8215** Black	21 (Solid) Copperweld	96.6 (inner shield)	.332	75	66%	20.5	50 100 200 300 400	2.0 2.9 4.3 5.4 6.5	100, 500, 1000
Conductor, polyethylene insulated, two bare copper braid shields, black polyethylene jacket.		*RG-6A/U type*								
Triaxial 	**8232** Black	20 (Solid) Copperweld	94.6 (inner shield)	.315	75	78%	17.3	50 100 200 300 400	2.3 3.2 4.5 5.5 6.3	500, 1000, 2000
Conductor, cellular polyethylene insulated, bare copper braid shield, polyethylene insulated, bare copper braid shield, black polyethylene jacket.	**8233** Black	14 (Solid) copper	82.5 (inner shield)	.475	75	78%	17.3	50 100 200 300 400	1.0 1.5 2.3 2.9 3.4	500, 1000, 2000

SWEEP TESTING

For satisfactory transmission of a signal through a cable at any frequency, Belden Sweep Tests every length of its Community TV Cables at all channels in the VHF Frequency range on an oscilloscope.

Sweep Testing, performed by trained technicians using the most modern equipment, prevents unsatisfactory program reception due to imperfections in the cable acting as "Filter Traps" at some frequencies.

The black polyethylene jackets on Belden numbers 8211, 8212, 8213, 8215, 8232, and 8233 are manufactured with a noncontaminating, nonmigratory compound specially formulated for superior weather resistance.

HIGH VOLTAGE CATHODE-RAY TUBE LEAD

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D (Inch)	Jacket Color	Breakdown Voltage	Suggested Working Voltage	Standard Spool Lengths in ft
	**8868**	22 (7x30)	.045	.015	.150	Red	50,000	25,000	25, 100, 500
	8869	22 (7x30)	.030	.015	.120	Blk	35,000	17,000	25, 100, 500
Tinned copper, conductive polyethylene, polyethylene insulated, vinyl jacket.		*8869 for use with non-conductive ceramic flyback cores.*							

80 KV D.C. HIGH VOLTAGE CABLE

Description	Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D (Inch)	Jacket Color	Breakdown Voltage	Suggested Working Voltage	Standard Spool Lengths in ft
	**8870**	22 (Solid) Copperweld	.142	.020	.440	Black	160,000 D.C.	80,000 D.C.	100
		Solid Copperweld, conductive polyethylene, polyethylene insulation, tinned copper braid equipotential sheath, black polyethylene jacket.							

Conductive polyethylene over inner conductor combined with a copper wire braid over the dielectric provides uniform distribution of voltage stress. Consult Belden Engineering Department for AC or pulse applications.

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Belden | mil-w-16878d vinyl plastic

TYPE B—VINYL—600V—105C



Tinned copper, vinyl insulated.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 100	500	1000
8599	B-32	32(7x40)	.010	.029	1 thru 10	—	1 thru 10
8598	B-30	30(7x38)	.010	.032	1 thru 10	—	1 thru 10
8597	B-28	28(7x36)	.010	.035	1 thru 10	—	1 thru 10
8505	B-26	26(7x34)	.010	.039	1 thru 10 14 thru 22	1 thru 10 —	1 thru 10 14 thru 22
8509	B-24	24(19x36)	.010	.045	9, 14 thru 22	—	9, 14 thru 22
8504	B-24	24(7x32)	.010	.044	1 thru 10 14 thru 22	1 thru 10 14 thru 22	1 thru 10 14 thru 22
8508	B-22	22(19x34)	.010	.051	9, 14 thru 22	—	9, 14 thru 22
8503	B-22	22(7x30)	.010	.050	1 thru 10 14 thru 22	1 thru 10 14 thru 22	1 thru 10 14 thru 22
8507	B-20	20(19x32)	.010	.059	9, 14 thru 22	—	9, 14 thru 22
8502	B-20	20(7x28)	.010	.058	1 thru 10 14 thru 22	1 thru 10 —	1 thru 10 14 thru 22
8501	B-18	18(7x26)	.010	.068	1 thru 10 14 thru 22	1 thru 10 —	1 thru 10 14 thru 22
8500	B-16	16(19x29)	.010	.077	1 thru 10 14 thru 22	1 thru 10 —	1 thru 10 14 thru 22

Stock Colors

1 Brown	14 White/Black
2 Red	15 White/Red
3 Orange	16 White/Green
4 Yellow	17 White/Yellow
5 Green	18 White/Blue
6 Light Blue	19 White/Brown
7 Violet (purple)	20 White/Orange
8 Gray (slate)	21 White/Gray
9 White	22 White/Violet
10 Black	

TYPE B—VINYL-NYLON JACKET—600V—115C



Tinned copper, vinyl insulated, nylon jacket overall.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 100	1000
8515	B-26	26(7x34)	.010	.045	1 thru 10	1 thru 10
8519	B-24	24(19x36)	.010	.051	1 thru 10	1 thru 10
8514	B-24	24(7x32)	.010	.050	1 thru 10 14 thru 22	1 thru 10 14 thru 22
8518	B-22	22(19x34)	.010	.057	1 thru 10	1 thru 10
8513	B-22	22(7x30)	.010	.056	1 thru 10 14 thru 22	1 thru 10 14 thru 22
8517	B-20	20(19x32)	.010	.065	1 thru 10 14 thru 22	1 thru 10 14 thru 22
8512	B-20	20(7x28)	.010	.064	1 thru 10 14 thru 22	1 thru 10 14 thru 22
8516	B-18	18(19x30)	.010	.075	9, 14 thru 22	9, 14 thru 22
8511	B-18	18(7x26)	.010	.074	1 thru 10 14 thru 22	1 thru 10 14 thru 22
8510	B-16	16(19x29)	.010	.083	1 thru 10 14 thru 22	1 thru 10 14 thru 22

Stock Colors

1 Brown	14 White/Black
2 Red	15 White/Red
3 Orange	16 White/Green
4 Yellow	17 White/Yellow
5 Green	18 White/Blue
6 Light Blue	19 White/Brown
7 Violet (purple)	20 White/Orange
8 Gray (slate)	21 White/Gray
9 White	22 White/Violet
10 Black	

Manufactured to current Government specifications and subsequent revisions.

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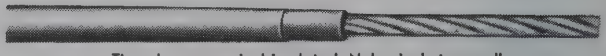
TYPE C—VINYL & VINYL-NYLON—1000V.

VINYL



Tinned copper, vinyl insulated.

VINYL-NYLON



Tinned copper, vinyl insulated, Nylon jacket overall.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Type	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Temperature Rating	Stock Colors on Standard Spools 100	Stock Colors on Standard Spools 1000
8955	C-24	24(7x32)	Vinyl	.018	.058	105C	9	9
8954	C-22	22(7x30)	Vinyl	.018	.064	105C	1 thru 10	1 thru 10
8960	C-22	22(7x30)	Vinyl-Nylon	.018	.070	115C	1 thru 10	1 thru 10
8953	C-20	20(7x28)	Vinyl	.018	.072	105C	1 thru 10	1 thru 10
8959	C-20	20(7x28)	Vinyl-Nylon	.018	.078	115C	1 thru 10	1 thru 10
8952	C-18	18(7x26)	Vinyl	.018	.082	105C	1 thru 10	1 thru 10
8958	C-18	18(7x26)	Vinyl-Nylon	.018	.089	115C	1 thru 10	1 thru 10
8951	C-16	16(19x29)	Vinyl	.018	.091	105C	9	9
8957	C-16	16(19x29)	Vinyl-Nylon	.018	.098	115C	9	9
8950	C-14	14(19x27)	Vinyl	.018	.105	105C	9	9
8956	C-14	14(19x27)	Vinyl-Nylon	.018	.114	115C	9	9

Stock Colors

1 Brown
2 Red
3 Orange
4 Yellow
5 Green
6 Light Blue
7 Violet (purple)
8 Gray (slate)
9 White
10 Black
14 White/Black
15 White/Red
16 White/Green
17 White/Yellow
18 White/Blue
19 White/Brown
20 White/Orange
21 White/Gray
22 White/Violet

TYPE D—VINYL—3000V—105C



Tinned copper, vinyl insulated.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 100	Stock Colors on Standard Spools 500	Stock Colors on Standard Spools 1000
8971	D-22	22(7x30)	.030	.090	1 thru 10	—	1 thru 10
8970	D-20	20(7x28)	.030	.098	1 thru 10	—	1 thru 10
8969	D-18	18(7x26)	.030	.108	1 thru 10	—	1 thru 10
8968	D-16	16(19x29)	.030	.117	9	—	9
8967	D-14	14(19x27)	.030	.131	9	—	9
8966	D-12	12(19x25)	.035	.160	9	—	9
8965	D-10	10(37x26)	.035	.178	9	—	9
8964	D-8	8(133x29)	.040	.245	9	9	—
8963	D-6	6(133x27)	.040	.290	9	9	—

Stock Colors

1 Brown
2 Red
3 Orange
4 Yellow
5 Green
6 Light Blue
7 Violet (purple)
8 Gray (slate)
9 White
10 Black
14 White/Black
15 White/Red
16 White/Green
17 White/Yellow
18 White/Blue
19 White/Brown
20 White/Orange
21 White/Gray
22 White/Violet

TYPE E—TFE TEFLON—600V—200C

TYPE E 600V—200C



TYPE EE—TFE TEFLON—1000V—200C

TYPE EE 1000V—200C



Concentrically stranded silver coated copper conductor, extruded TFE Teflon insulated

Trade Number	Type Designation	AWG & (Stranding)	Nom. O.D. (Inch)	Stock Colors	Standard Spool Lengths in ft.
8300	E-30	30(7x38)	.033	1 thru 10	25, 100, 500, 1000
8301	E-28	28(7x36)	.036	1 thru 10	25, 100, 500, 1000
8302	E-26	26(7x34)	.041	1 thru 10	25, 100, 500, 1000
8303	E-24	24(19x36)	.046	1 thru 10	25, 100, 500
8304	E-24	24(7x32)	.045	1 thru 10	25, 100, 500, 1000
8305	E-22	22(7x30)	.051	1 thru 10	25, 100, 500, 1000
8306	E-22	22(19x34)	.052	1 thru 10	25, 100, 500, 1000
8307	E-20	20(19x32)	.060	1 thru 10	25, 100, 500, 1000
8308	E-20	20(7x28)	.059	1 thru 10	25, 100, 500
8309	E-18	18(19x30)	.071	1 thru 10	25, 100, 500, 1000
8310	E-16	16(19x29)	.080	1 thru 10	25, 100, 500, 1000

Trade Number	Type Designation	AWG & (Stranding)	Nom. O.D. (Inch)	Stock Colors	Standard Spool Lengths in ft.
8323	EE-24	24(19x36)	.053	1 thru 10	25, 100, 500
8325	EE-22	22(7x30)	.058	1 thru 10	25, 100, 500
8326	EE-22	22(19x34)	.060	1 thru 10	25, 100, 500, 1000
8327	EE-20	20(19x32)	.068	1 thru 10	25, 100, 500, 1000
8328	EE-20	20(7x28)	.066	1 thru 10	25, 100, 500
8329	EE-18	18(19x30)	.079	1 thru 10	25, 100, 500, 1000
8330	EE-16	16(19x29)	.086	1 thru 10	25, 100, 500, 1000

Stock Colors

1. Brown
2. Red
3. Orange
4. Yellow
5. Green
6. Light Blue
7. Violet (purple)
8. Gray (slate)
9. White
10. Black

Color striping available on 1,000 ft. minimum per item each color on 500' and 1000' spools.

Manufactured to current Government specifications and subsequent revisions.

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Belden | mil-w-76b vinyl plastic

TYPE MW—VINYL & VINYL-NYLON—1000 V

VINYL



Tinned copper, vinyl insulated, medium wall. The extruded vinyl insulation is flame and ozone-resistant and is inert to most chemicals, oils, and solvents.

VINYL-NYLON



Tinned copper, vinyl insulated. Medium wall, clear nylon jacket overall.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Type	Insulation Thickness (inch)	Nom. O.D (inch)	Temperature Rating	Stock Colors on Standard Spools 25	100	500	1000
8525	MW-C-24-(7)-U	24(7x32)	Vinyl	.017	.058	80C	—	1 thru 22	1 thru 22	1 thru 22
8538	MW-C-24-(1)-U	24(Solid)	Vinyl	.017	.054	80C	—	1 thru 22	—	1 thru 22
8524	MW-C-22-(7)-U	22(7x30)	Vinyl	.017	.064	80C	1 thru 13	1 thru 30	1 thru 30	1 thru 30
8530	MW-C-22-(1)-U	22(Solid)	Vinyl	.017	.059	80C	1 thru 13	1 thru 30	1 thru 30	1 thru 30
8537	MW-C-22-(7)-J	22(7x30)	Vinyl-Nylon	.017	.069	90C	—	1 thru 10 14 thru 22	—	1 thru 10 14 thru 22
8523	MW-C-20-(10)-U	20(10x30)	Vinyl	.017	.070	80C	1 thru 13	1 thru 30	1 thru 30	1 thru 30
8529	MW-C-20-(1)-U	20(Solid)	Vinyl	.017	.066	80C	1 thru 13	1 thru 22	1 thru 22	1 thru 22
8536	MW-C-20-(10)-J	20(10x30)	Vinyl-Nylon	.017	.076	90C	—	1 thru 10	—	1 thru 10
8522	MW-C-18-(16)-U	18(16x30)	Vinyl	.017	.080	80C	1 thru 13	1 thru 30	1 thru 30	1 thru 30
8528	MW-C-18-(1)-U	18(Solid)	Vinyl	.017	.074	80C	—	1 thru 13	1 thru 13	1 thru 13
8535	MW-C-18-(16)-J	18(16x30)	Vinyl-Nylon	.017	.086	90C	—	1 thru 10	—	1 thru 10
8521	MW-C-16-(26)-U	16(26x30)	Vinyl	.019	.098	80C	—	1 thru 22	1 thru 22	1 thru 22
8531	MW-C-16-(1)-U	16(Solid)	Vinyl	.017	.085	80C	—	1 thru 10	1 thru 10	1 thru 10
8520	MW-C-14-(41)-U	14(41x30)	Vinyl	.020	.111	80C	—	1 thru 22	1 thru 22	1 thru 22
8527	MW-C-12-(65)-U	12(65x30)	Vinyl	.020	.130	80C	—	1 thru 10	1 thru 10	1 thru 10

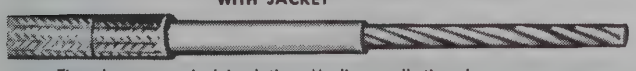
Stock Colors

First color in stripe combination is body color and second or third colors are stripes. (White/Black/Red).

1 Brown
2 Red
3 Orange
4 Yellow
5 Green
6 Light Blue
7 Violet (purple)
8 Gray (slate)
9 White
10 Black
11 Tan
12 Pink
13 Dark Blue
14 White/Black
15 White/Red
16 White/Green
17 White/Yellow
18 White/Blue
19 White/Brown
20 White/Orange
21 White/Gray
22 White/Violet
23 White/Black/Red
24 White/Black/Green
25 White/Black/Yellow
26 White/Black/Blue
27 White/Black/Brown
28 White/Black/Orange
29 White/Black/Gray
30 White/Black/Violet

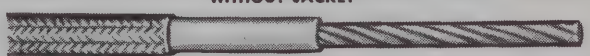
TYPE MW—SHIELDED—WITH & WITHOUT NYLON JACKET—1000V—80C

WITH JACKET



Tinned copper, vinyl insulation. Medium wall, tinned copper shield, nylon jacket.

WITHOUT JACKET



Tinned copper, vinyl insulation. Medium wall, tinned copper shield overall.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket	Nom O.D (Inch)	Stock Colors on Standard Spools 100	500	1000
8887	MW-C-24-(7)-S	24(7x32)	.017	None	.082	1 thru 10	—	1 thru 10
8883	MW-C-22-(7)-S	22(7x30)	.017	None	.088	1 thru 10	—	1 thru 10
8893	MW-C-22-(7)-SJ	22(7x30)	.017	Nylon	.096	9	9	9
8886	MW-C-20-(10)-S	20(10x30)	.017	None	.096	1 thru 10	—	1 thru 10
8896	MW-C-20-(10)-SJ	20(10x30)	.017	Nylon	.105	9	9	9
8882	MW-C-18-(16)-S	18(16x30)	.017	None	.105	1 thru 10	—	1 thru 10
8892	MW-C-18-(16)-SJ	18(16x30)	.017	Nylon	.114	9	9	9
8884	MW-C-16-(26)-S	16(26x30)	.019	None	.122	1 thru 10	—	1 thru 10
8894	MW-C-16-(26)-SJ	16(26x30)	.019	Nylon	.132	9	—	9
8881	MW-C-14-(41)-S	14(41x30)	.020	None	.135	9, 10	—	9, 10
8880	MW-C-12-(65)-S	12(65x30)	.020	None	.154	9, 10	—	9, 10

Stock Colors

1 Brown
2 Red
3 Orange
4 Yellow
5 Green
6 Light Blue
7 Violet (purple)
8 Gray (slate)
9 White
10 Black

Manufactured to current Government specifications and subsequent revisions.

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mil-w-76b vinyl plastic | **Belden**

TYPE MW-GLASS BRAID-SHIELDED—1000V—80C

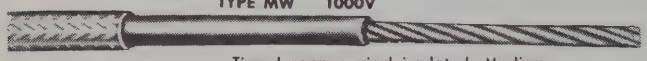


Tinned copper, vinyl insulated. Medium wall, lacquered glass braid, tinned copper shield overall.

Trade Number	Type Designation	AWG & Stranding	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools: 100	1000	Stock Color
8863	MW-C-22(7)-BS	22(7x30)	.017	.102	9	9	White only (9)
8862	MW-C-20(10)-BS	20(10x30)	.017	.110	9	9	
8861	MW-C-18(16)-BS	18(16x30)	.017	.119	9	9	
8860	MW-C-16(26)-BS	16(26x30)	.019	.136	9	9	
8859	MW-C-14(41)-BS	14(41x30)	.020	.149	9	9	
8858	MW-C-12(65)-BS	12(65x30)	.020	.168	9	9	

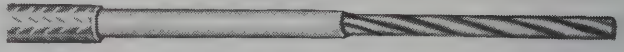
TYPE MW & HW VINYL—GLASS BRAID (OVERALL)—80C

TYPE MW 1000V



Tinned copper, vinyl insulated. Medium wall, lacquered glass braid overall.

TYPE HW — 600V

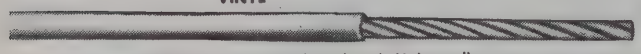


Tinned copper, vinyl insulated. Heavy wall, lacquered glass braid.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Voltage Rating	Stock Colors on Standard Spools: 100	500	1000	Stock Colors
8566	MW-C-22(7)-B	22(7x30)	.017	.078	1000V	1 thru 10	—	1 thru 10	1 Brown, 2 Red, 3 Orange, 4 Yellow, 5 Green, 6 Light Blue, 7 Violet (purple), 8 Gray (slate), 9 White, 10 Black; 124 White/Brown, 125 White/Red, 126 White/Orange, 127 White/Yellow, 128 White/Green, 129 White/Blue, 130 White/Violet, 131 White/Gray, 132 White/Black
8565	MW-C-20(10)-B	20(10x30)	.017	.086	1000V	1 thru 10	—	1 thru 10	
8564	MW-C-18(16)-B	18(16x30)	.017	.095	1000V	1 thru 10 124 thru 132	— —	1 thru 10 124 thru 132	
8563	MW-C-16(26)-B	16(26x30)	.019	.112	1000V	1 thru 10 124 thru 132	— —	1 thru 10 124 thru 132	
8562	MW-C-14(41)-B	14(41x30)	.020	.125	1000V	9, 124 thru 132	— —	9, 124 thru 132	
8561	MW-C-12(65)-B	12(65x30)	.020	.144	1000V	9, 125, 132	—	9, 125, 132	
8591	HW-C-10(105)-B	10(105x30)	.048	.238	600V	9, 125, 132	—	9, 125, 132	
8590	HW-C-8(133)-B	8(133x29)	.048	.279	600V	9	9	—	
8589	HW-C-6(133)-B	6(133x27)	.048	.328	600V	9	9	—	

TYPE LW—VINYL & VINYL-NYLON—300V

VINYL



Tinned copper, vinyl insulated. Light wall.

VINYL-NYLON



Tinned copper, vinyl insulated. Light wall, clear nylon jacket overall.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Type	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Temperature Rating	Stock Colors on Standard Spools: 100	1000	Stock Colors
8571	LW-C-28(7)-U	28(7x36)	Vinyl	.011	.037	80C	1 thru 10	1 thru 10	1 Brown, 2 Red, 3 Orange, 4 Yellow, 5 Green, 6 Light Blue, 7 Violet (purple), 8 Gray (slate), 9 White, 10 Black
8578	LW-C-28(7)-J	28(7x36)	Vinyl-Nylon	.011	.042	90C	—	1 thru 10	
8570	LW-C-26(7)-U	26(7x34)	Vinyl	.011	.041	80C	1 thru 10	1 thru 10	
8577	LW-C-26(7)-J	26(7x34)	Vinyl-Nylon	.011	.046	90C	—	1 thru 10	
8569	LW-C-24(7)-U	24(7x32)	Vinyl	.011	.046	80C	1 thru 10	1 thru 10	
8576	LW-C-24(7)-J	24(7x32)	Vinyl-Nylon	.011	.051	90C	—	1 thru 10	
8568	LW-C-22(7)-U	22(7x30)	Vinyl	.012	.054	80C	1 thru 10	1 thru 10	
8575	LW-C-22(7)-J	22(7x30)	Vinyl-Nylon	.012	.059	90C	—	1 thru 10	
8567	LW-C-20(10)-U	20(10x30)	Vinyl	.012	.060	80C	1 thru 10	1 thru 10	
8574	LW-C-20(10)-J	20(10x30)	Vinyl-Nylon	.012	.065	90C	—	1 thru 10	

Manufactured to current Government specifications and subsequent revisions.

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Belden | mil-w-76b vinyl plastic mil-w-5086a & mil-w-7078a aircraft wire

TYPE HW—VINYL—Gauges 16-22 2500V, Gauges 6-14 600V—80C



Tinned copper, vinyl insulated. Heavy wall.

Trade Number	Type Designation	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors on Standard Spools 100	500	1000
8586	HW-C-18(16)-U	18(16x30)	.034	.115	1 thru 10	—	1 thru 10
8585	HW-C-16(19)-U	16(26x30)	.034	.128	2, 9, 10	—	2, 9, 10
8584	HW-C-14(19)-U	14(41x30)	.048	.171	2, 9, 10	—	2, 9, 10
8583	HW-C-12(19)-U	12(65x30)	.048	.191	2, 9, 10	—	2, 9, 10
8582	HW-C-10(37)-U	10(105x30)	.048	.220	2, 9, 10	—	2, 9, 10
8581	HW-C-8(127)-U	8(133x29)	.048	.261	2, 9, 10	2, 9, 10	—
8580	HW-C-6(127)-U	6(133x27)	.048	.310	2, 9, 10	2, 9, 10	—

Stock Colors

1 Brown
2 Red
3 Orange
4 Yellow
5 Green
6 Light Blue
7 Violet (purple)
8 Gray (slate)
9 White
10 Black

MIL-W-5086A—TYPES 1 & 2—600V

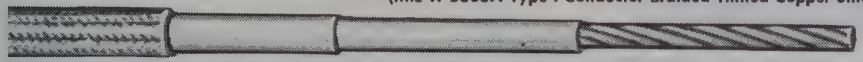


UNSHIELDED

Trade Number	MIL Type Designation	AWG & (Stranding)	Nom. O.D. (Inch)	Spec. Type	Stock Colors on Standard Spools 100	500	1000	Stock Color
8541	AN-22	22(19x34)	.068	No. 1	9	—	9	White only (9)
8542	AN-20	20(19x32)	.078	No. 1	9	—	9	
8543	AN-18	18(19x30)	.088	No. 1	9	—	9	**Additional Description**
8544	AN-16	16(19x29)	.098	No. 1	9	—	9	**MIL-W-5086A-Type I AN-22 thru AN-12.** Stranded tinned copper, white vinyl, clear nylon jacket insulation.
8545	AN-14	14(19x27)	.117	No. 1	9	9	9	
8546	AN-12	12(19x25)	.137	No. 1	9	9	9	
8559	AN-22	22(19x34)	.075	No. 2	9	—	9	**MIL-W-5086A-Type II AN-22 thru AN-12** Stranded tinned copper, white vinyl insulation, saturated glass braid, clear nylon jacket.
8558	AN-20	20(19x32)	.085	No. 2	9	—	9	
8557	AN-18	18(19x30)	.095	No. 2	9	—	9	
8556	AN-16	16(19x29)	.105	No. 2	9	—	9	
8555	AN-14	14(19x27)	.125	No. 2	9	9	9	
8554	AN-12	12(19x25)	.143	No. 2	9	9	9	
8553	AN-10	10(49x27)	.190	No. 2	9	9	9	**MIL-W-5086A-Type II AN-10 thru AN-00** Stranded tinned copper, white vinyl insulation, saturated glass braid, nylon braid, nylon lacquer.
8552	AN-8	8(133x29)	.240	No. 2	9	9	—	
8551	AN-6	6(133x27)	.293	No. 2	9	9	—	
8550	AN-4	4(133x25)	.355	No. 2	9	9	—	
8549	AN-2	2(665x30)	.425	No. 2	9	—	—	
8548	AN-0	0(1045x30)	.525	No. 2	9	—	—	
8547	AN-00	00(1330x30)	.590	No. 2	9	—	—	

MIL-C-7078A—TYPE 1—600 VOLT

(MIL-W-5086A Type I Conductor Braided Tinned Copper Shield)



Trade Number	MIL Type Designation	AWG & (Stranding)	Nom. O.D. (Inch)	Spec. Type	Stock Colors on Standard Spools 100	500	1000	Stock Color
8855	AN-22	22(19x34)	.092	No. 1	9	—	9	White only (9)
8854	AN-20	20(19x32)	.102	No. 1	9	—	9	
8853	AN-18	18(19x30)	.112	No. 1	9	—	9	**Additional Description**
8852	AN-16	16(19x29)	.122	No. 1	9	9	—	Stranded tinned copper, white vinyl insulation, nylon jacket, braided tinned copper shield.
8851	AN-14	14(19x27)	.141	No. 1	9	—	—	
8850	AN-12	12(19x25)	.156	No. 1	9	—	—	

Manufactured to current Government specifications and subsequent revisions.

© U.C.P., Inc.

hook-up and lead wires—grid wire
shielding and bonding cable—bus bar wire

Belden

UL TYPE HOOK-UP AND LEAD WIRES

UL-600V-90C (CSA-TYPE TRB)



Tinned copper, vinyl insulated, cotton braid, lacquered

Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors	Standard Spool Lengths in Ft
8937	22(7x30)	.016	.091	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8936	20(10x30)	.017	.098	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8935	18(16x30)	.017	.113	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8934	16(26x30)	.017	.126	1, 2, 3, 4, 5, 9, 10, 13	100, 500
8933	14(41x30)	.031	.177	1, 2, 3, 4, 5, 9, 10, 13	100, 500

For color coding see Page 25.

UL rated 600V for electronic circuits only—300V for other applications.

UL-600V-105C (CSA-600V-TYPE TEW)



Tinned copper, vinyl insulated.

Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Stock Colors	Standard Spool Lengths in Ft
8920	22(7x30)	.031	.095	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8919	20(10x30)	.031	.102	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8918	18(16x30)	.031	.112	1, 2, 3, 4, 5, 9, 10, 13	100, 1000
8917	16(26x30)	.031	.126	1, 2, 3, 4, 5, 9, 10, 13	100, 500
8916	14(41x30)	.031	.141	1, 2, 3, 4, 5, 9, 10, 13	100, 500

For color coding see Page 25.

UL rated 2500 volts peak for electronic circuits.

GRID WIRE

Description	Trade Number	AWG & Stranding	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Suggested Working Voltage	Breakdown Voltage	Nom. Cap. (mmf/ft)	Standard Spool Lengths in Ft
	**8885**	20(10x30)	.015	.117	300	4000	80	15, 25, 100, 500

Tinned copper, rubber insulated, cellulose acetate braid, lacquered, tinned copper braid shield.

SHIELDING AND BONDING CABLES



Cables conforming to QQB575 can be manufactured on a special order basis.

Braided tinned copper.
Standard Spool: 10, 50, 250 feet

Trade Number	Stranding	Approx. Cir. Mil. Area	Nom. I.D. (Inch)	Approx. Flat Dimension (Inch)
8676	16x36	400	1/32	.025x .035
8674	24x36	600	3/64	.030x .045
8660	96x34	3,800	1/8	.050x .150
8668	120x34	4,700	11/64	.060x .205
8663	168x34	6,700	1/4	.060x .275
8661	192x34	7,600	3/8	.060x .310
8669	336x34	13,300	1/2	.060x .520
8672	528x36	13,200	5/8	.040x .580
8662	576x34	22,900	23/32	.100x .590
8670	480x30	48,000	3/4	.125x .750
8671	864x36	21,600	1	.050x1.000

This braided cable will provide approximately 90% shield coverage when applied over the recommended diameter.
For additional sizes, see current BRAIDED AND STRANDED COPPER CABLE CATALOG.

BUS BAR WIRE

Made in accordance with Federal Spec QQ-W-343.



Solid tinned copper.
Standard Spool: 100, 1000 feet

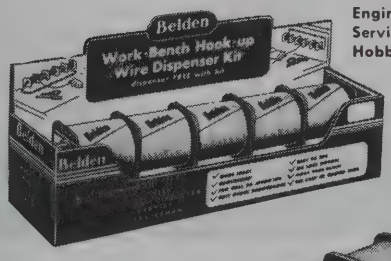
Trade Number	AWG	Nom. O.D. (Inch)	Circular Mil. Area
8025	30	.010	100.0
8024	28	.012	159.0
8023	26	.016	253.0
8022	24	.020	404.0
8021	22	.025	640.0
8020	20	.032	1020.0
8019	18	.040	1620.0
8013	16	.050	2580.0
8012	14	.064	4110.0
8011	12	.080	6530.0

8011 Available in 100' spool only.

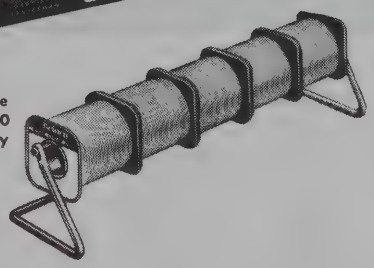
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Belden | hook-up wire, antenna and litz wire

KITS—HOOK-UP WIRE ON RACKS



R and D Labs . . .
Engineers . . .
Servicemen . . .
Hobbyists



Specify Trade Number 8800 for Rack only

Each kit contains an assortment of Hook-Up Wire colors and types plus a portable metal dispenser rack for workbench or wall mounting. The dispenser rack provides a complete, compact, and convenient wire department for every working area.

Trade Number	No. of Spools	Spool Lengths	Type of Wire	Colors in Kit
8822	10	25′	20 solid, Type MW vinyl (8529-25)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
8823	5	100′	20 solid, Type MW vinyl (8529-100)	2, 5, 6, 9, 10
8824	8	25′	20 stranded, Type MW vinyl (8523-25)	1, 2, 3, 4, 5, 6, 9, 10
8825	5	100′	20 stranded, MIL-W-16878D vinyl (8507-100)	9, 14, 15, 16, 17
8826	5	100′	22 stranded, MIL-W-16878D vinyl (8508-100)	9, 14, 15, 16, 17
8827	5	100′	22 stranded, MIL-W-16878D vinyl-nylon (8518-100)	2, 5, 6, 9, 10

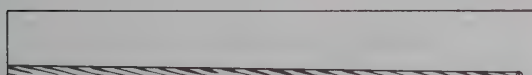
See column below for color coding.

STOCK COLORS

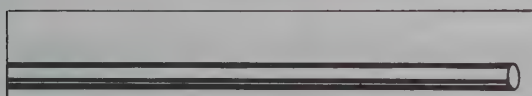
First color in stripe combination is body color and second or third color are stripes (White Black Red)

1	Brown	7	Violet (purple)	13	Dark Blue
2	Red	8	Gray (slate)	14	White Black
3	Orange	9	White	15	White Red
4	Yellow	10	Black	16	White Green
5	Green	11	Tan	17	White Yellow
6	Light Blue	12	Pink		

ANTENNA WIRE



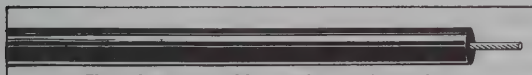
Stranded bare copper.



Copper, Belden Heavy Poly-Thermaleze □ insulated.

Trade Number	AWG & (Stranding)	Nom. O.D. (Inch)	Standard Spool Lengths in ft.
8002	16(7x24)	.060	50, 100
8000	14(7x22)	.076	50, 75, 100, 1000
8009	14(Solid)	.067	100, 150, 500
8008	12(Solid)	.084	100, 150, 500

RADIO ANTENNA WIRE



Tinned copperweld, weather-resistant brown polyethylene insulation.

Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Standard Spool Lengths in ft
NEW 8201	20(7x28)	.121	.278	100, 500, 1000

INDOOR ANTENNA WIRE



Tinned copper, chrome vinyl insulated.

Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Standard Spool Lengths in ft
8014	25(13x36)	.010	.044	25, 500

LITZ WIRE



Copper, Celenamel†† insulated, nylon wrap.

Trade Number	Stranding	Nom. O.D. (Inch)	Standard Spool Lengths in ft
8817	5x44	.008	100

†† *Belden Trademark—Reg. U.S. Pat. Off.* □*Licensed under U.S. Patent 3,022,200*

BELDEN PAGE 25

 © U.C.P., Inc.

magnet wire—mobile communications cable for marine and automotive

Belden



BELDSOL Magnet Wire is a dual film insulated Magnet Wire that combines the excellent dielectric characteristics of Polyurethane and the known toughness and solvent resistance offered by an overcoat of nylon. This wire is rated by IEEE tests for 130 C usage and will solder without insulation removal at 750 F.

BELDEN POLY-THERMALEZE is a dual polyester film insulated Magnet Wire rated for 180 C usage and has exceptional ability to resist solvents and abuse in difficult windings.

SINGLE BELDSOL
Solderable

Size	¼ Pound Spool		½ Pound Spool		Turns per Linear Inch	Turns per Square Inch
	Trade Number	Approx. Length (Feet)	Trade Number	Approx. Length (Feet)		
14			8047	40	15.2	231
16			8048	63	19.1	365
18			8049	100	23.9	571
20			8050	160	29.9	894
22			8051	254	37.5	1410
24			8052	404	46.9	2200
26			8053	645	59.0	3480
28	8040	510	8054	1020	73.8	5450
30	8041	807	8055	1615	91.7	8410
32	8042	1257	8056	2515	114.0	13000
34	8043	2030	8057	4060	144.0	20700
36	8044	3200	8058	6400	180.0	32400
38	8045	5070			225.0	50600
40	8046	8050			290.0	84100

BELDEN HEAVY POLY-THERMALEZE
High Temperature

Size	½ Pound Spool		1 Pound Spool		Turns per Linear Inch	Turns per Square Inch
	Trade Number	Approx. Length (Feet)	Trade Number	Approx. Length (Feet)		
14	8059	40	8073	80	14.9	222
16	8060	63	8074	126	18.6	346
18	8061	100	8075	199	23.2	538
20	8062	157	8076	315	28.9	835
22	8063	250	8077	501	36.0	1296
24	8064	396	8078	793	44.7	1998
26	8065	630	8079	1260	55.7	3102
28	8066	995	8080	1990	69.4	4816
30	8067	1570	8081	3140	86.2	7430
32	8068	2440	8082	4880	106.0	11236
34	8069	3930	8083	7860	133.0	17689
36	8070	6200	8084	12400	167.0	27889
38	8071	9700	8085	19400	225.0	50600
40	8072	16050	8086	32100	290.0	84100

38 AWG & 40 AWG Polyester, Blue Color

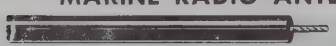
PRIMARY WIRE—MARINE AND AUTO



S.A.E. TYPE G.P.T.
Bare copper, vinyl insulated.

Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Color	Standard Spool
8685	16 (19x29)	.023	.102	Black	100
8684	14 (19x27)	.023	.117	Green	100
8683	12 (19x25)	.026	.142	Red	100
8682	10 (19x23)	.031	.175	White	100
8681	8 (19x21)	.037	.219	Chrome	100
8680	6 (37x21)	.043	.290	Chrome	100
NEW 8679	4 (61x22)	.061	.350	Chrome	100

MARINE RADIO ANTENNA WIRE

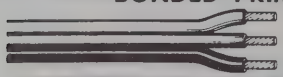


WEATHER-RESISTANT

Tinned Copperweld polyethylene insulated

Trade No.	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Standard Spool
NEW 8201	20 (7x28)	.121	.278	100, 500, 1000

3 & 4 CONDUCTOR PARALLEL BONDED PRIMARY WIRE



Bare copper, vinyl insulated.

Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Color Coding	Standard Spool
8475	16-3 19x29	.023	.102x .295	Wht/Brn Red	100, 500
8476	16-4 19x29	.023	.102x .400	Wht/Brn Yel/Grn	100, 500

Conforms to SAE and Outboard Industries Association Color Coding for boat trailers.

DUPLEX PRIMARY WIRE



Tinned copper, vinyl insulated, conductors parallel, chrome vinyl jacket.

Standard Spools: 100 and 500 feet

Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Jacket Thickness (Inch)	Nom. O.D. (Inch)	Color Coding
8677	16 (19x29)	.032	.022	.164 x .276	Brn, Red
8675	14 (19x27)	.037	.022	.189 x .326	Brn, Red
8673	12 (19x25)	.040	.022	.213 x .384	Brn, Red
8678	10 (19x23)	.040	.025	.243 x .436	Brn, Red

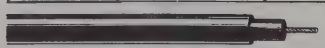
7 MM IGNITION WIRE



Ignition Radiation Suppression

Standard Spool: 100 feet

Trade Number	AWG & (Stranding)	Insulation Thickness (Inch)	Nom. O.D. (Inch)	Color
NEW 8688	Elastomer Duoprene G Conductor	.104	.278	Blk.



Tinned Copperweld conductor

Standard Spool: 100 feet

NEW 8689	20 (7x28)	.120	.278	Blk.

[ ]*Licensed under U.S. Patent 3,022,200*

BELDEN PAGE 26

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Belden
Manufacturing Company,

VINYL HEAT-SHRINKABLE TUBING



1. Shrinks to 50% of supplied diameter in 5 seconds
2. Longitudinal change less than 15%
3. Thin wall – better conformability
4. High Dielectric Strength
5. Translucent for easy visibility (exc. black)
6. Flame retardant
7. Continuous lengths – 25' - 100' - 250'
8. Recognized for 105°C

Size (inches)	Trade No.	Put-up Length (ft.)	Stock Colors	Minimum Expanded I.D. (inch)	Maximum Recovered I.D. (inch)	Nom. Wall Recovered (inch)	No. of Spools Std. Pkg.	Total Ft. per Std. Pkg.
1/8	68513	25	2-6-10-368	.135	.075	.014	2	50
	68514	100					2	200
	68515	250					2	500
3/16	68523	25	2-6-10-368	.200	.110	.014	2	50
	68524	100					2	200
	68525	250					2	500
1/4	68533	25	2-6-10-368	.270	.150	.020	2	50
	68534	100					2	200
	68535	250					1	250
3/8	68543	25	2-6-10-368	.395	.225	.020	5	125
	68544	100					2	200
	68545	250					2	500
1/2	68553	25	2-6-10-368	.520	.300	.020	5	125
	68554	100					2	200
	68555	250					2	500
5/8	68563	25	2-6-10-368	.645	.375	.020	4	100
	68564	100					2	200
3/4	68573	25	2-6-10-368	.770	.450	.020	2	50
	68574	100					2	200
7/8	68583	25	2-6-10-368	.895	.525	.020	2	50
	68584	100					2	100
1	68593	25	2-6-10-368	1.02	.600	.020	2	50
	68594	100					2	100
1-1/2	68603	25	2-6-10-368	1.52	.90	.030	2	50
	68604	100					2	100
2	68613	25	2-6-10-368	2.02	1.20	.030	2	50
	68614	100					1	100

COLOR CODE IDENTIFICATION

2. Red 6. Light Blue 10. Black 368. Clear

BEL-1

481 EAST 11th AVE., COLUMBUS, OHIO 43211 • PHONE: (614) 294-5351

PROPERTIES OF POLYVINYLCHLORIDE USED FOR BELDEN HEAT-SHRINKABLE TUBING

Belden Polyvinylchloride Heat-Shrinkable Tubing has an extra thin wall, is flame retardant and has excellent physical and electrical properties. All colors except black are translucent so that the enclosed object is visible. The data given below is intended only as a guide to the general properties of the material.

PROPERTIES	Value	Method of Test
ELECTRICAL		
Dielectric Strength*, volts/mil		
After 96 hrs. at 23°C, 0% R.H.		
.012" wall	1300.	
.016" wall	1150.	MIL-I-631
.020" wall	1000.	MIL-I-631
.025" wall	900.	MIL-I-631
.031" wall	800.	
After 96 hrs. at 23°C, 96% R.H.	95% original	MIL-I-631
After 7 days at 136°C	95% original	U.L. 224
Insulation Resistance, megohms/1000 ft.	500.	U.L. 224
Volume Resistivity, ohm-cm.	3×10^{15}	MIL-I-631
Dielectric Constant, at 1 kc.		
After 96 hrs. at 23°C, 0% R.H.	5.3	MIL-I-631
After 96 hrs. at 23°C, 96% R.H.	5.5	MIL-I-631
Dissipation Factor at 1 kc.		
After 96 hrs. at 23°C, 0% R.H.	0.10	MIL-I-631
After 96 hrs. at 23°C, 96% R.H.	0.12	MIL-I-631
PHYSICAL		
Heat Aging, percent elongation		
After 400 hrs. at 130°C	80% original	MIL-I-631
After 7 days at 136°C	85% original	U.L. 224
After 60 days at 113°C	85% original	U.L. 224
Oil Resistance, % dia. change		
After 200 hrs. at 50°C, in ASTM #3 oil	10	MIL-I-631
Flexibility		
After 200 hrs. at 100°C	No cracking	MIL-I-631
After 60 days at 113°C	No cracking	U.L. 224
Deformation, 1 hr. at 121°C, percent	72	U.L. 224
Heat Shock. 1 hr. at 121°C	No cracking	U.L. 224
Cold Bend, 1 hr. at -10°C	No cracking	U.L. 224
Cold Bend, 4 hrs. at -55°C	No cracking	On 2" mandrel
Cold Brittleness		
Full Tubing Section	-8°C	MIL-I-631
Flat Section		ASTM-D-746
Specific Gravity	1.31	ASTM-D-792
Durometer, Shore A, 15 sec.	95.	ASTM-D-676
Tensile Strength, psi	4000.	MIL-I-631
100% Modulus, psi	2265.	
Elongation, percent	250	MIL-I-631
Flame Resistance	10 Sec.	MIL-I-631
Bursting Strength, psi	>50.	MIL-I-631
Softening Temperature	120°C	MIL-I-631
Corrosive Effect		
After 720 hrs. at 70°C, 100% R.H.		MIL-I-631
After 48 hrs. at 100°C, 100% R.H.	Non-visible	Sperry Copper Dust
After 60 days at 113°C	No Pitting	U.L. 224
Fungus Resistance		MIL-I-631

* - Tested in oil

BEL 2

Belden
Manufacturing Company,

IRRADIATED POLYOLEFIN HEAT SHRINKABLE TUBING



1. Shrinks to 50% of supplied diameter at 275° F
2. Longitudinal change less than 3% when fully shrunk
3. Solvent and fungus resistant
4. 135° C continuous operating temperature
5. Meets or exceeds MIL-I-23053 (WEPS) Revision A
6. 500 volts per mil
7. Maximum water absorption of 0.1%

Size (inches)	Trade No.	Put–up Length	Stock Colors ●	Minimum Expanded I.D. (inch)	Maximum Recovered I.D. (inch)	Nom. Wall Recovered (inch)	No. of Lengths in Std. Pkg.	Total Ft. per Std. Pkg.
3/64	68001	6"	10-368	046	.023	.016	25	12½
	68002	4'	10-368				10	40
1/16	68011	6"	10-368	.063	.031	.017	25	12½
	68012	4'	10-368				10	40
3/32	68021	6"	10-368	.093	.046	.020	25	12½
	68022	4'	2-4-6-9-10-368				25	100
1/8	68031	6"	10-368	.125	.062	.020	25	12½
	68032	4'	2-4-6-9-10-368				25	100
3/16	68041	6"	10-368	.187	.093	.020	25	12½
	68042	4'	2-4-6-9-10-368				25	100
1/4	68051	6"	10-368	.250	.125	.025	25	12½
	68052	4'	2-4-6-9-10-368				25	100
3/8	68061	6"	10-368	.375	.187	.025	25	12½
	68062	4'	2-4-6-9-10-368				25	100
1/2	68071	6"	10-368	.500	.250	.025	25	12½
	68072	4'	2-4-6-9-10-368				25	100
3/4	68081	6"	10-368	.750	.375	.030	25	12½
	68082	4'	2-4-6-9-10-368				25	100
1	68091	6"	10-368	1.000	.500	.035	10	5
	68092	4'	10-368				10	40
1-1/2	68101	6"	10-368	1.500	.750	.040	10	5
	68102	4'	10-368				10	40
2	68111	6"	10-368	2.000	1.000	.045	5	2½
	68112	4'	10-368				5	20
3	68121	6"	10-368	3.000	1.500	.050	5	2½
	68122	4'	10-368				5	20
4	68131	6"	10-368	4.000	2.000	.055	5	2½
	68132	4'	10-368				5	20

● All colors are flame-retardant except clear (368)

COLOR CODE IDENTIFICATION

2. Red	6. Light Blue	10. Black
4. Yellow	9. White	368. Clear

BEL-3

1128 SYCAMORE ST., CINCINNATI, OHIO 45210 • PHONE: (513) 381-7625

PROPERTIES OF IRRADIATED POLYOLEFIN USED FOR BELDEN HEAT-SHRINKABLE TUBING

Belden Irradiated Polyolefin Heat-Shrinkable Tubing is thermally stabilized and homogeneous in nature. It is essentially free from flaws, defects, pin holes, bubbles, seams, cracks or inclusions. The data given below is intended only as a guide to the general properties of the material.

PROPERTIES	Colored Tubing	Clear Tubing	Method of Test
ELECTRICAL			
Dielectric Strength, min. volts/mil	500.	500.	ASTM D876
Dielectric Constant, max.	2.9	2.5	ASTM D1531
Vol. Resistivity, min. ohm-cm	10^{15}	10^{16}	ASTM D257
PHYSICAL			
Length Change, max. percent	3	3	ASTM D876, 3 minutes at 200°C (392°F)
Tensile Strength, min. psi.			ASTM D638
Sizes, 3/64 - 1/4	2000.	1500.	
3/8 - 4	1500.	1500.	
Elongation, min. percent original	200.	200.	ASTM D638
Specific Gravity, max.	1.3	1.3	ASTM D792
Low Temp. Flexibility	No cracking	No cracking	Around mandrel* after 4 hrs. at -55°C (-67°F)
Heat Shock	No dripping, flowing or cracking	No dripping, flowing or cracking	After 4 hrs. at 250°C (482°F)
Heat Aging	No cracking	No cracking	Around mandrel* after 168 hrs. at 175°C (347°F)
Color	MIL STD 104	**	MIL STD. 104
Color Stability	MIL STD 104	**	MIL STD. 104, 24 hrs. at 175°C (347°F)
CHEMICAL			
Corrosive Effect	Non-Corrosive	Non-Corrosive	***
Flammibility	Self-extinguising	**	
Fungus Resistance	No growth	No growth	MIL-1-7444
Water Absorption, max. percent	0.1	0.1	ASTM D570, Proc. A, 24 hrs. at 25°C (77°F)
Solvent Resistance			
JP-4 Fuel			
Skydrol 500			Immersed 24 hrs. at 25°C (77°F) followed by tests below.
Hydraulic Fluid (MIL-H-5606)			
Aviation Gasoline (100/130)			
Water			
Dielectric Strength, min. volts/mil	500.	500.	ASTM D876
Tensile Strength, min. psi.	1500.	1500.	ASTM D638

*-Mandrel diameter, 5/16 to 7/8 inch according to size of tubing

**-Not applicable

***-Testing procedure used as basis for determining corrosive effect may be obtained upon request

BEL-4

MAGNET WIRE PER MIL-W-583B

SOLID TINNED (SOFT DRAWN) SYMBOL TC

Specification MIL-W-3861 Type S, QQ-W-343 Type S, ASTM-B-33

Cat. No.	¼ lb. SPOOL Size B&S	¼ lb. SPOOL Ft.	½ lb. SPOOL Size B&S	½ lb. SPOOL Ft.	1 lb. SPOOL Size B&S	1 lb. SPOOL Ft.	Nom. O.D.
BST-10	10	8	10	16	10	32	.103"
BST-12	12	12	12	25	12	50	.082"
BST-14	14	20	14	40	14	80	.065"
BST-16	16	32	16	63	16	126	.051"
BST-18	18	50	18	100	18	201	.040"
BST-20	20	80	20	160	20	320	.033"
BST-22	22	127	22	254	22	508	.025"
BST-24	24	201	24	403	24	806	.020"
BST-26	26	320	26	640	26	1280	.016"
BST-28	28	507	28	1015	28	2030	.013"
BST-30	30	805	30	1610	30	3220	.010"
BST-32	32	1282	32	2564	32	5128	.008"
BST-34	34	2037	34	4075	34	8150	.006"
BST-36	36	3221	36	6443	36	12887	.005"
BST-38	38	5132	38	10246	38	20492	.004"
BST-40	40	8143	40	16286	40	32573	.003"

ALL SOLID TINNED COPPER AVAILABLE IN 1000 FT. SPOOLS
BARE COPPER — SOFT DRAWN AVAILABLE FROM STOCK

TINNED COPPER WIRE — SOLID SOFT BRAND

Pure Electrolytic, Copper, annealed, tinned for quick soldering MIL-W-3861 Type S, ASTM-B-33 specifications, QQ-W-343 Type S

Cat. No.	Put-Up	Size AWG	Area Circular Mils	O.D.
1433/4	100' Coil	4	41,704	.204"
1433/6	100' Coil	6	26,250	.162"
1433	100' Coil	8	16,510	.129"
1402	100' Coil	10	10,380	.103"
1403	1000' Spool	10	10,380	.103"
1406	100' Coil	12	6,530	.082"
1407	1000' Spool	12	6,530	.082"
1410	100' Coil	14	4,107	.065"
1411	1000' Spool	14	4,107	.065"
1414	100' Coil	16	2,583	.051"
1415	1000' Spool	16	2,583	.051"
1418	100' Coil	18	1,624	.040"
1419	1000' Spool	18	1,624	.040"
1422	100' Coil	20	1,022	.033"
1423	1000' Spool	20	1,022	.033"
1434	1000' Spool	22	624.4	.025"
1424	1000' Spool	24	404.0	.020"
1426	1000' Spool	26	254.1	.016"
1428	1000' Spool	28	159.8	.013"
1430	1000' Spool	30	100.5	.010"
1430/32	1000' Spool	32	63.21	.008"
1430/34	1000' Spool	34	39.75	.006"
1430/36	1000' Spool	36	25.00	.005"
1430/38	1000' Spool	38	15.72	.004"

DOUBLE NYLON (DN)

Single conductor round bare copper covered with double nylon insulation overall. Type F-2.

Cat. No.	¼ lb. SPOOL Size B&S	¼ lb. SPOOL Ft.	½ lb. SPOOL Size B&S	½ lb. SPOOL Ft.	1 lb. SPOOL Size B&S	1 lb. SPOOL Ft.	Nom. O.D.
BDN-10	10	8	10	16	10	32	.109"
BDN-12	12	12	12	24	12	49	.086"
BDN-14	14	19	14	39	14	78	.069"
BDN-16	16	31	16	62	16	125	.056"
BDN-18	18	49	18	99	18	198	.045"
BDN-20	20	78	20	157	20	314	.037"
BDN-22	22	123	22	247	22	495	.030"
BDN-24	24	195	24	390	24	781	.024"
BDN-26	26	303	26	606	26	1212	.020"
BDN-28	28	478	28	956	28	1912	.017"
BDN-30	30	739	30	1479	30	2958	.014"
BDN-32	32	1136	32	2272	32	4545	.012"
BDN-34	34	1712	34	3424	34	6849	.010"
BDN-36	36	2551	36	5102	36	10204	.009"
BDN-38	38	3770	38	7541	38	15082	.008"
BDN-40	40	5040	40	10080	40	20161	.007"

HEAVY FORMVAR (HF) TYPE T2

Single conductor round bare copper, baked film insulation from a varnish based on a vinyl acetal resin. 105°C.

Has new tough abrasion resisting film. Replaces enamel and fabric insulations for certain applications requiring exceptional abrasion resistance. Stable under heat. High dielectric strength. Infinite resistance to water and moisture. Does not fail after two hours at 105°C. Takes up less winding space.

ALL MAGNET WIRE AVAILABLE IN LARGER PUT-UPS

Cat. No.	¼ lb. SPOOL Size B&S	¼ lb. SPOOL Ft.	½ lb. SPOOL Size B&S	½ lb. SPOOL Ft.	1 lb. SPOOL Size B&S	1 lb. SPOOL Ft.	Nom. O.D.
BHF-10	10	8	10	16	10	32	.1056"
BHF-12	12	12	12	25	12	50	.0842"
BHF-14	14	20	14	39	14	78	.0673"
BHF-16	16	31	16	62	16	124	.0539"
BHF-18	18	49	18	99	18	198	.0432"
BHF-20	20	78	20	156	20	313	.0346"
BHF-22	22	125	22	250	22	501	.0277"
BHF-24	24	200	24	399	24	798	.0224"
BHF-26	26	300	26	600	26	1200	.0180"
BHF-28	28	500	28	1000	28	1999	.0144"
BHF-30	30	800	30	1600	30	3200	.0116"
BHF-32	32	1225	32	2450	32	4900	.0095"
BHF-34	34	1988	34	3975	34	7950	.0075"
BHF-36	36	3200	36	6400	36	12800	.0060"
BHF-38	38	5050	38	10100	38	20200	.0049"
BHF-40	40	7975	40	15850	40	31700	.0038"
BHF-42	42	12375	42	24750	42	49500	.0032"
BHF-44	44	14500	44	29000	44	58000	.0026"

PLAIN ENAMEL (PE) TYPE T

Single conductor round bare copper covered with a continuous insulating film of enamel. 105°C.

Cat. No.	¼ lb. SPOOL Size B&S	¼ lb. SPOOL Ft.	½ lb. SPOOL Size B&S	½ lb. SPOOL Ft.	1 lb. SPOOL Size B&S	1 lb. SPOOL Ft.	Nom. O.D.
BPE-10	10	8	10	16	10	32	.1037"
BPE-12	12	12	12	25	12	50	.0825"
BPE-14	14	20	14	40	14	80	.0657"
BPE-16	16	32	16	63	16	126	.0522"
BPE-18	18	50	18	100	18	201	.0416"
BPE-20	20	80	20	160	20	320	.0332"
BPE-22	22	127	22	254	22	508	.0266"
BPE-24	24	201	24	403	24	806	.0212"
BPE-26	26	320	26	640	26	1280	.0169"
BPE-28	28	507	28	1015	28	2030	.0135"
BPE-30	30	805	30	1610	30	3220	.0108"
BPE-32	32	1282	32	2564	32	5128	.0087"
BPE-34	34	2037	34	4075	34	8150	.0069"
BPE-36	36	3221	36	6443	36	12887	.0055"
BPE-38	38	5132	38	10246	38	20492	.0044"
BPE-40	40	8143	40	16286	40	32573	.0034"
BPE-42	42	12803	42	25605	42	51211	.0028"
BPE-44	44	20455	44	40910	44	81819	.0023"

DOUBLE COTTON (DC)

Single conductor round bare copper covered with double cotton insulation overall. Type C-2.

Cat. No.	¼ lb. SPOOL Size B&S	¼ lb. SPOOL Ft.	½ lb. SPOOL Size B&S	½ lb. SPOOL Ft.	1 lb. SPOOL Size B&S	1 lb. SPOOL Ft.	Nom. O.D.
BDC-10	10	8	10	16	10	31	,113"
BDC-12	12	12	12	24	12	49	.091"
BDC-14	14	19	14	39	14	78	.074"
BDC-16	16	31	16	62	16	123	.060"
BDC-18	18	48	18	97	18	194	.050"
BDC-20	20	78	20	157	20	304	.041"
BDC-22	22	119	22	238	22	477	.034"
BDC-24	24	134	24	269	24	538	.029"
BDC-26	26	284	26	568	26	1136	.024"
BDC-28	28	435	28	871	28	1742	.020"
BDC-30	30	641	30	1284	30	2569	.017"
BDC-32	32	976	32	1953	32	3906	.015"
BDC-34	34	1365	34	2735	34	5470	.014"
BDC-36	36	1827	36	3654	36	7309	.012"
BDC-38	38	2738	38	5476	38	10952	.011"
BDC-40	40	3405	40	6811	40	13623	.010"

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Shielding Braid, Insulated Copper Wire, Braiding

UNINSULATED COPPER WIRE

TINNED COPPER SHIELDING



Used for shielding and bonding on aircraft, marine and auto radio wires and cables. Shields speaker leads, lead-ins, amplifier wires. Extremely flexible, slides over wires and cables.

DESCRIPTION:

No. 853 thru 856/7—Composed of extremely flexible fine soft annealed copper tinned wires closely woven, braided and **Rolled Flat.**

No. 860—Composed of extremely flexible fine soft annealed copper wires closely woven, braided and **Rolled Flat.**

TINNED

Cat. No.	Size & No. of Wires	Inside Diam. Flat.	Approx. O.D. Flat.	Approx. AWG Equiv.	Nom. Circ. Mills	Current Carrying Cap./Amps.
853	12x 2/36	1/32"	3/64"	24	400	6.0
854	12x 2/36	3/64"	1/16"	22	600	7.0
855	16x 3/36	1/16"	5/64"	20	1200	11.00
858	24x 5/36	1/16"	5/32"	18	1800	16.00
859	24x 5/36	5/64"	7/32"	15	3000	25.00
863	24x 7/36	1/16"	9/32"	14	4200	32.00
864	48x 4/36	3/32"	13/32"	12	7200	46.00
868	48x 7/36	1/8"	19/32"	10	9600	53.00
865	48x 8/36	5/32"	23/32"	10	9600	53.00
865/1	48x11/36	3/16"	13/16"	7	20,800	85.00
857	48x19/36	25/32"	27/32"	7	20,800	85.00
856	48x19/36	1"	1 1/16"	7	20,800	85.00
856/1	48x19/36	1 3/16"	1 7/16"	7	53,064	85.00
856/2	48x19/36	1 1/16"	1 3/16"	3	125,425	150.00
856/3	48x27/30	1 3/16"	1 7/16"	001	154,368	280.00
856/4	48x32/30	2"	2 1/16"	000	192,000	310.00
856/6	48x45/30	2 1/16"	2 3/16"	000	216,000	340.00
856/7	48x64/30	3"	3 1/16"	0000	225,000	390.00

BARE

860	24x10/36	1/4"

STANDARD PUT-UPS:

#853 thru #856/1 — 50′ — 100′ — 250′ — 500′ — 1000′
#856/2 thru #856/7 — 50′ — 100′ — 250′
#860 — 50′ — 100′ — 250′ — 500′ — 1000′

TINNED COPPER WIRE Solid Soft Brand

Pure Electrolytic, Copper, annealed, tinned for quick soldering

MIL—W—3861 type S, ASTM—B—33 specifications, QQ—W—343 type S

SOLID

Cat. No.	Size AWG	Area Circular Mills	O.D.
1433/4	4	41,704	.204"
1433/6	6	26,250	.162"
1433	8	16,510	.129"
1402	10	10,380	.103"
1406	12	6,530	.082"
1410	14	4,107	.065"
1414	16	2,583	.051"
1418	18	1,624	.040"
1422	20	1,022	.033"
1434	22	624.4	.025"
1424	24	404.0	.020"
1426	26	254.1	.016"
1428	28	159.8	.013"
1430	30	100.5	.010"
1430/32	32	63.21	.008"
1430/34	34	39.75	.006"
1430/36	36	25.00	.005"
1430/38	38	15.72	.004"

STANDARD PUT-UPS:
100′ — 500′ — 1000′

SOLID TINNED (Soft Drawn) SYMBOL TC

Specification MIL-W-3861 Type S, QQ-W-343 Type S, ASTM-B-33

Cat. No.	Size B&S	Nom. O.D.
BST-10	10	.103"
BST-12	12	.082"
BST-14	14	.065"
BST-16	16	.051"
BST-18	18	.040"
BST-20	20	.033"
BST-22	22	.025"
BST-24	24	.020"
BST-26	26	.016"
BST-28	28	.013"
BST-30	30	.010"
BST-32	32	.008"
BST-34	34	.006"
BST-36	36	.005"
BST-38	38	.004"
BST-40	40	.003"

STANDARD PUT-UPS: ¼ lb., ½ lb., 1 lb., 5 lbs., 10 lbs.
Sizes 34, 36 largest put-ups 5 lbs.
Sizes 38, 40, 42, 44 largest put-up 1 lb.

BUS BAR WIRE (Hard Drawn)

QQ-W-343 type S—MIL-W-3861 type S, ASTM-B-33, ASTM-B-246-51 specifications

For hooking up all types of transmitters, especially ultra short wave equipment. All bus wire is made of hard drawn copper, tinned, straightened, and cut in 2 ft. lengths.



Cat. No.	No.		
2010	10	Round	Tinned
2013	12	Round	Tinned
2014	14	Square	Tinned
2015	14	Round	Tinned
2016	16	Round	Tinned
2018	18	Round	Tinned
2020	20	Round	Tinned
2022	22	Round	Tinned

SILICON BRONZE AERIAL WIRE

Especially designed for ships, airports, short wave and transmitting antennas where high tensile strength and resistance to the elements are important.



Cat. No.	Size AWG	Strand	Breaking Strength/Lbs.	Nom. O.D.
529	4	7/12	3670	.240"
528	6	7/14	2140	.190"
527	8	7/16	1600	.150"
499	10	7/18	1000	.122"
524	12	7/20	650	.100"
526	14	7/22	420	.075"

#528 & #499 meets MIL-W-13074; #524 meets MIL-W-13276
STANDARD PUT-UPS: 100′ — 500′ — 1000′

TUBULAR BRAID PER MIL SPEC. QQ-B-575



Manufactured completely round as noted in MIL Spec. QQ-B-575, this tinned copper shielded braid has self-supporting characteristics which enables it to maintain its round shape. The shielding coverage percentage is 95% or more. This tubular braid is used in military applications where maximum shielding against electrostatic interference is indicated. In addition, it is used as a protective covering against mechanical abrasion and stresses for the wires, cables and other components.

Cat. No.	Construction: Nom. Inside Diam. When Rounded	Construction: Total No. of Wires	Construction: Carriers	AWG of Indiv. Wires	Approx. AWG Equiv.	Nom. Circular Cir-cular Mills	*Current Carrying Capacity Amps
2250-1/32	1/32"	24	24	36	22	640	7.0
2250-1/16	1/16"	48	24	36	19	1,290	11.0
2250-5/64	5/64"	72	24	36	17	1,900	18.0
2250-7/64	7/64"	96	24	36	16	2,500	22.0
2250-1/8	1/8"	120	24	36	15	3,260	28.0
2250-5/32	5/32"	240	24	36	12	6,200	39.0
2250-11/64	11/64"	168	24	36	14	4,500	32.0
2250-3/16	3/16"	192	24	36	13	5,100	35.0
2250-13/64	13/64"	312	24	36	11	8,200	46.0
2250-1/4	1/4"	384	24	36	10	10,400	53.0
2250-3/8	3/8"	384	48	36	10	10,400	53.0
2250-1/2	1/2"	528	48	36	9	13,200	70.0
2250-9/16	9/16"	528	48	36	9	13,200	70.0
2250-11/16	11/16"	720	48	36	7	19,000	82.0
2250-25/32	25/32"	864	48	36	7	21,750	85.0
2250-13/16	13/16"	864	48	36	7	21,750	85.0

STANDARD SPOOL PUT-UPS: 50′ — 100′ — 250′

*Values based on copper in free air at 65°F.
Additional constructions and variations made to order. Also available in silver plated copper, bare copper and stainless steel.

STRANDED TINNED COPPER WIRE

Cat. No.	Size AWG	Strand	Nom. O.D.
495	12	7/20	.102"
1671	14	7/22	.076"
1674	15	7/23	.069"
1628	16	7/24	.062"

#1671 meets H4.4—1940 type W—1
Also available in stranded bare.

JUMPER CABLE

PURE ELECTROLYTIC COPPER, annealed, tinned for quick soldering MIL-W-3861 Type B, ASTM-B-33 Specifications

Cat. No.	Class Descr.	Size AWG	Strand	Nom. O.D.
1622	K	22	7/30	.030"
1620	K	20	10/30	.037"
1618	K	18	16/30	.045"
1616	K	16	26/30	.059"
1614	K	14	41/30	.073"
1612	K	12	65/30	.091"

STANDARD PUT-UPS:
100′ — 500′ — 1000′

STRANDED BARE COPPER WIRE

Cat. No.	Size AWG	Strand	Nom. O.D.
493	12	7/20	.100"
1670	14	7/22	.075"
1673	15	7/23	.068"
1680	16	7/24	.060"
681	18	7/26	.050"
700	19	7/27	.041"

STANDARD PUT-UPS:
100′ — 500′ — 1000′

SOLID ENAMEL COPPER WIRE

Cat. No.	Size AWG	Nom. O.D.
497	10	.103"
492	12	.083"
490	14	.066"

STANDARD PUT-UPS:
100′ — 250′ — 500′ — 1000′

BARE COPPER WIRE (Soft Drawn)

QQ—W—341A specifications

SOLID

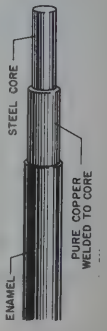
Cat. No.	Size AWG	Area Circular Mills	Nom. O.D.
1560	8	16,510	.1285"
1562	10	10,380	.102"
1566	12	6,530	.081"
1570	14	4,107	.064"
1574	16	2,583	.051"

STANDARD PUT-UPS: 100′ — 500′ — 1000′

COPPERWELD ENAMEL ANTENNA WIRE

Used where high tensile strength is required as for short wave and transmitting aerials. Has low R.F. resistance and is ideal for transmitting doublet and directional antennas. Will maintain frequency characteristics because of its stretchless qualities.

ENAMEL



Cat. No.	Put-Up	Size AWG	Tensile Strength/Lbs.	Nom. O.D.
710-100	100′ Spool	10	1130	.103"
710-250	250′ Spool	10	1130	.103"
710-500	500′ Spool	10	1130	.103"
710-1000	1000′ Spool	10	1130	.103"
710-2500	2500′ Spool	10	1130	.103"
712-100	100′ Coil	12	720	.082"
712-250	250′ Coil	12	720	.082"
712-500	500′ Spool	12	720	.082"
712-1000	1000′ Spool	12	720	.082"
712-2500	2500′ Spool	12	720	.082"
714-100	100′ Coil	14	400	.065"
714-250	250′ Spool	14	400	.065"
714-500	500′ Spool	14	400	.065"
714-1000	1000′ Spool	14	400	.065"
714-2500	2500′ Spool	14	400	.065"

BIRNBACH RADIO COMPANY INC.

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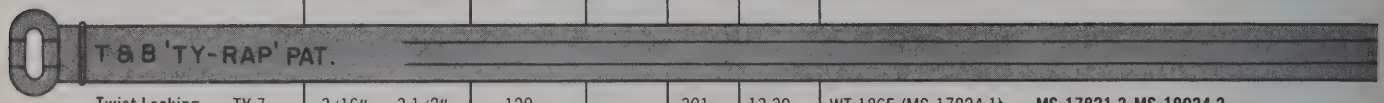
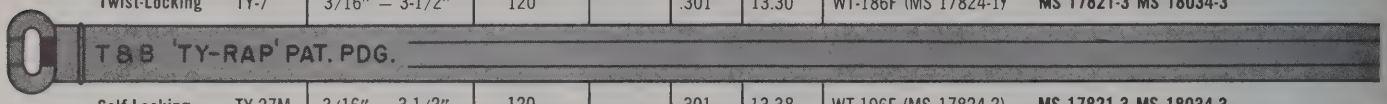
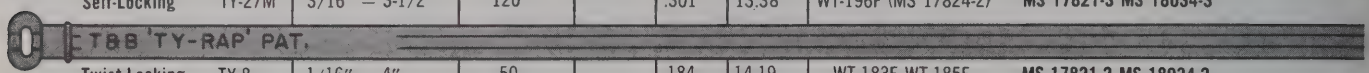
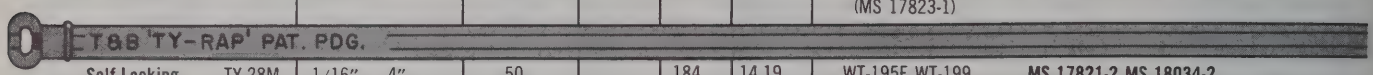
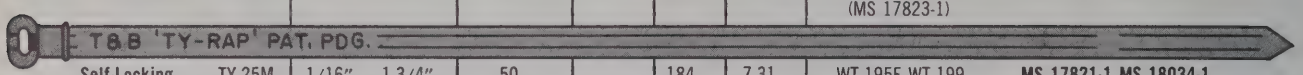
AAA

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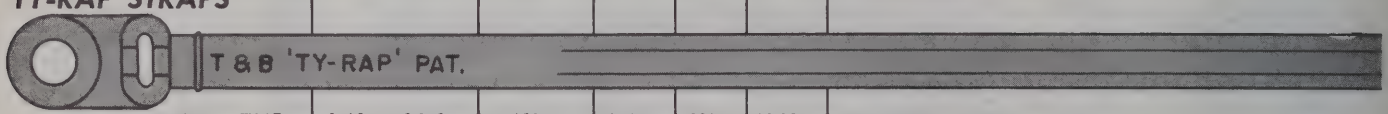
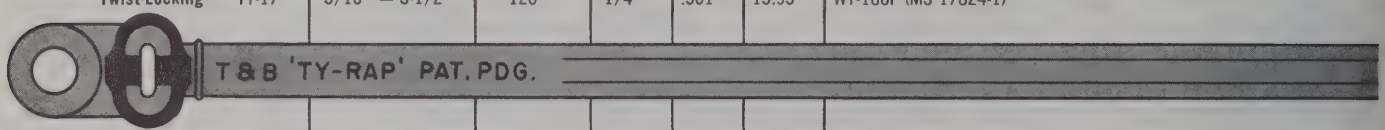
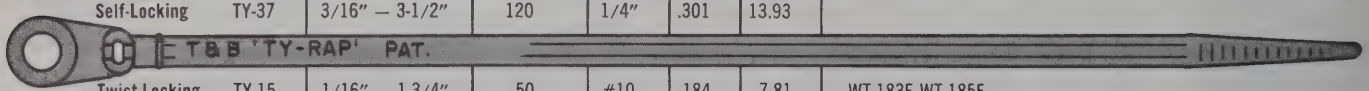
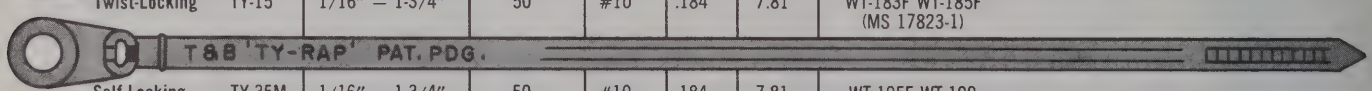
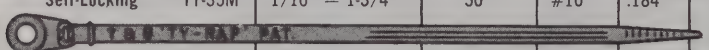
T&B ENGINEERED

TY-RAP™ ..... for High Speed Tying, Clamping, Identification

TY-RAP TIES

	CAT. NO	WIRE BUNDLE RANGE	MINIMUM TENSILE UNLOCKING STRENGTH (lbs.)	HOLE (STRAPS ONLY)	WIDTH	LENGTH	INSTALLING TOOL	MS NUMBERS
 Twist-Locking	TY-7	3/16" – 3-1/2"	120		.301	13.30	WT-186F (MS 17824-1)	MS 17821-3 MS 18034-3
 Self-Locking	TY-27M	3/16" – 3-1/2"	120		.301	13.38	WT-196F (MS 17824-2)	MS 17821-3 MS 18034-3
 Twist-Locking	TY-8	1/16" – 4"	50		.184	14.19	WT-183F WT-185F (MS 17823-1)	MS 17821-2 MS 18034-2
 Self-Locking	TY-28M	1/16" – 4"	50		.184	14.19	WT-195F WT-199 (MS 17823-2)	MS 17821-2 MS 18034-2
 Twist-Locking	TY-5	1/16" – 1-3/4"	50		.184	7.31	WT-183F WT-185F (MS 17823-1)	MS 17821-1 MS 18034-1
 Self-Locking	TY-25M	1/16" – 1-3/4"	50		.184	7.31	WT-195F WT-199 (MS 17823-2)	MS 17821-1 MS 18034-1
 Twist-Locking	TY-3	1/16" – 5/8"	18		.091	3.62	WT-185F WT-195F (MS 17823-1)	MS 17821-4 MS 18034-4
 Self-Locking	TY-23M	1/16" – 5/8"	18		.091	3.62	WT-199 (MS 17823-2)	MS 17821-4 MS 18034-4

TY-RAP STRAPS

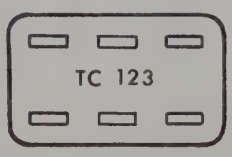
 Twist-Locking	TY-17	3/16" – 3-1/2"	120	1/4"	.301	13.93	WT-186F (MS 17824-1)	
 Self-Locking	TY-37	3/16" – 3-1/2"	120	1/4"	.301	13.93		
 Twist-Locking	TY-15	1/16" – 1-3/4"	50	#10	.184	7.81	WT-183F WT-185F (MS 17823-1)	
 Self-Locking	TY-35M	1/16" – 1-3/4"	50	#10	.184	7.81	WT-195F WT-199 (MS 17823-2)	
 Twist-Locking	TY-13	1/16" – 5/8"	18	#4	.091	4.00	WT-185F (MS 17823-1)	

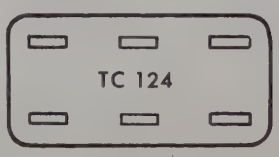
TY-RAP IDENTIFICATION TIES

 Twist-Locking	TY-42	3/8" – 1-3/4"	50		.184	7.25	WT-183F WT-185F (MS 17823-1)	MS 17822-1 MS 18035-1
 Self-Locking	TY-46M	3/8" – 1-3/4"	50		.184	7.25	WT-195F WT-199 (MS 17823-2)	MS 17822-1 MS 18035-1

TY-RAP IDENTIFICATION PLATES

Can be heat stamped or marked. Secure to bundle with ties or straps. They are .010" thick, 3/4" wide and come in the following lengths: Cat. No. TC-123, 1-1/4"; TC-124, 1-1/2"; TC-125, 1-3/4"; TC-126, 2"; TC-128, 2-1/2".





T&B 1

TY-RAP™ for High Speed Tying, Clamping, Identification

MATERIAL: ZYTEL* (Nylon), Clinching Clip — Stainless Steel
TEMPERATURE RANGE: —65°F — +350°F (Melts over 480°F)
FUNGUS INERT — Self Extinguishing
*duPont Trademark for its Polyamide Resin



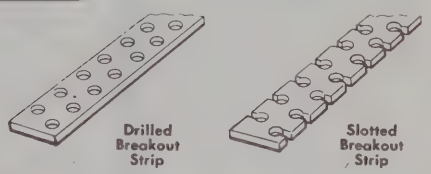
HOW TO ORDER COLOR-CODED TY-RAP CABLE TIES, STRAPS, I.D. AND MOUNTING PLATES.

Add the following dash numbers of Ty-Rap Catalog Numbers. (Example: TY-5-2 TY-5 Red)

COLOR	DASH NO.	COLOR	DASH NO.
Black	—0	Green	—5
Brown	—1	Blue	—6
Red	—2	Purple	—7
Orange	—3	Gray	—8
Yellow	—4		

NOTE: Natural Nylon is standard; will be shipped if no other color is specified.

CUSTOM ENGINEERED TY-RAP BREAKOUT STRIPS



Secure wires and bundles at breakout and fanning junctures. Eliminate need for tying between breakouts to isolate. This is done while routing wires on wire harness board. Measures 5/16" wide, 0.40 thick; any length, any sequence of holes or slots to suit your specific needs.

MILITARY SPECIFICATIONS

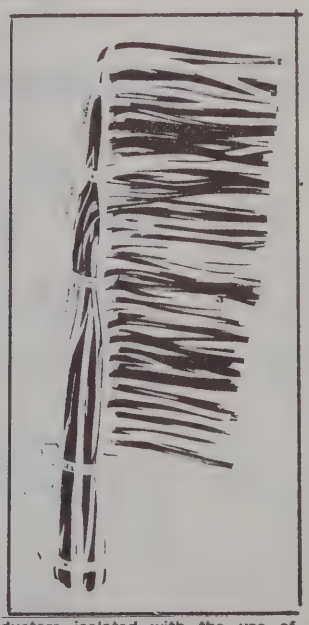
TY-RAP meets MIL-S-23190A (WEP) dated 16 March 1964 which specifically covers nylon cable ties and identification ties. Applicable Military Standards drawing numbers are shown.

NEW *TY-RAP* AIR TOOLS

Write for information on new air powered tools for high speed *TY-RAP* tie installation.

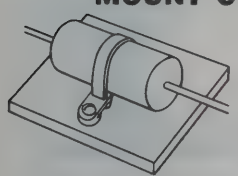


HERE'S HOW THE NEW TY-RAP CUSTOM ENGINEERED BREAKOUT STRIP LOOKS IN ACTION . . .



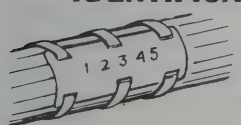
50 Conductors isolated with the use of only 4 Spot Ties!

MOUNT COMPONENTS



TY-RAP Straps mount component tightly in place with a single fastener, in the same fashion it holds a wire bundle.

IDENTIFICATION PLATES



Removable Nylon Identification plate fits firmly in place, flush with your bundle, held by two or three *TY-RAP* ties.

NOTE: Identification ties (TY-42 and 46M and Identification Plates) can be heat stamped with standard machine or permanently marked with pen and nylon marking ink. The neatest, most attractive wire and bundle identification method devised!

REWORK ADVANTAGES

TY-RAP ties won't slip or loosen until intentionally removed. When you take them off, a quick twist of your pliers does the trick without danger of cutting insulation.

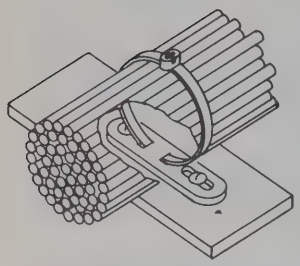




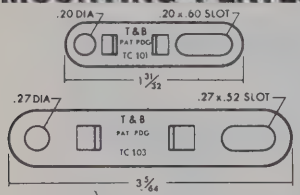
T&B

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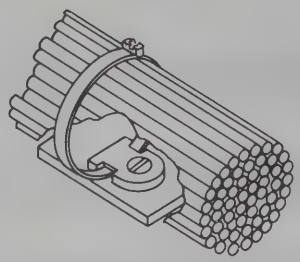
HERE ARE TYPICAL T&B MOUNTING DEVICES FOR HARNESSES AND WIRE BUNDLES



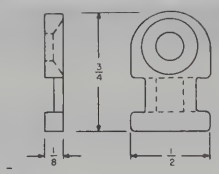
ADJUSTABLE MOUNTING PLATES



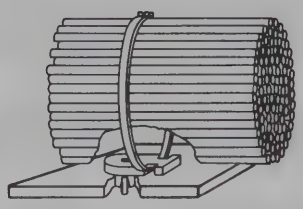
Cat. No. TC-101 and TC-103 are for two-fastener clamping with allowance for variable distance between drilled holes. TC-101 accommodates all sizes of *TY-RAPS* except TY-7, 17, 27M, and 37. These numbers fit the TC-103.



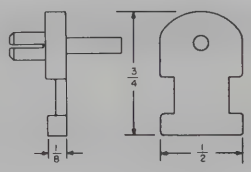
MINIATURE MOUNTING PLATE



Cat. No. TC-102 mounts to chassis or housing and is practically out of sight. Epoxy cements can be used if desired. TC-102 accepts TY-3, 23M, 8, 28M, 5, 25M, 42, 46M.

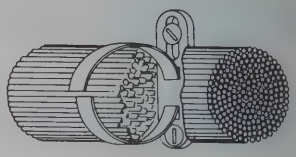


KNOCK-IN CLAMPS

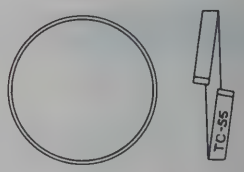


Cat. No. TC-116, TC-118, TC-120 are the same as TC-102 with an added feature for mounting . . . no screw necessary. The projecting expansion peg is inserted into a drilled hole. A rap on the outer pin locks mounting plate in place.

TC 116 — #6 mtg. hole
TC 118 — #8 mtg. hole
TC 120 — #10 mtg. hole

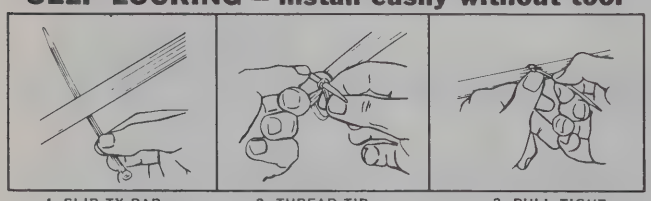


HELICAL RINGS

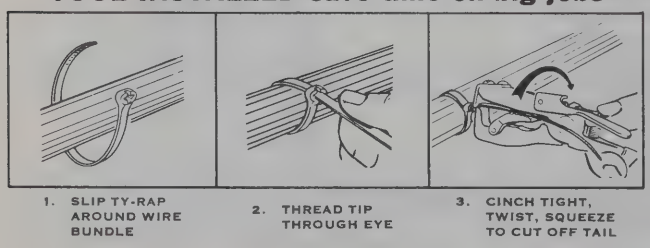


Cat. No. TC-55, TC-56 are used to temporarily hold wires in position for long wire runs or for wire harness assembly. Use TC-101 mounting plate with TC-55, and TC-103 with TC-56.

SELF LOCKING — install easily without tool

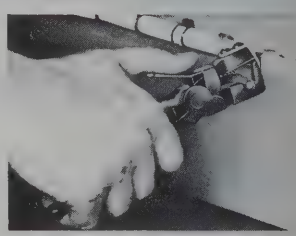


TOOL INSTALLED save time on big jobs





The WT-199 pistol-type tool has an easily adjustable tension control that enables the operator to tighten each tie exactly to the desired bundle diameter. Light, quick and easy to use.



WT-183F as simple to use as a pair of pliers, the *TY-RAP* Installing Tool tightens, locks and cuts off tail of tie in one easy motion. Operation can be learned in minutes.

THOMAS & BETTS

T&B 3

NOTES

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(513) 381-7625

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SHIP TO

DATE .....19 .....

WRITE YOUR NAME IN FULL

STREET ADDRESS | R.F.D | BOX NO.

POST OFFICE | STATE

(PLEASE GIVE SHIPPING POINT IF DIFFERENT FROM POST OFFICE)

SHIPPING POINT | STATE | COUNTY

AMOUNT ENCLOSED
Include Sufficient Amount for Postage.
We Refund Every Cent Not Used

MONEY ORDER $

CASH $
PLEASE SEND CASH BY REG. MAIL

CHECK $

20% DEPOSIT MUST BE ENCLOSED WITH ALL C.O.D. ORDERS. ALL C.O.D. ORDERS MUST EXCEED $5.00 NET.

SHIP VIA ☐ Parcel Post | ☐ Express | ☐ Freight | ☐ Best Way | Mark with X

TERMS: Cash with Order on Amounts under $5.00.
C.O.D. Orders Require 20% Deposit with Order.

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QUANTITY	CATALOG NUMBER	NAME OF ARTICLE	LIST PRICE EA.	NET PRICE EA. (DEDUCT DISCOUNT)	EXTEND HERE AND ADD THIS COLUMN

Amt. Order	DO NOT	USE
Postage		
C.O.D. Fee		
Insurance		
Total		
Deposit		
C.O.D.		

DO NOT USE THIS SPACE

Amt. of Goods

Amt. of Parcel Post

Total Amt. Enclosed

Date Shipped

Please Send More Order Forms ☐ Check Here

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SHIP TO

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WRITE YOUR NAME IN FULL

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TERMS: Cash with Order on Amounts under $5.00.
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QUANTITY	CATALOG NUMBER	NAME OF ARTICLE	LIST PRICE EA.	NET PRICE EA. (DEDUCT DISCOUNT)	EXTEND HERE AND ADD THIS COLUMN

	DO NOT	USE
Amt. Order		
Postage		
C.O.D. Fee		
Insurance		
Total		
Deposit		
C.O.D.		

DO NOT USE THIS SPACE

Amt. of Goods			
Amt. of Parcel Post			
Total Amt. Enclosed			

Date Shipped

Please Send More Order Forms ☐ Check Here

TEAR HERE

CUT HERE AND MAIL



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